



ASIAN INSTITUTE OF TECHNOLOGY

**GOLDEN JUBILEE** 



# **CONTENTS**

AIT LEADERSHIP	2
AIT BOARD OF TRUSTEES	
SENIOR MANAGEMENT	
CHAIRMAN'S MESSAGE	
PRESIDENT'S MESSAGE	
AIT OVERVIEW	6
INSTITUTIONAL HIGHLIGHTS	
AWARDS AND RECOGNITION	24
AT A GLANCE	
RESEARCH, TRAINING COURSES, PUBLICATIONS	
STUDENTS, ALUMNI	31
AIT'S REACH	32
STRATEGY 2013	38

KEY ACHIEVEMENTS IN 2009	40
ACADEMICS	42
RESEARCH	56
EXTENSION, OUTREACH AND CENTERS	62
FACULTY MEMBERS	72
PARTNERS	77

#### FINANCIAL STATEMENTS AND 82 **AUDITOR'S REPORT**











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President, AIT Alumni Association





he establishment of the Asian Institute of Technology was a historic event in the history of education in Asia. The significance of the decision to establish an institute of higher learning in Asia can only be understood in its historical context.

At a critical moment of history, the founding fathers established a graduate school for engineers, that would bloom into the Asian Institute of Technology. The institute they started was small, but the dream was big. The vision was to create future leaders. Leaders who would guide the destiny of the region.

Since that day in 1959, the institute has never looked back. The SEATO Graduate School of Engineering began with a few select students and courses. It grew into a full-blown institute with its own campus and a new name – AIT. It now has more students and greater educational offerings than ever. True to its vision, AIT continues to be a leader. The educational offerings at AIT are new, innovative, and path breaking. The institute is not confined to one region and has always had a global orientation.

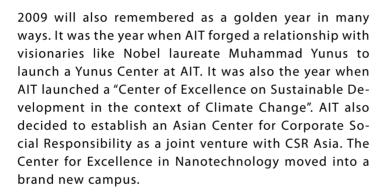
Students graduated from the institute and rose to high positions in their respective countries. As its alumni achieved high levels of success, AIT's influence grew as well.

Students and teachers alike are proud to be associated with AIT. It is with this background that the year 2009 and its importance in AIT's history needs to be viewed. AIT has come a long way since 1959, and 2009 will be remembered as the year when AIT moved ahead with new dreams and aspirations, while maintaining the vision and mission for which it was founded.

H.E. Dr. Tej Bunnag CHAIRMAN OF THE BOARD OF TRUSTEES ASIAN INSTITUTE OF TECHNOLOGY

ifty years is a long time in the history of an institute. It is a time when an institute can firmly stake its claim to fame. But for us at AIT, while we hold our head high and are proud of our achievements, we are eagerly looking forward towards playing a greater role in the future.

In the annals of AIT, 2009 will be a landmark year. This was the year when AIT decided that rather than resting on laurels; it would embark on an ambitious course aimed at increasing its profile, enriching its academic offerings and broadening its reach. While the vision and mission remains the same, AIT embraced a new strategy and direction.



While broadening our academic offerings, AIT began its undergraduate programs this year offering courses in three different streams. In the graduate stream, a Professional Master's in Software Engineering was launched, along with a double degree Masters program on Urban Water Engineering and Management in collaboration with UNESCO-IHE (Institute for Water Education). These moves reaffirm our commitment to venture into new programs, while further strengthening our core areas by forming new partnerships and forging fresh alliances.

This is in line with the vision of the founding fathers of AIT. The first class in 1959 was housed in a small site and comprised just 18 students. It was then called the SEATO Graduate School of Engineering. Today AIT has undergone an amazing transformation and has established itself as one of the Asia's most connected and cosmopolitan institutes of higher learning. On our golden jubilee year, we reaffirm the vision of our founders and pledge to live up to their mission.



**PRESIDENT** ASIAN INSTITUTE OF TECHNOLOGY



# **Institutional Highlights**

PAGE 8-23

Awards and Recognition PAGE 24-29

# Since its inception in 1959, AIT has grown into a leading international institution of higher learning in Asia. AIT's mission is to develop highly qualified professionals and researchers who will play a leading role in the sustainable development of the region and its integration into the global economy.

AIT offers Undergraduate, Master's and Doctoral Degree Programs, apart from conducting training programs.





# INSTITUTIONAL HIGHLIGHTS





Inauguration of the new ly refurbished golf course at AIT.

AIT forges a new partnership with Pakistan's Balochistan University of Engineering & Technology (BUETK).

## **JANUARY**

#### **AIT Golf Club opens**

With the help of a star-studded field of inaugural round golfers, the Asian Institute of Technology (AIT) inaugurated its newly refurbished nine-hole public golf course. H.E. Dr. Tej Bunnag, Chairman of the Asian Institute of Technology Board of Trustees, and Assistant Secretary General for Administration, Thai Red Cross Society, and former Minister of Foreign Affairs, Thailand, and Mr. Preecha Boodsri, Governor of Pathum Thani province, co-presided over the official AIT Golf Club Opening Ceremony. The 125-rai course was recently redeveloped by Innotech Sports Management of the Innotech Group of Companies.

#### **Balochistan** Pakistan's University of Engineering & Technology inks MoU

AIT signed a Memorandum of Understanding (MoU) with Balochistan University of Engineering & Technology (BUETK), which is located in Khuzdar in Pakistan. AIT will provide higher education and research opportunities for faculty members of BUETK.

The three-year agreement was signed by Brig. Mukhtar Ahmad (Retd.), Vice Chancel-Ior of BUETK, and AIT President Said Irandoust. The tie-up covers graduate studies, shortterm training, and research programs. Based on the agreement, selected faculty members nominated by BUETK will pursue master's and / or doctoral studies at AIT.

#### Partnership for broad cooperation with university of Transport and Communications (UTC), **Vietnam**

AIT entered a Memorandum of Understanding (MoU) with Vietnam's University of Transport and Communications (UTC) to enable a broad range of cooperation in educational, research and outreach programs. The five-year agreement was signed by Associate Prof. Tran Dac Su, Rector, UTC, and Prof. Said Irandoust, President of AIT. A key component of the MoU was joint implementation of academic programs for both undergraduate and graduate levels.



Left, H.E. Staheng Lasphone, Minister of Agriculture and Forestry, Lao PDR, with Prof. Peter Haddawy (VP for Academic Affairs).



H.E. Ms. Vijaya Latha Reddy, Ambassador of the Republic of India to Thailand and Mr. Abhijit Chakraverthy, Consular, who represented the Kalinga Institute of Industrial Technology (KIIT).

#### **MARCH**

#### AIT signs general MoU with Andalas University (UNAND), Padang, Indonesia

AIT partnered with Andalas University (UNAND), Padang, Indonesia to enable development of faculty and staff exchange programs; capacity upgrade of UNAND teaching staff members; development of student exchange programs, launch of unified bachelor-master's degree programs and dual master's degree programs; development of joint research endeavors; organization of international conferences, short courses, seminars, symposia, and workshops on areas of interest to both institutions and/or countries; and the exchanging of teaching and research information between the two institutions. The MOU was signed by AIT President Said Irandoust with Professor Dr. Musliar Kasim, Rector of UNAND.

#### **AIT signs MoU with Government of Lao PDR**

AIT entered into a formal Memorandum of Understanding (MoU) with the Ministry of Education of the Government of Lao PDR to strengthen multi-faceted collaboration in education, training, research, and developmental outreach activities for the next five-year period from 2009 to 2014. The agreement was signed on behalf of AIT by its Vice President for Academic Affairs Professor Peter Haddawy.

The Government of the Lao PDR was represented by H.E. Staheng Lasphone, Minister of Agriculture and Forestry, Lao PDR, and Mr. Khamsouay Keodalavong, Deputy Permanent Representative of ESCAP and Deputy Head of Mission of Lao Embassy in Bangkok.

#### **APRIL**

#### Partnership with India's KIIT begins with 2010 Summer Program **RRDP**

AIT launched a partnership with the Kalinga Institute of Industrial Technology (KIIT), Orissa, India. Under the partnership KITT sends about 60 students for a summer program on Rural and Regional Development Planning (RRDP). This program aims to empower KIIT's School of Rural Management students with relevant knowledge on sustainable and holistic rural development for the elimination of the rural-urban divide in India and other countries of South Asia. The Ambassador of the Republic of India to Thailand, H.E. Ms. Vijaya Latha Reddy, and Mr. Abhijit Chakraverthy, Consular, were present during the MoU signing ceremony.

# **INSTITUTIONAL HIGHLIGHTS**



Left, Dr. Norman Looney (GlobalHort) and Prof. Said Irandoust sign an MoU to support high value vegetable production.



H.E. Dr. Tej Bunnag, second from left, AIT's Chairman of the Board, presides over the inauguration of AIT-Vietnam's new premises in Hanoi.

#### **APRIL**

#### **GlobalHort begins** partnership

AIT signed a Memorandum of Understanding (MoU) and a Memorandum of Agreement (MoA) with Global Horticulture Initiative (GlobalHort). GlobalHort specializes in capacity building to support rural environments, especially high value vegetable production and income generation. The MOU was signed by Dr. Norman Looney, Chairman of the Board of Directors, GlobalHort and AIT President Prof. Said Irandoust. GlobalHort also seconded one of its scientists, Dr. Po-Yung Lai, to AIT for a one-year period.

#### **JUNE**

#### **New home for AIT Vietnam** in Hanoi

AIT Center in Vietnam (AITCV) relocated to a new home in the heart of Vietnam's capital by officially unveiling its new AIT-Vietnam center building located on the campus of the University of Transport and Communications (UTC).

The special inauguration event at UTC was graced by Professor Nguyen Thien Nhan, Deputy Prime Minister and Minister of Education and Training, Vietnam; H.E. Dr. Tej Bunnag, former Minister of Foreign Affairs of the Kingdom of Thailand and Chairman of the AIT Board of Trustees: AIT President Prof. Said Irandoust; Dr. Amrit Bart, Director of AIT Vietnam (AITVN); representatives from the University of Transportation and Communication and Vietnam National University; AIT partners in Vietnam, and more than ten ambassadors based in Vietnam.

#### **Prof. Chongrak Polprasert's** research on cement kilns usage is featured in Asia **Research News 2009**

A project conducted by AIT's expert in environmental engineering, Professor Chongrak Polprasert, from the School of Environmental, Resources and Development (SERD), was featured in Asia Research News 2009. The article, published in the Environment Section, featured the effective management of hazardous wastes by co-processing in existing cement kilns. Professor Chongrak Polprasert was the former Dean of the School of Environment, Resources and Development (SERD) at AIT. In 2000, he was awarded Thailand's National Scientist for his outstanding research in environmental engineering, particularly in the use of natural systems for water pollution control and waste recycling.



## **JULY**

#### AIT partners with SAITM in Sri Lanka for International Bachelor Degree Program

South Asian Institute of Technology Management (SAITM) signed a Memorandum of Agreement (MoA) with AIT to offer its first four-year collaborative International Bachelor Degree Program in Information and Communications Technology to Sri Lankan students as well as prospective students from the South Asian Association for Regional Cooperation (SAARC) region. The first two years of the four-year program will be conducted at SAITM's campus, while the next two years will be at AIT in Thailand.

# AIT invited to Global Meeting of Emerging Markets Forum in Mumbai

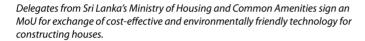
AIT made its mark at the Global Meeting of the Emerging Markets Forum held at Mumbai. The invitation-only Emerging Markets Forum, which is a nonprofit initiative of the Centennial Group, Washington DC, is one of the world's leading forums for intellectual discourse and policy debate concerning emerging markets. The Global Meeting of the Emerging Markets Forum is Co-Chaired by H.E. Fidel V. Ramos, former President of The Republic of the Philippines; Mr. Michel Camdesses, former Managing Director, International Monetary Fund; and Mr. Haruhiko Kuroda, President, Asian Development Bank. AIT was the only institution of higher learning from Asia invited to this high-level international meeting.

# 3R Knowledge Hub at AIT endorsed by the Regional 3R Forum

The 3R Knowledge Hub (3RKH) implemented by ADB and jointly hosted by AIT-UNEP RRC.AP and UNESCAP was endorsed as the knowledge arm of the Regional 3R Forum in Asia. The endorsement was made during the preparatory meeting for the Inaugural Conference held in Tokyo on the Regional 3R Forum in Asia, 29-30 June 2009 in which Prof. C. Visvanathan, Principal Investigator of 3R Knowledge Hub at AIT, participated and presented the importance of 3RKH in fostering networking and knowledge dissemination for 3R. The Ministry of the Environment, Japan, has taken the leadership under, the 3R Initiative to setup a Regional 3R Forum in Asia with 18 member countries and a number of regional organizations and multilateral agencies.

# INSTITUTIONAL HIGHLIGHTS







Prof. Dr. Chananat Thebtaranonth (NSTDA) and Prof. Worsak Kanok-Nukulchai (AIT) launch Thailand's first Professional Master's Program in Software Engineering.

## **JULY**

#### **AIT signs MoU with** Government of Sri Lanka on Housing Technology

AIT and the Government of Sri Lanka signed an MoU for exchange of cost-effective and environmentally friendly technology for constructing houses. This MoU was signed by the AIT President Said Irandoust and Mr. S.M.A.L. Gunathilaka, Secretary, Ministry of Housing and Common Amenities, during a visit of an AIT delegation to Sri Lanka. The MoU was signed in the presence of the Hon. Minister of Housing and Common Amenities, Mr. Gitanjana Gunawardena. AIT's Habitat Centre and the Centre under the Housing Ministry intends to jointly submit bids for the rebuilding of communities, housing, schools and health centers.

## **AUGUST**

#### **Partnership with Ministry** of Education, Sri Lanka

AIT signed a MoU with the Ministry of Education, Sri Lanka, for the implementation of a series of Professional Development and Empowerment Programs ("PDEP") for Ministry officials. The courses, funded by the Secondary Education Modernization Program II (SEMP II), address the needs of school supervisors to be trained in the facilitation of key processes, including School-Based Assessment (SBA), School Planning Leadership and School Improvement (PSI), Modern Teaching Learning Methodologies, Teaching Learning Resources.

#### Thailand's first Professional Master's in Software Engineering launched

AIT and Thailand's National Science and Technology Development Agency (NSTDA) signed a Memorandum of Agreement (MoA) to offer a Professional Master's in Software Engineering (PMSE), the first of its kind in Thailand and one of the first in the world. The MoA was signed by Prof. Dr. Chananat Thebtaranonth, Vice President and Director of Technology Management Center (TMC), National Science and Technology Development Agency (NSTDA), and Prof. Dr. Worsak Kanok-Nukulchai, AIT Vice President for Resources Development.



Front left, Dr. Achim Steiner (UNEP) presides over the inauguration of new low carbon office of AIT-UNEP RRC.AP. Dr. Steiner is seen with Prof. Sudip K. Rakshit AIT Vice President for Research.



H.E. Fidel V. Ramos, former Philippines President, and President Said Irandoust at the unveiling of the Golden Jubilee monument at Chulalongkorn University.

#### **AUGUST**

# Royal Thai Government (RTG) projects worth Bt. 19 million

Sixteen projects worth Bt. 19 million under the Joint Research Project of the Royal Thai Government (RTG) were launched with AIT President Said Irandoust formally signing the agreement with partners from 10 universities and three research institutes of Thailand. The Joint Research Projects under the Royal Thai Government Funding program are a key national initiative supporting the country's concept of "people as the center of development". This program aims to develop the potential of Thai researchers at the country's leading research institutes. The RTG Program's support of 19 million Baht was the highest financial commitment in the program that began in 2002.

# Low carbon office inaugurated at AIT-UNEP RRC.AP

A low carbon office of United Nations Environment Programme Regional Resource Centre for Asia and the Pacific at the Asian Institute of Technology (AIT-UNEP RRC.AP) was inaugurated by Dr. Achim Steiner, Executive Director of the United Nations **Environment Programme (UNEP)** and Under Secretary General of the United Nations. The new low carbon office located in AIT's Outreach Building is expected to result in a 40 per cent reduction in energy consumption and an annual decrease of 50 tonnes of carbon dioxide emissions.

Inaugurating the office, Dr. Steiner complimented AIT-UNEP RRC.AP for taking the lead in creating a low carbon office. Dr. Steiner remarked that "The future has arrived at AIT."

# Former Philippines President Fidel V. Ramos unveils AIT's 50-year landmark

AIT marked its original birthplace on the campus of Chulalongkorn University by unveiling a permanent landmark on the exact site of its founding nearly fifty years ago. At a special Golden Jubilee ceremony on August 20 at Chulalongkorn University's downtown campus, senior officials of both schools paid tribute to the moment on 8 September 1959 when, AIT's predecessor, the SEATO Graduate School of Engineering, was formally established in affiliation with Chulalongkorn University, Thailand's oldest university. Specially invited guest of honor, H.E. Mr. Fidel V. Ramos, former President of the Republic of the Philippines, presided over the ceremony.

# **INSTITUTIONAL HIGHLIGHTS**



Delegates in Vietnam participate remotely in AIT's international conference on Sustainable Development in the Context of Climate Change (SDCC), which was streamed live through intERLab's CanalAVIST.



Mr. Vikrom Kromadit, CFO Amata Corporation, shares his plans on "Amata Science City."

#### **AUGUST**

#### **Erasmus Mundus Program kicks** off at AIT

The prestigious Erasmus Mundus Program kicked off at AIT with applications being invited from interested students. A total of 48 students and staff from Thailand and Indonesia were to be granted Erasmus Mundus scholarships. The scholarship covers the return ticket from the home institution to the host institution, insurance during stay at the host institution, tuition, living expenses and housing. AIT is the only institute in Thailand which is a part of the 11-member consortium for the Erasmus Mundus (EM) EuroAsia Programme.

#### **SEPTEMBER**

#### CanalAVIST streams climate change conference to Vietnam and France

CanalAVIST streamed the International Conference on Sustainable Development in the Context of Climate Change (SDCC), held from 24-25 September at the Asian Institute of Technology (Thailand), to audiences at AIT Vietnam (AITVN), Hanoi, and to Polytech Nice, in France.

UNESCAP Executive Secretary, Dr. Noeleen Heyzer, inaugurated the conference which gathered partners and stakeholders to discuss emerging and urgent issues and plan joint research efforts. The UN Under-Secretary General expressed her delight at having participants from Vietnam attend virtually, making full use of information technology while limiting the carbon footprint by removing the need for travel.

#### **AIT signs MoU with Amata Corporation**

AIT signed a Memorandum of Understanding with Thailand's Amata Corporation Public Company Limited to conduct a feasibility study for establishing an international educational hub for undergraduate and / or postgraduate programs in Amata Nakorn, Thailand. The deal was signed by AIT President Said Irandoust on 16 September 2009. The MoU envisages exploring other related activities and services that may be mutually agreed upon by both parties. Amata's principal business is running industrial estates. It is creating a city concept under the "Amata Science City" banner. Amata has established three industrial estates located in Thailand and Vietnam which house many globally renowned multinational manufacturing companies.





Distinguished AIT alumnus and Vice President of Asia Development Bank (ADB), Dr. Bindu Lohani, reveals that countries like Indonesia, Philippines, Thailand and Vietnam would lose 6.7 per cent of GDP every year due to climate change.

# President Ramos lauds AIT

Former President of the Philippines, Fidel V. Ramos lauded AIT in an article written in the Manilla Bulletin, describing AIT as an institution "In a class of its own". President Ramos described AIT as "East, South, West and Central Asia's collective effort to meet the challenge that all education systems must face - that of producing the universal citizen, the individual who is at home in every culture - required today by the forces of globalization." In the article former President Ramos said: "Education, in the end, is the individual search for identity and fulfillment. The 'great' university - of which 'the AIT is in a class of its own' - makes possible such search by providing education that is 'generous, inspiring, and humane."

# ADB Vice President Dr. Bindu Lohani warns about climate change in a talk at AIT

Distinguished AIT alumnus and Vice President of Asia Development Bank (ADB), Dr. Bindu Lohani, delivered an extramural lecture at AIT where he talked on the urgent needed for arriving at an agreement at the Copenhagen Climate Change Summit. He remarked that the entire world (including developing and developed countries) needed to be a part of a successful Copenhagen Climate Change Summit. Developing countries, particularly in Asia, need to "climate proof" their infrastructure since they will face impacts like floods, drought, river bank erosion and cyclones on account of climate change. Ninetyseven per cent of the projected increase in carbon dioxide emissions between 2005-2030 will

emanate from non-OECD countries and 60 per cent will be from China and India.

Citing a study by the Asian Development Bank (ADB) which reveals that countries like Indonesia, Philippines, Thailand and Vietnam would lose 6.7 per cent of GDP every year due to climate change, Dr. Lohani stated that "all countries had no choice but to take collective action". Dr. Lohani added that water scarcity could impact Central, South, East and South-East Asia; while coastal regions in South, East and South-East Asia face the specter of environmental refugees.

# **INSTITUTIONAL HIGHLIGHTS**





AIT's Prof. Ganesh Shivakoti (right) with Nobel Laureate for Economic Sciences, Prof. Elinor Ostrom (center).

#### **OCTOBER**

#### Thai-ASEAN News features **AIT Centre of Excellence** on SDCC

Thai-ASEAN News (TAN) Network, featured the launch of the Centre of Excellence on Sustainable Development in the Context of Climate Change (SDCC) and AIT's International Conference on Climate Change.

The report emphasized how AIT's new research focus could play a role in tackling climate change issues and poverty across the Asia-Pacific region.

In an interview, UN/ESCAP Executive Secretary and UN Under-Secretary General, Dr. Noeleen Heyzer, stressed the importance of focusing on the development of technologies for energy efficiency, sustainable agriculture, water management and food security.

#### **AIT features on UNEP website**

AIT is one of the institutes which was featured prominently on the website of the United Nations Environment Programme (UNEP). This followed the move by AIT in 2009 to join the UN Climate Neutral Network.

AIT was featured in the section on "Associations and Organizations" which have joined the Climate Neutral Network. AIT is among those "institutions which is adopting climate neutral principles in their activities, such as procurement and travel, as well as promoting climate neutrality to their members and /or partners", the website says. While featuring AIT, the UNEP website refered to the AIT Golden Jubilee and stated, "AIT remains a vital hub for international, trans-boundary education and research with 1000 graduates annually, a network of 16,000 alumni from about 80 countries and territories."

#### **Nobel Laureate** has AIT connection

Nobel laureate Professor Elinor Ostrom has an AIT connection. For the past eleven years, Prof. Ganesh P. Shivakoti of the School of the Environment, Resources and Development (SERD), collaborated with Prof. Ostrom, having coauthored five publications.

Prof. Ostrom, who won the Nobel Prize in Economic Sciences (2009) "for her analysis of economic governance, especially the commons", is the first woman to win the Nobel Prize in this category.

In 1992, Prof. Shivakoti participated in a workshop in "Political Theory and Political Analysis" at Indiana University where Prof. Ostrom was the co-director. The result was a monogram published jointly by Prof. Shivakoti and Prof. Ostrom titled "Institutions, Incentives, and Irrigation in Nepal".



Left, Vice President Worsak Kanok-Nukulchai, presents a token of appreciation to H.E. Mr. Kyoji Komachi, Ambassador of Japan to Thailand.



H.R.H. Princess Maha Chakri Sirindhorn, far right, visits AIT's research exhibition at the Chulachomklao Royal Military Academy (CRMA).

#### Eight AIT students receive Japanese scholarships

Eight students from AIT were awarded scholarships by H.E. Mr. Kyoji Komachi, Ambassador of Japan to Thailand. The ambassador visited AIT and congratulated each of the students for their success in winning the scholarship.

"I congratulate you all for successfully earning this scholarship and hope that you will contribute towards the national development of your respective home countries," the ambassador said.

Japan has assisted AIT for the past four decades by granting scholarships, sending seconded faculty as well as contributing towards its endowment fund. Ambassador Komachi said that the Government of Japan would continue to support AIT and help in the transfer of technology in the region.

Professor Worsak Kanok-Nukulchai, Vice President for Resource Development, thanked the Government of Japan for its support to AIT. He recalled the continuous association the Institute has enjoyed with Japan, and emphasized that AIT has emerged much stronger courtesy of the unstinted support of Japan and its people.

#### **NOVEMBER**

# HRH Princess Maha Chakri Sirindhorn honors AIT

On behalf of AIT, President Said Irandoust was honored by Her Royal Highness Princess Maha Chakri Sirindhorn at the research exhibition organized by the Chulachomklao Royal Military Academy (CRMA). At an elaborate ceremony, HRH Princess Sirindhorn bestowed a token of appreciation to the Asian Institute of Technology for its contribution to the annual event. The exhibition was organized on 25-26 November 2009 at the CRMA campus where President Irandoust welcomed HRH Princess Sirindhorn to an AIT booth and briefed her about the research conducted at the Institute.

The exhibition displayed research activities undertaken by CRMA students and faculty. A total of eight displays were installed by AIT at the exhibition. The displays included field sensor network applications, real-time image acquisition from the Annapuruna Range in the Himalayas for aircraft operation, and from an unmanned aerial vehicle (UAV) platform for quick response to disasters, a project by Dr. Kiyoshi Honda, Associate Professor, School of Engineering and Technology (SET).

# **INSTITUTIONAL HIGHLIGHTS**



Dr. Branford Johnson, right, Editor at the Bangkok Post, was the external judge at AIT's first Open Presentation Competition. The competition was supported by The Office of the President.



Prof. Joydeep Dutta, Director, Center of Excellence in Nanotechnology (CoEN) at AIT, organized the international conference Nanomaterials for Energy, Health and Environment."

#### **DECEMBER**

#### **Open Presentation Competition for Students**

"Creativity is a hugely important factor contributing to one's success, and is often fostered outside of classrooms at events like this one," AIT President Said Irandoust remarked to a large crowd gathered at the AIT auditorium where academic teams faced-off in a test of wits and the art of public speaking, persuasion and presentation.

The inaugural Open Presentation Competition for students was spearheaded by the Office of the President. Special guest judge Dr. Branford Johnson, Editor, Education Section, Bangkok Post newspaper, brought an expert journalistic perspective to the event, and offered numerous tips and recommendations for improving students' presentation skills.

#### Three AIT students from France volunteer for postdisaster reflief work

Three French students from the Asian Institute of Technology (AIT) returned after serving for almost a month as a part of the Telecoms Sans Frontières (TSF) team which assisted in post-disaster relief measures in the Philippines and Samoa islands. The three, Frédéric Leduc, Albane Coeurquetin and Fanny Gaborit are Master's students at

The three, along with regional ICT coordinator Sebastien Sivadier and Oisin Walton, TSF delegate for Asia and the Pacific, narrated their experience from the disaster zone.

"We are happy that half of the TSF team in the Philippines and Samoa was comprised of volunteers and members of the AIT community, and we are looking forward towards extending this partnership," Oisin remarked.

#### Nanotechnology ripe for growth, academics tell AIT/ Nanotec international symposium

From the development of new cosmetics and computers to the introduction of science fiction-like cancer therapies, nanotechnology stands poised to revolutionize the way people work and live, scientists told an international symposium hosted by the Asian Institute of Technology in December that attracted experts from 11 countries.

"The prosperity of nations will depend on how well they commercialize nanotechnology," Prof. Gabor L. Hornyak, a visiting American professor at the Asian Institute of Technology's Center of Excellence in Nanotechnology, told fellow scientists attending the conference organized by AIT/CoEN and Nanotec titled "Nanomaterials for Energy, Health and Environment."



The winning team from the iNexus Robot Competition at AIT moved on to participate at the World Challenge in Mumbai, India.



Prof. Sudip K. Rakshit (VP for Research) congratulated the seven grant winners during the Bio-Innovations Asia Awards.

# International Conference on Sustainability Science

An International Conference on Sustainability Science in Asia was organized at AIT in 2009. Prof. Akima Sumi, Executive Director of Transdisciplinary Initiative for Global Sustainability, urged both developed and developing countries should work hand-in-hand to enhance sustainable practices. He stressed for greater interaction between academia and society and stated that the first step is to establish "a concrete idea of sustainable development". Prof. Worsak Kanok-Nukulchai, Vice President for Resource Development, AIT, stated that during the last few decades, Asia has witnessed rapid urbanization and industrialization which has in turn led to increased demands on infrastructure. "Unfortunately these demands are not based on sustainability," Prof. Worsak remarked.

# iNexus Robot Competition at AIT crowns Thailand's autonomous machine champion

Over two-hundred students representing 22 tertiary institutions from across Thailand competed at the first "iNexus Thailand Robot Competition" organized at AIT.

The would-be engineers and computer scientists were challenged to build two autonomous machines which cooperate and collaborate in an intelligent way to transport blocks placed randomly on a flat grid to required locations. At stake was the title of Thai champion and cash prizes totaling 200,000 Baht.

The top three teams earned free travel and accommodation to compete at the "World Challenge" competition at the Indian Institute of Technology (IIT) Mumbai, India, in January 2010.

# AIT organizes Bio-Innovations Asia Awards 2009

Seven international research proposals won grants at the Bio-Innovations Asia Awards 2009 ceremony held in Bangkok, Thailand on 8 December 2009. The research competition titled "Enabling Bio-Innovation for Poverty Alleviation in Asia" was organized by the Asian Institute of Technology (AIT), with financial support from the Canada's International Development Research Centre (IDRC). Each award-winner was entitled to a funding grant of up to (CAN) \$18,000 to pursue their research focused on Asia.

This year, a total of 108 research entries pertaining to 15 countries were submitted from across the Asian region. The winners included international researchers from the United States, United Kingdom, China, Philippines, Thailand and Nepal.

# New undergraduates are AIT pioneers

istory was made when twelve students from five countries attended their first day of classes as undergraduates at AIT on November 2, 2010.

Fifty years after eighteen graduate students from three countries enrolled at the SEATO Graduate School of Engineering, which would later become the Asian Institute of Technology, a similarly small group of students from India, Nepal, Myanmar, Vietnam and Thailand ushered in a new era for undergraduate education at AIT.

Welcomed along with their families by administration officials on Undergraduate Orientation Day on October 29 the newcomers, ranging from sixteen to twenty years of age, quickly learned the significance of their decision to attend AIT. "You are all making history as the first ever batch of undergraduates at AIT," the Head of the AIT Student Office, Ms. Ann Lopez-Fontanilla said.

Director of AIT Undergraduate Programs, Dr. Nitin Afzulpurkar, emphasized how special it was that the undergraduates had arrived on campus during AIT's Golden Jubilee year. Recalling that AIT started small in 1959, he explained that the original class of graduate students went on to achieve great professional success, with one student even becoming the Minister of Foreign Affairs of Thailand. "We believe you are all special in a similar way," he said.

On Orientation Day, the twelve were given a crash course in all things AIT. Apart from getting an overview of the rules and regulations of AIT academics, meeting their professors, reviewing their courses and exploring their classrooms and dormitories, the dozen newcomers heard what they could expect by living and studying on a multicultural campus dominated by over 2000 international postgraduate students.





# AIT launches Center of Excellence on Sustainable Development in the Context of Climate Change

IT launched the Center of Excellence on Sustainable Development in the Context of Climate Change (SDCC) on September 24, 2009. Dr. Noeleen Heyzer, Executive Secretary, United Nations Economic and Social Commission for Asia and the Pacific (UN/ESCAP), said the UN body looked forward to working in partnership with AIT to tackle poverty and climate change in Asia.

The new Center was announced at an international conference held at the Asian Institute of Technology in Pathumthani from 24-25 September 2009. The conference was inaugurated by Dr. Heyzer, who also signed a memorandum of understanding (MOU) with Prof. Said Irandoust, President, Asian Institute of Technology for a partnership between the UN/Economic and Social Commission for Asia and the Pacific (ESCAP) and AIT.

Delivering a keynote speech at the conference, the UN Under-Secretary-General spoke of the critical need to push forward toward a

low carbon, green society, and stressed the urgency of finalizing a global climate change deal at the UN Framework Convention on Climate Change (UNFCCC) in Copenhagen, in December this year.

Outlining the many threats to human security in the Asia-Pacific region, Dr. Heyzer said most countries in the region face two critical challenges: poverty and climate change. She called for a new global paradigm that must include

increased balance, inclusiveness, and sustainability. "AIT's new research focus can play a role in achieving this vision in Asia, and the new center is one of the building blocks for constructing this future," Dr. Heyzer said.

United Nations Development Programme (UNEP), Executive Director-General, Dr. Achim Steiner, echoed Dr. Heyzer in his videotape address to the conference. "The United Nations

Environment Programme shares the objectives of the AIT Center of Excellence on Sustainable Development in the Context of Climate Change and we hope to be able to contribute and build on the long tradition that we have developed in working together in partnership with AIT," the UN Under-Secretary-General said.

The conference gathered together a large number of international scholars and stakeholders to discuss emerging, urgent issues and to plan joint research efforts. The launching ceremony was also attended by other distinguished guest speakers, namely H.E. Mr. Lennart Linner, Ambassador of the Kingdom of Sweden to Thailand; Mr. Yann Pradeau, Charge d'Affaires a.i. of France to Thailand; and Mr. Cholathorn Dumrongsak, Director, Total Quality Production Center, Siam Cement Group (SCG).

AIT President Prof. Said Irandoust said, "If Asia, which is home to 60% of the world's population, is to have a prosperous future, it must be built upon sustainable and sound green principles." According to Prof. Sudip K. Rakshit, VP for Research, AIT focuses on learning and research strategies that will drive poverty reduction, reduce risk and resource consumption, and create opportunities for

> green jobs creation by building sustainable livelihoods in Asia.



(Above) Prof. Said Irandoust and UNESCAP's Dr. Noeleen Heyzer (Top right) Mr. Cholathorn Dumrongsak (Siam Cement Group) (Bottom right) Prof. Sudip K. Rakshit (VP for Research, AIT)



# School of Management celebrates 20th Anniversary, IEMBA Vietnam marks 10th Anniversary



(Top) 10th Anniversary of IEMBA- Vietnam Program in HCMC (Bottom) 10th Anniversary of IEMBA-Vietnam Program in Hanoi (Right) Religious Ceremony at SOM

OM celebrated its 20th Anniversary on 5 September 2009. The event was attended by over 60 alumni (100 including family members) from various batches. Alumni from Sri Lanka, Philippines, Laos, Vietnam, Thailand and a host of other countries participated in the event. The event began in the morning with a ceremony with Buddhist monks chanting prayers and blessings. Faculty, students and alumni were present at this religious ceremony, which was followed by lunch and sport events. Students of SOM showcased a charming cultural performance. A football match between the students and alumni ended in a draw. Following the success of this event, it was decided that SOM Day (Homecoming) will be celebrated every year on the first Saturday of September.

In June 2009, the International Executive MBA (IEMBA) program in Vietnam celebrated the 10th Anniversary of its inception. In the last 10 years since its establishment, the program has opened 21 different classes

at various locations: Hanoi, Ho Chi Minh City, Dong Nai and Vung Tau, producing 397 graduates. With a current enrolment of 593 students, it has significant impact in the economic development of Vietnam. To celebrate this event, programs were launched on June 13 in Ho Chi Minh City and on June 21 in Hanoi. Both events were successful and provided useful inputs for strengthening the program for the future. The program in Ho Chi Minh City was attended by over 90 guests and in Hanoi there were more than 100 guests. The guests included alumni, students, press, corporate representatives and partners of SOM and AITVN, faculty members from SOM and the staff of IEMBA as well as AITVN. The anniversary was also attended by member of the press representing Hanoi Television (HTV), The Manager Magazine, Tuoi Tre Newspapers, Doanh Nhan Saigon and Vietnam News. The 10th Anniversary event in Hanoi was telecast during the evening news program of 25 June 2009 on Hanoi TV.

66

What I learned at AIT inspired me to begin community-based watershed management activities in China.



# **AIT Alumnus wins Ramon** Magsaysay Award of 2009

IT Alumnus, Yu Xiaogang was the proud recipient of the Ramon Magsaysay Award of 2009. The award announcement was made by the Ramon Magsaysay Award Foundation (RMAF). In honouring Yu Xiaogang, the Foundation said, "He is being recognized for his fusing the knowledge and tools of social science with a deep sense of social justice, in assisting dam-affected communities in China to shape the development projects that impact their natural environment and their lives."

An alumnus of AIT, Yu Xiaogang acquired his M.Sc. degree from the School of Environment, Resources and Development (SERD) in 1993. He also worked as a research associate at SERD.

RMAF President, Carmencita T. Abella, while describing the Magsaysay awardees of 2009, said the awardees "are true Asian Heroes, putting their advanced knowledge and skills at the service of critical needs of their people. They are, each one, addressing major issues affecting the growth and preservation of their respective societies - health care, mass poverty, community displacement, environmental degradation, human rights. They are each using calibrated strategies to craft lasting solutions to problems besetting their people. Nevertheless, these six awardees share a greatness of spirit which infuses their leadership for change. They all build collaboration and seek consensus wherever possible. They all refuse to give up, despite adversity and opposition. Four of them share a passionate concern for the environment, which the Foundation wishes to give special attention to at this time."



# **JANUARY**

# AIT researchers win Bt. 150,000 grant from Japan's MSIWF to study speed management for road safety

A five-member team of AIT researchers was awarded a research grant of Bt. 150,000 from Japan's Mitsui Sumitomo Insurance Welfare Foundation (MSIWF) for its project "Evaluation of Drivers' Attitudes on Speed Management Strategies". Led by Asst. Prof. Kunnawee Kanitpong, field coordinator of Transportation Engineering at the School of Engineering and Technology (SET), the team was honored on January 14 at a ceremony that marked the foundation's entry into Thailand as part of its search for ground-breaking research. The research aims to gain more insight into public acceptability of speed management schemes in the context of Thailand and to develop an understanding of the factors that influence drivers' attitudes. AIT's winning research team was featured in the Thai newspaper The Nation, on 19 January 2009.

# SERD's Prof. C. Visvanathan joins editorial board of international environmental science journal

SERD's Prof. C. Visvanathan was chosen to be part of the editorial board of "Reviews in Environmental Science and Bio Technology", published by Springer Netherlands. Prof. C. Visvanathan received his doctorate degree in 1988 in Chemical/Environmental Engineering from the Institute de Genie Chimique, Institut National Polytechnique Toulouse, France, under the Government of France's Ministry of External Affairs Scholarship. His career in AIT as an educator and researcher spans two decades.

#### AIT alumnus appointed member of Nepal's National Planning Commission (NPC)

Dr. Laxmi Prasad Devkota, M.Eng. Water Resources Engineering (1992), was selected to become part of Nepal's National Planning Commission. Dr. Devkota completed his doctor of engineering in hydrology from Nagoya University, Nagoya, Japan, in 1996. He is presently a member and former Executive Director of the National Development Research Institute (NDRI), which is a non-profit, non-governmental organization established in Nepal which aims to contribute to society with high quality research and professional expertise on various issues. NPC serves as the advisory body for formulating development plans and policies of the country under the directives of the National Development Council (NDC). It explores and allocates resources for economic development and works as a central agency for monitoring and evaluation of development plans, policies and programs.

# SET's Associate Dean, Dr. Nitin Afzulpurkar's journal paper among the top 25 most down-loaded articles in Science Direct, Sensors and Actuators Journal for four consecutive quarters in 2008 and 2009

The paper discusses the development of MEMS-based micropumps and their applications in drug delivery and other biomedical applications such as micrototal analysis systems ( $\mu$ TAS) or lab-on-a-chip and point of care testing systems (POCT). The focus of the review is to present key features of micropumps such as actuation methods, working principles, construction, fabrication methods, performance parameters and their medical applications. A book written by Dr. Nitin and colleague Dr. Asim Nisar was also published by Stanford Publishing, Singapore, in June 2009.

# Professor Phan Minh Dung (CSIM) is the sole representative from Southeast and South Asia on the editorial board of the Artificial Intelligence Journal (AIJ)

AlJ is considered among the most prestigious journals in the field of Artificial Intelligence, particularly in the field of Computer Science and Information Technology. Prof. Dung received both his master's and doctoral degree in Computer Science from Dresden University of Technology, Germany. He is a faculty member with the Computer Science and Information Management field of study, SET.

# **MARCH**

#### **Energy team commended**

Professor Ram M. Shrestha (Energy) and AIT alumnus Dr. Govinda R. Timilsina were commended for their work on examining potential Demand-Side Management (DSM) programs in terms of their impacts to the overall economy in Thailand. The study found that the economy-wide impacts of the DSM program (Eg., economic welfare, GDP, international trade) depend on three key factors: the project economics of the DSM option or the ratio of unit cost of electricity savings to price of electricity (CPR); the implementation strategy of the DSM option; and scale or size of the DSM option. The paper entitled "A general equilibrium analysis of potential demand-side management programs in the household sector in Thailand" was also published in the International Journal of Energy Sector Management.

# SET's Dr. Nitin Kumar Tripathi is guest editor of international journal's special issue on Natural Disaster Management

Dr. Nitin Kumar Tripathi was invited to be the guest editor of the International Journal of Remote Sensing's special issue on Natural Disaster Management. The issue was published by Taylor and Francis, United Kingdom. Dr. Tripathi is currently an associate professor for the Remote Sensing and GIS field of study, SET. Dr. Tripathi received his masters and doctoral degree from the Indian Institute of Technology (IIT), Kanpur, India.

#### Dean of the School of Management (SOM) interviewed by "Thansettakij"

On 12 March 2009, Dr. Barbara Igel, Dean of the School of Management, discussed corporate social responsibility (CSR) and its implication on AIT's activities and initiatives with the Thai-language magazine "Thansettakij".

#### Dr. Roland appointed President of International Arbitration Tribunal Seating

Dr. Roland Amoussou-Guenou, AIT Lecturer and Project Manager of the AIT-Africa Initiative, was appointed as President of an International Arbitration Tribunal seating in Bangkok.

# **MAY**

#### AIT alumnus named Institute of Industrial Engineers (IIE) Fellow

AIT alumnus Professor R. Logen Logendran, MEng, Industrial Engineering and Management 1980, is currently a Professor at Oregon State University. Professor Logendran was honored at the IIE Annual Conference and Expo 31 May 2009 in Miami, USA.

#### **Telecommunications Team wins Best Paper Award**

Co-authors, Dr. Poompat Saengudomlert, and AIT alumnus Mr. Sucha Supittayapornpong, shared the Best Paper Award at the Sixth International Conference on Electrical Engineering/Electronics, Computer, Telecommunications, and Information Technology (ECTI-CON 2009) in Pattaya, Thailand, on 8 May 2009. The paper extends an existing static framework for joint flow control, routing and medium access control (MAC) in random access multi-hop wireless networks in to a dynamic framework where link capacities vary over time. Dr. Saengudomlert, assistant professor of Telecommunications, received his bachelor's degree from Princeton University and his master's and doctorate at the Massachusetts Institute of Technology (MIT) in Electrical Engineering and Computer Science. Mr. Supittayapornpong, who graduated from AIT in 2008 with a master's in Telecommunications '08, is currently a research associate at AIT.

# Vice President for Research joins editorial board of Asian Biotechnology and Development Review

Professor Sudip K. Rakshit, Vice President for Research, was invited to join the Editorial Board of the "Asian Biotechnology and Development Review". The journal is published by a think tank called the Research and Information Service (RIS) for Developing Countries. It serves as a forum for debate and reflection by eminent experts and disseminates information on substantive issues such as the developmental potential of biotechnological issues for developing issues, the role of south-south co-operation, and other implications of biotechnology for developing countries. The publication was supported by the Department of Biotechnology, Government of India, and the United Nations UNESCO, Paris.

# Environmental Engineering and Management (EEM) alumna publishes book on the development of clean mechanisms for solid waste management

German publishing house VDM Verlag requested Ms. Indra Gurung (M.Eng Environmental Engineering and Management, 2007) for the rights to publish her master's dissertation on the topic "Application of Clean Development Mechanism for Solid Waste Management in Developing Countries: A Case Study for Bangkok Thailand" in the form of a printed book. Her advisor was Professor Chongrak Polprasert.

# Center of Excellence in Nanotechnology (CoEN) Director elevated to Senior Member of the Institute of Electrical and Electronics Engineers, Inc (IEEE)

AIT faculty member and SET Associate Dean, Professor Joydeep Dutta was appointed as a Senior Member of the Institute of Electrical and Electronics Engineers, Inc (IEEE). IEEE's Senior Member status is the highest professional grade of the institute. Only 12% of its 382,000 members have achieved this grade.

# SET Team receives Best Paper Award at 2nd International Data Storage Technology Conference (DST-CON 2009)

Dr. Nitin Afzulpurkar, Associate Dean SET, and his team including Sujin Wanchat (AIT Mechatronics Master's student) and two engineers from Magnecomp Precision Technology received the Best Paper Award for their work on the "Influence of Cutting Parameters to Surface Roughness"



for Q-Switched Nd:YAG Laser". The research was carried out between AIT and Magnecomp Precision Technology, a multinational company from the USA with its main base in Thailand and was funded by HDDI project grant. The Best Paper Award was presented at the 2nd International Data Storage Technology Conference (DST-CON2009) which was held in Bangkok from 13-15 May 2009. DST-CON 2009 Conference is a forum for academic and industry to present their recent research works and exchange ideas in the area of Hard Disk Drive (HDD) or Data Storage Technology (DST).

# New AIT grad's study on Hanoi motorcycle emissions takes best student paper award, USA bound

Newly graduated (May 2009) Miss Mai Thi Thuy Phuong co-authored a paper with Dr. Nguyen Thi Kim Oanh of the School of Environment, Resources and Development (SERD) which received the winning student paper award of the West Coast Section of the Air Pollution Control Association in Hanoi, Vietnam. Her paper titled "Emission Inventory for Motorcycles" also earned her a cash award of US\$ 1,500 and an invitation to present the paper at the 2009 Annual Conference and Exhibition of the Air and Waste Management Association (AWMA), which took place in Detroit, United States, June 16-19, 2009. The study has produced for the first time a detailed database on the use of motorcycles and emissions for the city. Emission factors and emission inventory are important to design appropriate vehicular emissions control strategies in Vietnam. The data produced can also be used to analyze potential impacts of various management strategies on air quality in the city.

# **JULY**

#### SERD graduate among seven granted bio-innovation joint award by AIT and IDRC

A PhD graduate from AIT was among the winners of an Asia-wide research grants competition organized by the Asian Institute of Technology and sponsored by Canada's International Development Research Centre (IDRC). A total of 94 entries from 14 countries across the Asian Region were received. Seven proposals were awarded grants. Each winner was presented with CAN \$18,000 (Bt. 541,000) to undertake the proposed research. Dr. Juthathip Chalermphol, who earned her doctorate from AIT's School of Environment, Resources and Development in May 2009, was one of the winners. Her study explored the gender roles of men and women in rural areas of Thailand and to see how the imbalances women face in the field of agriculture might change through the introduction of innovative technologies.

#### AIT's impact is strong in SCG: Thailand's Most Admired Company

The Siam Cement Group (SCG) remained the number one admired company in Thailand, despite the economic downturn, a key survey said in 2009. According to the Asian Wall Street Journal survey "Asia's 200 Most Admired Countries," the 96-year-old industrial firm's performance was impressive despite having to defer new regional projects. The SCG Paper president, Mr. Chovalit Ekabut credits his AIT education to his contributions to the success of the firm. Many AIT graduates work in SCG in all business units and at various levels. Two out of the five core business units of SCG are headed by AIT alumni, one of whom is Chaovalit Ekabut, president of SCG Paper.

#### Prof. Visvanathan on AIT's instrumental role in membrane technology in Asia

As a guest panelist on the Pakistani TV show "Guest in Town", AlT's Professor Visvanathan explained AlT's instrumental role in promoting membrane technology as a bioreactor for the past 25 years, focusing on applications to water and municipal waste water.

# **AUGUST**

#### AIT report highlighted by Yale Center for the Study of Globalization

A report by the Asian Institute of Technology (AIT) and the United Nations Environment Program (UNEP) on the Mekong river dams in China was highlighted by the Yale Center for the Study on Globalization. The report "Freshwater under threat – South East Asia" is a joint publication of the United Nations Environment Programme (UNEP) and the Asian Institute of Technology (AIT). The study states that countries in South-East Asia should act now to secure the region's abundant water supplies into the future. Authored by AIT's Dr. Mukand S. Babel of the School of Engineering (SET) and Shahriar M. Wahid, Senior Research Engineering of AIT, the report states that though the Mekong River Basin (MRB) is now characterized by either water shortages or open conflicts, and it warrants attention due to potential threats that might arise from development pressures and transboundary issues.

#### AIT Teams emerge champions in Thailand Intelligent Vehicle Challenge 2009

A driverless car invented by Asian Institute of Technology (AIT) students won the Thailand Intelligent Vehicle Challenge for 2009.

AIT's intelligent vehicle team named Kuen-Chai won all the races. Kuen-Chai received Baht 300,000 cash prize and the championship trophy. Kuen-Chai's members included Methee Srisupundit (M.Eng Mechatronics), Nassaree Benalie (M.Eng Mechatronics), and Somphong Thanok (D.Eng Mechatronics). The team was supervised by School of Engineering and Technology faculty members Dr. Manukid Parnichkun and Dr. Matthew Dailey. The car used was a 2.0 Litre Mitsubishi Galant and was equipped with AIT made Adaptive Cruise Control System. Various sensors including GPS, electronic compass and Laser Scanner were equipped in the car. The high-level system communicates through the serial port to other microcontrollers to drive motors which control steering angle and speed according to high-level system command. AIT's other intelligent vehicle team, Pak-Shee, received the excellent creativity award with Baht 50,000 cash prize. The team was comprised of Suradech Duongpummet (M.Eng Mechatronics), Wongsakorn Pornnutvuttikul (M.Eng Mechatronics), Alisa Kunapinun (M.Eng Mechatronics). The team was also supervised by Dr. Manukid Parnichkun and Dr. Matthew Dailey and assisted by Mr. Somphop Limsoonthrakul (RA Mechatronics).

# **SEPTEMBER**

#### AIT Alumnus Dr. Dinesh Raj Shiwakoti honored in Vietnam

Senior consulting engineer and AIT alumnus (1994), Dr. Dinesh Raj Shiwakoti, was granted a prestigious merit award by the authorities in Ho Chi Minh City, Vietnam. Dr. Shiwakoti was honored in reorganization of his excellent achievements in works contributing to the completion of Stage 1 construction of the Saigon East-West Highway Construction Project. The award was presented to him during a special ceremony on 11 September 2009. Dr. Shiwakoti completed his Master's degree in Geotechnical and Transportation Engineering from AIT. He earned his doctorate from Yokohama National University, and completed his post-doctorate research studies from the Port and Harbour Research Institute in Japan.

# **OCTOBER**

#### AIT features in USDA's Agriculture Research Service

Research work by Prof. Vilas M. Salokhe of the School of Environment, Resources and Development (SERD) at the Asian Institute of Technology (AIT) was featured by the Agriculture Research Service (ARS) of the United States Department of Agriculture (USDA). An article written by Ann Perry titled "Computer Modeling Can Contribute to Thai Soybean Production" stated that ARS scientists along with their partners at AIT have been able to "pinpoint the best agronomic practices for maximizing soybean production in Thailand". The article said ARS scientists were testing the soybean model GLY-CIM to improve its performance under a range of conditions around the world. GLYCIM was designed to simulate the growth of any soybean cultivar on any soil at any location and for any time of the year. ARS research leader Vangimalla Reddy and soil scientist Dennis Timlin at the ARS Crops Systems and Global Change Laboratory in Beltsville, Md., partnered with scientists S. B. Lokhande and V.M. Salokhe, who work at the Asian Institute of Technology, to see how well GLYCIM estimated soybean yield potential in Thailand.

# **NOVEMBER**

#### **AIT student earns UNDP fellowship**

Ms. Nisha Onta, a Ph.D. student of the Asian Institute of Technology was awarded the UNDP 2009 Asia Pacific Human Development Academic Fellowship. The UNDP Human Development Academic Fellowship for Asia Pacific carries an award of US\$ 10,000. The objective of the Academic Fellowship is to encourage young PhD students from the Asia-Pacific region to analyze critical development issues from a human development perspective, contributing to development theory, applications and policies. Fellows are expected to push the frontiers of research on human development while analyzing, through the human development lens, issues related to human development. Nisha Onta is pursuing her Ph.D. in Gender and Development Studies under the supervision of Dr. Bernadette P. Resurreccion, Associate Professor at AIT. Her Ph.D title is "Gendered Pathways to Climate Change Adaptation: The Case of Jumla, the Mid-Western Hills of Nepal." She is currently a NORAD fellowship awardee at AIT.

# **DECEMBER**

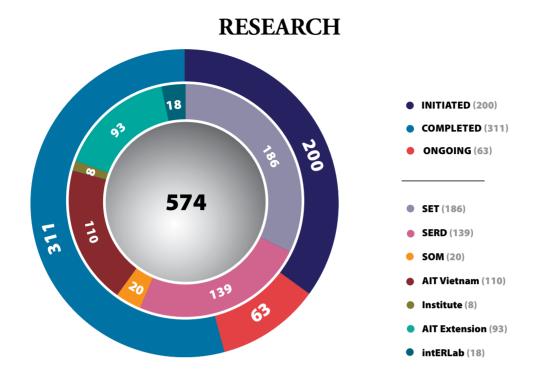
#### **Rockefeller Foundation identifies AIT as Center of Excellence**

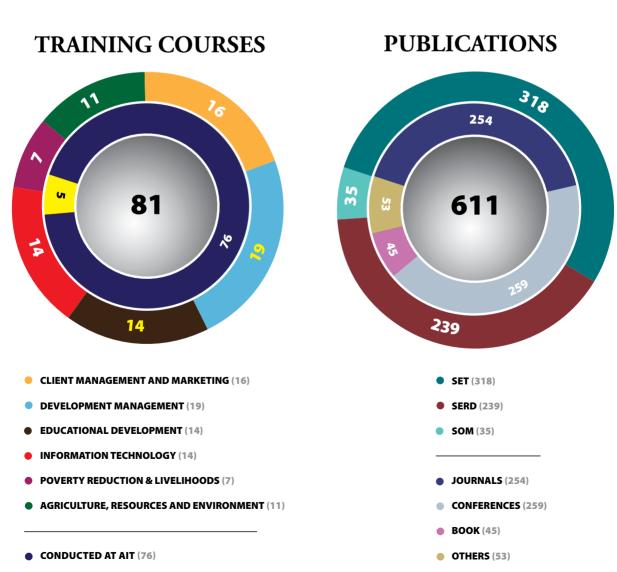
Asian Institute of Technology (AIT) was included as a Center of Excellence in an independent report prepared by the Rockefeller Foundation. Titled "Research Centres of Excellence in Asia: A Quantitative Review for the Rockefeller Foundation," the report was prepared with inputs about AIT provided by the Vice President for Research, Prof. Sudip K Rakshit. According to Mr. Ashvin Dayal, Managing Director (Asia), Rockefeller Foundation, the Asia office is investing significantly in two major initiatives - building climate resilience cities and transforming health systems. As the Rockefeller Foundation aligns its work to new global initiatives, they would like to ensure that their efforts will also build and strengthen the development of centers of Excellence for research in Asia.

#### AIT project secures grant from Global Horticulture Initiative

An AIT project on fruit flies in South and Southeast Asian countries secured a grant from the Global Horticulture Initiative/ICDF, Taiwan. Titled "Area-Wide Integrated Pest Management of Fruit Flies in South and Southeast Asian Countries (with special emphasis on Mekong Countries)", the project was submitted by the Agriculture Systems and Engineering (ASE) Field of Study, School of Environment, Resources and Development (SERD).

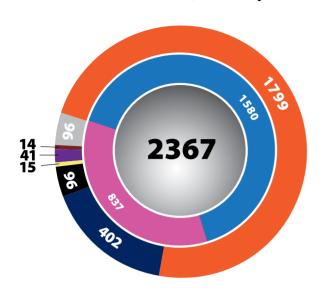
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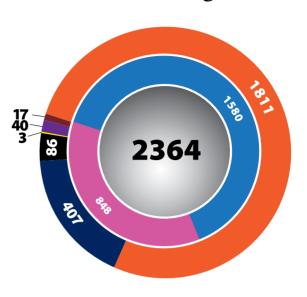




## STUDENTS (January)

## STUDENTS (August)





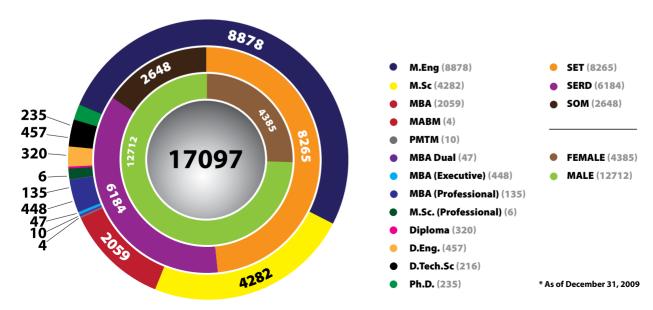
- SOUTH-EAST ASIA (1799)
- SOUTH & WEST ASIA (402)
- EAST & CENTRAL ASIA (96)
- NORTH AMERICA (15)
- EUROPE (41)
- AFRICA (14)
- MALE (1580)
- FEMALE (837)

- SOUTH-EAST ASIA (1811)
- SOUTH & WEST ASIA (407)
- EAST & CENTRAL ASIA (86)
- NORTH AMERICA (3)
- EUROPE (40)
- AFRICA (17)
- MALE (1516)
- FEMALE (848)

The year 2009 saw the largest combined graduation class in AIT's half-century history.

A total of 859 graduted with degrees during the year.

#### **ALUMNI\***



# **AIT'S REACH**

The Asian Institute of Technology is a profoundly international institute of higher learning serving Asia and beyond. It does so in partnership with governments and their agencies, state universities, research institutions, international development agencies, foundations and the public and private sectors. Additionally, the Institute continues to develop and foster academic and research linkages with Asian, European and American institutions for student and faculty exchange programs. All of these contribute to the international characteristics of the Institute - not just in terms of the number of nationalities represented on the governing board, and in the Institute's faculty, staff, and students, but also by virtue of the rich international perspectives shared and taught in the classroom and experienced in the field.

In 2009, the Institute continued its partnership programs with the Royal Thai Government, the Swedish International Development Cooperation Agency (Sida), the Government of Norway (Ministry of Foreign Affairs), the Government of Japan, Government of France, the Netherlands Government, the Canadian International Development Agency (CIDA), and the Austrian Development Agency (ADA).

 ${\it Please turn \ to \ Page \ 77 \ for \ a \ comprehensive \ list \ of \ AIT \ partners.}$ 

#### Legend

- Governments
- ▲ University
- Business
- Association
- International Organization





These governments and government agencies partnered with AIT in furthering their development agenda in the region through human resource development programs at the higher education level as well as at the continuing education level, and through development and research projects.

One of the major regional projects AIT is involved in is the Swedish International Development Cooperation Agency (Sida) supported "Wetland Alliance Program", the aim of which is to build local capacity for sustainable wetlands management in the Mekong region. The regional partners of the program are AIT, Coastal Resources Institute (CORIN) of Prince of Songkhla Uni-

versity, World Fish, and World Wide Fund for Nature (WWF). Another major regional project AIT is leading is the Canadian International Development Agency (CIDA) supported "Southeast Asia Urban Environmental Management Applications (SEA-UEMA) Project" that aims to contribute to the improvement of Urban environmental conditions in South-East Asia (7 Canadian ODA eligible countries). The SEA-UEMA Project works with local governments, national government agencies, community based organizations, local/regional/ international research institutions and academic institutions in furthering its aim. The above two projects exemplify the Institute's expanded network of partners, it being the link between the North and South (or between the West and the East, in literal terms), and its contribution to sustainable development at the regional level. There are numerous other projects at AIT working in the same line.

The year 2009 saw continued partnership between the institute and the governments in the region, notable examples included India, Pakistan, Vietnam, Indonesia, Nepal and Afghanistan. The government of India continued to support AIT by sending seconded faculty members to teach and provide research supervision to students, and also by providing a local currency fund for India-related research. The government of Pakistan provided scholarship support through its Higher Education Commission to aspiring Pakistani students to pursue their postgraduate education (Master's and



Master's leading to Doctoral studies) at AIT. It also provided funds to support Pakistani students for their research travel back to Pakistan. The government of Vietnam also provided scholarship support to its nationals for their studies at AIT-Vietnam as well as at AIT's main campus in Thailand. The government of Indonesia provided support for the operations of the AIT Center in Bandung by seconding the staff at the center and also providing scholarship support to Indonesians to study on a dual degree program between AIT and an Indonesian university. The Nepalese government provided a local currency fund to support research of importance to Nepal, plus, at the end of the year, provided major financial support through the AIT alumni in Nepal for the organization of an international conference on "Knowledge Management for Sustainable Development" jointly organized by AITAA Nepal and AIT. AIT also partnered with the government of Afghanistan in capacity building of Balkh University, Faculty of Engineering. The Institute also partnered with many other Asian governments in serving their needs related to short-term professional training, and post-graduate education. Additionally, AIT also partnered with the government of Ethiopia in Africa, whereby the latter are sending Ethiopian nationals for post-graduation education at AIT.

The Joint Japan World Bank Graduate Scholarship Program (JJ/WBGSP), the ADB-Japan Scholarship Program, the International Fellowship Program of the Ford Foundation, The Bridge Fund, and the ASEAN Foundation

continued to provide scholarships to Asian nationals for their postgraduate studies at AIT. While the German Academic Exchange (DAAD) program provided scholarships to Cambodia, Laos, Myanmar and Vietnam (CLMV) countries, the KAAD also provided few partial scholarships. The Chinese government is also providing some scholarships for Chinese nationals to pursue their doctoral studies at AIT. These are in addition to the scholarships being provided by Sida, Norway, Japan, the Netherlands and the Austrian Development Agency (ADA).

On the private sector and industry front, AIT continued professional as well as regular study programs and other research collaborative programs, such as the ones with Western Digital, Siam Cement Group, Electricity Vietnam, EVN-Telecom, Nippon Koei Co. Ltd., and Advance Agro Public Company Limited amongst many others. The Institute also carried out partnerships with the private sector - Innotech Sports Management of the Innotech Group of Companies of Thailand to run the AIT Golf Club professionally) and the French multinational company Sodexo for campus infrastructure facilities management and maintenance - on a profit sharing basis. A new MoU signed in 2009 with the Amata Group of Companies (a firm which contributes significantly to Thailand's GDP), was noteworthy in terms of the possible involvement of the private sector in higher education. AIT also signed some agreements for conducting joint academic programs and research with private acade-mic institutions, for example, in Nepal and Sri Lanka. The establishment of the CSR Asia Center at AIT was also expected to increase AIT joint activities with the private sector and industry.

The ASEAN Regional Center of Excellence on MDGs (AR-CMDG) established at AIT in 2008 got due recognition from the ASEAN countries when the 14th ASEAN Summit Joint Declaration on the Attainment of the Millennium Development Goals in ASEAN countries included sharing information, experiences and best practices in the attainment of the MDGs among ASEAN Member States through the relevant ASEAN bodies as well as through the "ASEAN Regional Centre of Excellence on MDGs" set up in the Asian Institute of Technology and other regional institutions. AIT continued to engage with the ASEAN Secretariat in the latter's activities, such as environment-related activities - education and research. AIT continued its activities under the Greater Mekong Sub-region Academic and Research Network (GMSARN), which comprises of 11 academic institutions from 6 Mekong countries. The Japan Aerospace Exploration Agency (JAXA), which is providing faculty secondment at AIT, recognizes the contribution of the Institute in planning, implementing and conducting Advance Land Observing Satellite (ALOS) initiatives, which have implications across the region. The "Yunus Center at AIT", named after the Nobel Peace Laureate Prof. Muhammad Yunus, was launched in 2009 with the objective to contribute to poverty alleviation by enabling rural people across Asia to handle and be in control of improving their own livelihoods, with an initial focus on agriculture and food security issues. The activities of the recently established centers - "CSR Asia Center at AIT" and the "Center of Excellence for Sustainable Development in the context of Climate Change (SDCC)" also would have implications across Asia and beyond.

In 2009, the Institute carried on with its wide network of partner institutions – in Asia and beyond – in working towards the common goal of contributing towards sustainable development through poverty alleviation, environmental protection and conservation, disaster mitigation and management, infrastructure development, and economic development. Some of the partner institutions of AIT (including those with whom AIT has student exchange and/or dual degree programs – are: University of Balochistan (UOB), Pakistan; Balochistan University of Engineering & Technology - Khuzdar (BUETK); UNU-IAS, Japan; Chubu University, Japan; University of Tokyo, Japan; Tohoku University, Japan; Ochanumizu University, Japan; Thammasat University, Thailand; Vishwakarma School of International Studies (VSIS), Pune, India; National Taiwan University; Yuan



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Ze University, Taiwan; Andalas University, Indonesia; University of Gaza-Madah, Indonesia; University of Boras, Sweden; International University of Vietnam; South Asia Institute of Techology and Management (SAITM), Sri Lanka; Asian Univesity, Thailand; NSTDA, Thailand; Chulabhorn Research Institute and Mahidol University, Thailand; Yunan University, China; Pokhara Univeristy, Nepal; Kathmandu University, Nepal; ITC, International Institute for Geo-information Science and Earth Observation – the Netherlands; University of Nice, France; CIRAD, France (providing faculty secondment); AIT-NCCR North-South Cooperation, Switzerland: AIT and UNESCO International Research and Training Centre for Rural Education (INRULED), China; State Bureau of Surveying and Mapping (SBSM), China; European Union; UN organizations such as UNEP, UNESCO, UN-ESCAP, and APCTT.

As has been the case every year, 2009 also saw an exchange of visits between AIT and its existing and prospective partners. This year, however, saw more visits in relation to promoting the new AIT Charter by the AIT Board Chair and the AIT President to various European countries and some Asian countries. The President and Vice Presidents also traveled abroad to attend and participate in a series of 50th Anniversary press conferences held in 7 countries (including Ethiopia and Kazakhstan), in addition to attending the 50th Anniversary events in the home country Thailand.

Senior administrators, faculty members and staff also traveled to various countries in relation to collaborative academic and research activities and to attend conferences. The Institute also received VIP visitors from various partners, some of whom were: Mr. Achim Steiner, UNEP Executive Director and UN Under Secretary General; H.E. Professor Tissa Witharana, Minister of Science and Technology, Sri Lanka; H.E. Mr. Gitanjana Gunawardena, Minister of Housing and Common Amenities, Sri Lanka; H.E. Mr. Bohara, Minister of Forestry and Soil Conservation, Nepal; Dr. Bindu Lohani, ADB Vice President (Finance and Administration); Mr. Jeremy Bird, CEO of the Mekong River Commission Secretariat; Mr. Douglas Becker, Chairman and CEO of Laureate Educa-

tion Inc.; Mr. Durga P. Paudyal, Director-General for the Center on Integrated Rural Development for Asia and the Pacific (CIRDAP); Dr. Norman Looney, Chairman of the Board of Directors of Global Horticulture Initiative; Ms. Krista Slade, Executive Director, Asia-Pacific, CASE (Council of Advancement and Support of Education); Dr. Wai-Hong Loke, Regional Director CABI Southeast and East Asia; Ms. Monica Garry, Executive Director, The Bridge Fund; Dr. Mary S. Zurbuchen, Director for Asia/Russia Programs, IFP, New York; Dr. Lourdes G. Salvador, Executive Director, Asian Scholarship Foundation; Prof. Yoshifumi Yasuoka, Executive Director of the National Institute for Environmental Studies (NIES), Japan; Prof. Dr. Muhammad Masoom Yasinzai, Vice Chancellor of University of Balochistan, Pakistan. Delegations came and/or went from/to the following countries - Uzbekistan, Cambodia, China, Myanmar, Bangladesh, Belgium, Sri Lanka, Philippines, India, Ne-



pal, Ethiopia, Kazakhstan, Indonesia, Vietnam, Japan, Thailand, Oman, UAE, Pakistan, Timor Leste, Ethiopia, Afghanistan, South Korea, North Korea, Taiwan, Spain, Sweden, Norway, Maldives, Azerbaijan, Iran, Mongolia, USA, Switzerland, Singapore and Malaysia.

In 2009, AIT organized, hosted, and/or participated in various international conferences / seminars / meetings. Some of them are named here: International Conference entitled "An International Perspective on Environmental and Water Resources" in partnership with the American Society of Civil Engineers (ASCE), and the Environmental and Water Resources Institute (EWRI), January 5-7; 4th International Conference on Innova-



tions in Food Processing Technology and Engineering (ICFPTE'08), January 19-20; 2nd International Conference on Geoinformation Technology for Disaster Management and Rehabilitation, January 30-31; 6th ICT-Asia Regional Seminar, February 11-12; Board Meeting of the Conference of Non-Governmental Organizations in Consultative Relationship with the United Nations (CONGO) February 23-25; The 2008 IEEE International Conference on Robotics and Biomimetics (ROBIO 2008), February 23; EU-Southeast Asia Expert meeting on Food Quality, Safety & Traceability, February 24-27, in partnership with CIRAD, a French agricultural research centre working for international development; AIT-Tohoku University Seminar-cum-Consultation Workshop on Infrastructure Development and Environment, March 16; Regional Workshop on "Capacity Building for Gender, Poverty and Mobility Analysis of Road Transportation Development in GMS Region", April 1; GIS for Disaster Risk Management (An Introductory Course), May 11, in partnership with the Asian Disaster Preparedness Center (ADPC) and ITC Netherlands; participation in the 11th Convention of Nepal Engineers Association, May 13-15; ProSPER.Net-Scopus Symposium, June 2-5 (ProSPER.Net is a consortium of eighteen of the leading universities in Asia-Pacific dedicated to furthering the integration of sustainability into postgraduate education and research.); World Environment Day 2009, AIT-UNEP Celebrations, June 5, with the theme 'Your Planet Needs You - UNite to Combat Climate Change'; participation in the 6th ASEAN Leadership Forum, June 19; participation in the 2009 Global Meeting of the

Emerging Markets Forum, Mumbai, India, June 23 – 25; participation in UN-ECOSOC (UN Economic and Social Council) Meeting, Geneva, July 6-9; Erasmus Mundus EuroAsia Mobility Project Steering Committee Meeting at AIT, August 10-11; Workshop on "Energy Security and Climate Change", sponsored by the Norwegian Ministry of Foreign Affairs, August 11; participation in the "International Conference on Branding in Higher Education: Practices and Lessons Learned from Global Perspective", August 10-12, organized by the Ministry of Education and Training-Vietnam (MOET), SEAMEO RETRAC & Nha Trang University (NTU); participation in the Symposium and Expert Meeting on the project entitled "Leadership for Environment and Development: Participatory Curriculum Development Network between the NGO and University", at Chubu University, Japan, September 17-18; International Conference on "Sustainable Development in the context of Climate Change", September 24-25; International Conference on Sustainability Science - Asia (ICSS-Asia), November 23-24; International Symposium on Aquaculture and Fisheries Education (ISAFE), November 27-30; European Science Cooperation Conference in Myanmar, December 4-5; International Conference on Knowledge Management for Sustainable Development (KMSD), Kathmandu, Nepal, December 10-12, in partnership with AITAA Nepal, an AIT 50th anniversary event. In a number of the above conferences / workshops / meetings, the AIT President was invited to give a talk/keynote speech.

# **Four Strategic Themes**



**Building on the Asian Institute Technology's** core values, its capabilities in innovative teaching and learning, research and outreach, and a thorough analysis of emerging trends in the external environment for higher learning, the Institute developed a fiveyear strategic framework for 2009 to 2013.

### AIT Strategy 2013 is comprised of Four Strategic Themes.

### 1. Internationality as a Regional Network Institute

There are no foreign students, faculty, staff or alumni at AIT. AIT does not consider them to be foreign, since the Institute embraces all nationalities and cultures, making every individual feel equally at home. The Institute's multicultural student body, faculty, staff, alumni and governing board continue to be AIT's core strength.

As the region's premier network institute, AIT contributes to this work by enhancing opportunities for local development partners to scale-up their knowledge, to analyze needs and to set priorities that bring educational and developmental stakeholders into regional and global agendas.





#### 2. Excellence and Relevance in Education, Research and Outreach

Excellence in teaching and learning will continue to be the foundation of the Institute. AIT has an opportunity to better integrate into its curricula the experiences and results of its research, development and outreach initiatives. This cross-fertilization will be a source of program quality development and renewal.

### 3. Positioning and Branding

The Asian Institute of Technology creates knowledge and develops human capital for sustainable economic growth and development across Asia. Complementing the academic offerings and research and outreach activities of national institutions located around Asia is integral to AIT's mission. This role becomes more pronounced as the pace of technological change accelerates, placing a premium on knowledge and its local application within the context of national development strategies. AIT will develop its capability as a regional knowledge hub of innovation for sustainable development.

### 4. Development and Resources Management

Major challenges lie ahead for AIT in ensuring its long-term financial stability. Development agencies are increasingly looking to Asian governments to drive regional and national development agendas. Donors contribute to the national development strategies formulated by developing countries by agreeing to co-finance components of these strategies. This trend is also reflected in changes in the donors and funding partners of AIT over the years. This has led to the emergence of several Asian countries as strong contributors to AIT.

Based on the Strategy document, and the strategic themes it highlights, the institute seeks to implement thorough action plans which will be developed collaboratively by relevant AIT units. These will include precise targets and performance indicators against which progress will be measured. Resources needed for implementation of the outlined goals will be drawn internally. Additionally needed resources will be raised through partnerships with various stakeholders.





# **Yunus Center**



# Yunus Center at AIT launched





obel Laureate Muhammad Yunus and the Asian Institute of Technology (AIT) formally launched the Yunus Center at AIT, the first of its kind outside of Bangladesh for the 2006 Nobel Peace Prize winner. The formal charter was signed on 19 August 2009 by Prof. Muhammad Yunus, Chairman, Yunus Centre, Dhaka and Prof. Said Irandoust, President of AIT.

Speaking after the signing ceremony, Prof. Muhammad Yunus remarked that this would be a landmark development in South-East Asia. The Yunus Center at AIT will contribute to poverty alleviation

# at AIT





by enabling rural people to handle and be in control of improving their own livelihoods through their own farming and agriculturerelated business.

"All activities at the Center shall follow the objective of poverty reduction and sustainability with an initial focus on agriculture and food security issues, encompassing a variety of disciplines and facilitating interdisciplinary work in such areas as production of food, food processing, logistics, economic factors of consumption choices in the society, the use of food for energy as well as nutritional value of food, land ownership, soil quality, water use, subsidies, credit, market stability, market speculation, wholesale and retail distribution systems and insurance," Prof Yunus said.

AIT President Prof. Said Irandoust remarked that it is very appropriate that AIT is the venue of the Yunus Center since AIT was recently endorsed by the United Nations Secretary General, Ban Ki-Moon as the site of the official ASEAN Center of Excellence on Millennium Development Goals (MDGs). "AIT's mission is to assist the region towards sustainable development, and its teaching, learning and research are constantly geared towards this goal," the AIT President said.

### **Academics**

2009 saw the launch of undergraduate programs at AIT.

**PAGE 42** 

### Research

A total of 574 research projects were initiated in 2009. Faculty and staff members completed 611 publications.

**PAGE 56** 

## Extension, Outreach and Centers

AIT Extension hosted 81 specialized training and capacity building programs. AIT Vietnam enlarged AIT Vietnam's network, while AIT Center in Indonesia was renamed AIT Indonesia.

**PAGE 62** 

### **ACADEMICS**



■ he Asian Institute of Technology has two very important strengths — technical expertise and internationality. AIT's faculty members are well-established international experts in their respective fields. They have taught and graduated over 17,500 master's and doctoral students since 1959. They have published widely in international journals, and have served as consultants in numerous national and international development projects. After five decades of AIT's existence, a tremendous reservoir of knowledge has been created.

### **Student Enrolment**

In comparison to August 2008 the Institute saw a 21% decrease in applications, from 2,028 in August 2008 to 1,594 in August 2009. This negative trend was observed in all schools with the School of Environment, Resources and Development (SERD) experiencing the largest drop of 33%. The decrease in applications was reflected in a corresponding decrease in offers. Institute-wide offers were reduced by 9% when comparing 2008 and 2009 statistics, from 1,442 in August 2008 to 1,311 in August 2009.

The final enrolment numbers showed an overall decrease of 12%, from 648 in August 2008 to 571 in August 2009.

### **Institute-wide Faculty Headcount 2009**

	2009 Average					
Long-term Faculty						
• Direct Hire		87				
• Seconded		17				
Short-term Faculty						
Visiting Faculty		3.5				
• Adjunct Factulty	14.75					
Grand Total		122.25				
CACULATION BASIS OF FACULTY HEADCOUNT						
Full Time	= 1 /	headcount				
Seconded	= 1 I	headcount				

= 0.50 headcount

= 0.25 headcount

### **Student-to-Faculty Ratio 2009**

**Visiting Faculty** 

Adjunct Faculty

	2009 Average			
SET	17.48			
SERD	15.28			
SOM	36.33			
Average	23.03			

### **Academic Developments**

### **Quality Assurance**

"Research Evaluation and Support Workshop": A Workshop on "Research Evaluation and Support" was conducted by AIT from 9-10 April 2009 at the AIT Conference Center. The purpose of the workshop was to spread awareness regarding various techniques to evaluate the research performance of individual researchers, fields of study, thematic research groups and also to benchmark against peers in the region. Key external invited speakers were Dr. Vudhipong Techadamrongsin, Deputy Director, The Thailand Research Fund, Prof. Narongrit Sombatsompop, Head of Polymer Processing and Flow (P-PROF) Group, Head of Thai-Journal Citation Index (TCI) Centre, King Mongkut's University of Technology Thonburi (KMUTT), along with colleagues from AIT, namely Professor Peter Haddawy, Vice President for Academic Affairs, Professor Sudip K. Rakshit, Vice President for Research and Dr. Nitin K. Tripathi, Director, Academic Quality Assurance.

A team of experts from Elsevier, Singapore conducted the hands-on session on the second day. The total number of registered participants was 79, which included participants from NSTDA; Thammasat University; King Mongkut University of Technology, Thonburi; Academy of Science, Malaysia; all the AIT School Deans; AIT Vice President for External Relations, faculty, staff and senior students.

### **Research Quality Evaluation**

### Workshop on Research Quality Assessment

A workshop with the help of Vice President for Academic Affairs and the Elsevier Scopus group was conducted by the Director-AQAA (Academic Quality and Assurance and Accreditation) for the AIT faculty/ senior staff members. It was marked by presentations by peers and later hands on exercises on how to evaluate the research quality/quantity of faculty members using the Scopus database. The factors to evaluate were number of papers published, H-Index and total citations.

One of the most important aspects of the workshop from the standpoint of strategy was the research benchmarking of AIT. This was done on the basis of publication and citation numbers, market share, and numbers per faculty member.

#### The analyses showed the following:

- AIT faculty members are highly productive.
   In most areas publications and citations per faculty member are very high and much higher than for Thai universities.
- Because of AIT's small size, the research market share is generally small, even in Thailand.
- AIT has lost market share in Thailand in recent years due to growth in research at Thai universities.
- Strength in niche areas of Environment and Energy gives AIT presence in Thailand, but regional presence is still limited.
- AlT's strongest research area is Sustainable Development: AlT dominates Thailand in publications and is second only to Mahidol in citations.
- Nine of the top ten researchers in Sustainable Development in Thailand are at AIT.
- AIT is very competitive regionally, with a sustained lead over IIT-Kanpur, USM, and Tokyo Tech in publications and citations.

### **Research Benchmarking Exercise**

All the faculty members were requested to inform the peer departments / institutions with which their field of study can be compared. A consultative meeting was held with all three schools at the level of School deans, the Dean Faculty Meeting (SERD) and with Coordinators. This was the first time that this exercise was completed and was treated as a learning process and an instrument to find areas to be improved. Keeping this in mind, a comprehensive research evaluation was conducted for each and every faculty of all three Schools.

### **Academic Program Review (APR)**

This was a comprehensive review of each academic program, involving preparation of a self-study document and visits by external reviewers. It is considered an essential process in preparation for formal accreditation. This process started in July 2009 and began with consultations with the Vice President for Academic Affairs, deans, faculty meetings, Dean (SET)-coordinator meeting and suggestions from colleagues. A face-to-face meeting was called for all

Coordinators and Deans to meet the President, Vice President for Academic Affairs and Director-AQAA to explain the need of APR.

The existing template to prepare the Self Study Document was refined and circulated to all field of study (FoS) / program coordinators to complete. This process will be carried out for the selected group of FoS to be advised by the School Deans. Once the self study document is ready then External Evaluators were to be selected by the Vice President for Academic Affairs in consultation with the Deans to visit AIT and conduct the final round of APR based on the self-study document and direct visit to field of studies/ programs, laboratory and class observations.

#### **Peer Teaching Review**

A system of Peer Teaching Review was introduced and made compulsory for evaluating any case of promotion. Director AQAA met the Deans of School of Management (SOM), School of Environment and Resources Development (SERD) and School of Engineering Technology (SET) to determine the progress on implementation and to see what support might be needed. SOM and SERD conducted the evaluation of teaching quality as per AlT's Policies & Procedures (P&P), whenever an application of promotion was received. Although there were applications for promotion in SET, peer teaching was yet to be implemented. The newly appointed Dean of SET indicated that peer reviews in SET would take place as soon as possible.

### Center for Learning Innovation and Quality (CLIQ)

AIT's Center for Learning Innovation and Quality (CLIQ) began operation on June 10 with the introduction of new Director, Dr. Evangelos Afendras. The center's mission is to serve AIT by supporting continuous quality improvement and innovation of pedagogy, curriculum development, academic quality assurance processes, particularly related to quality of teaching and formulation of guidelines for academic quality of professional programs. In addition, the center provides these services and disseminates best and innovative practices to universities in the region.

CLIQ began its operation by conducting a fact-gathering and exploration mission on material and human infrastructure. During the initial period the Center established a base of information in order to assess the state of learning/teaching at AIT. Implementation of the processes identified in the CLIQ proposal came from a better understanding of the

situation, as faculty perceptions became crucial to undertaking the management of teaching practice, where necessary. This data gathering was pursued through strategies involving numerous face-to-face discussions with colleagues and students, involvement with Professional Programs both in planning, such as surveying international practice in Recognition of Prior Learning (RPL) and visits to relevant international agencies for the development of insights and the testing of materials for AIT.

CLIQ proposals included Introducing a "Professional Communication" course for our students; developing a follow-up tracer study of Alumni involved in the private sector; offering a menu of training courses and consulting services to Alumni on entrepreneurship, professional communication skills and other support for starting or further development

of their businesses; undertaking a fundamental review with Language Centre staff and other stakeholders of the range of issues from placement and graduation language exams to the bridging courses, and the possibility of introducing Content Based Instruction in some optimal form; developing blended learning approaches, particularly for the MBA and Professional Programs; discussing the role of the Medium of Instruction (National languages), addressing the necessity of offering some instruction in some programs in languages other than English, and designing such components. The loss of large numbers of potential registrants - such as the reduction of market share for our courses in Vietnam owing to linguistically more flexible programs - was well documented.

### **The Language Center**

The Language Center supports the mission of the

Institute through the AIT Bridging Program – an intensive English language and academic preparation program for entering students from a variety of educational backgrounds. In addition, the Center supports all AIT students by offering writing clinics, workshops, on-line and live writing courses as well as French, Thai and Chinese language courses.



#### **Career Center**

The AIT Career Center was established in November 2006 to assist students in making informed decisions by providing the resources, programs and counseling that will lead them to different career options, internships opportunities, part-time jobs, exchange programs or ideas about options for further education. Its services revolve around (1) Career Counseling and Placement Assistance; (2) Student Assistantship / Internship Guidance; and (3) Further Studies and Exchange Program Counseling.

In 2009, the Career Center carried out several career talks and workshops. A total of 12 organizations/universities, including representatives from Mead Johnson, Standard Chartered Bank, Mekong River Commission Secretariat, Institute for International Education, Tokyo Institute of Technology and Polytech-Nice, visited AIT to deliver career/scholarship/

educational opportunity talks. As the Internship Desk was recently launched in November 2009, the Career Center team also visited companies in Bangkok to give presentations. Two trips to the National Science Museum for students and visits to other universities in Bangkok for Job Fair observation and company networking were organized. Twenty-five students were sent for internships, summer and exchange programs to Korea, Taiwan and Japan, respectively. The year's biggest event was the bi-annual Career Fair organized on 26-27 March and 13 November 2009, which attracted 53 companies with 300 vacant positions, 700 applicants and 70 job offers. Forty students also visited the Career Center office for CV counseling and mock interviews.

### **Admissions, Financial Aid and Registry**

The information analysis and visualization capability of the Admissions Information System, which provides analyses of trends in applications over time (broken down by country and field of study) continued to be developed during the year. This capability enables schools to analyze and target their responses to fluctuations in applications and student enrolment. Financial aid, in the form of AIT partner scholarships and AIT fellowships, was offered to deserving and highly qualified candidates. Improvements in forecasting student enrolment and revenue from tuition fees modules continue to be developed in the Student Information and ERP Systems.

### **Key Initiatives**

### **Yunus Center at AIT**

2006 Nobel Laureate Professor Muhammad Yunus came to Bangkok to launch the center on 19 August 2009. The launch enjoyed extremely heavy media coverage, appearing in over 100 newspapers and television stations world-wide. Coverage was particularly good in the United States. Media coverage included New York Times, Forbes, CNBC, and Channel News Asia. Several articles also appeared in Bangkok Post, The Nation, and the Thai language press. On behalf of the Yunus Center at AIT, Vice President for Academic Affairs (VPAA) met with several heads of private businesses such as the chief executive officers (CEO) of Betagro, Michelin Siam, HSBC Thailand,

and Ocean Insurance, who contacted AIT to find out how to get involved and support the center.

VPAA also briefed the Thai Senate Subcommittee on Banking and Finance on the mission and scope of the Center, on the Grameen model of microcredit, and on support that the Yunus Center could provide to the government of Thailand, particularly through our linkage to Grameen Trust. A discussion with the Assistant Governor of the Bank of Thailand was arranged by HSBC.

Mr. Borje Wallberg functioned as Interim Director of the Center in 2009. The Center hired one staff member and was supported by two volunteer interns from Sweden. A web page was designed. The Center continued to work with a number of CEOs on issues in Social Business, Microfinance, and Poverty Alleviation. In particular, the CEO of Betagro expressed strong interest in partnering with the Center to establish a social business and made a trip to Laos to observe the AIT-led PRAM program. The Center is planning a CEO roundtable on Social Business and a symposium on Microfinance.

### Poverty Reduction and Agricultural Management (PRAM)

A SERD Task Force chaired by Prof. Jayant K. Routray was formed to look at the curriculum, quality assurance issues, guidelines and cost of the PRAM. Some key achievements included a joint task force with the Laos Ministry of Agriculture and Forestry (MAF) to develop an overall strategic plan for human resources development within the Ministry of Agriculture and Forestry. This was an important opportunity for AIT to be more strategic about its efforts in developing educational programs for Laos as well as securing funding to support both existing graduate programs as well as new programs for professional education. The first meeting of the AIT-MAF Task Force was held on 8 December 2009. The main purpose of this meeting was to clearly define the responsibilities of the Task Force and develop a practical plan for shared action. Specific initiatives discussed included the Professional Bachelor's Degree in Poverty Reduction and Agriculture Management (PRAM), professional master's programs in develop-



From classroom to the field: A PRAM participant (right) puts theories to practice by sharing his new found knowledge on goat raising with a local farmer.

ment, a special track to support students from more rural areas to enter the master's programs, refresher training courses for senior ministry officials, and capacity building of the National University of Laos' faculty in the area of professional program design and delivery. The Ministry expected great potential to develop PRAM into a regional model for poverty reduction and has offered to help with such a regional initiative.

Cambodia's Fisheries Administration (under the Ministry of Agriculture, Forestry and Fisheries - MAFF), was also keen to the possibility of professional education programs for poverty reduction. Representatives of MAFF briefed senior members of the AIT administration on some options towards developing a professional bachelor's degree program in PRAM.

PRAM also moved forward in the Philippines. A roundtable discussion with senior representatives from the Commission on Higher Education (CHED), Department of Agriculture (DA), Department of Science and Technology (DOST), Department of Environment and Natural Resources (DENR), the Philippine National Academy of Science and Technology (NAST), some universities, NGOs and the business sector was held in March to discuss the PRAM education program and explain AlT's approach towards engagement in poverty reduction programs.

With the assistance of AIT, the Chancellors of the University of the Philippines Diliman (UPD) and the University of the Philippines Open University (UPOU) decided to go ahead with development of a bachelor's program in Bioresources Management and Productivity Systems. They have secured initial funding from UNESCO. The Australian Research Institute in Education for Sustainability (ARIES) was similarly interested in partnering with PRAM.

### ProSPER.Net-Scopus Symposium on Sustainable Development: Emerging Issues and New Leaders

#### 2-5 June 2009

In 2009, AIT was host to a string of important ProS-PER.Net events focusing on the theme of sustainable development. The event in June was the largest ProSPER.Net gathering since the consortium's inception one year ago. ProSPER.Net is a consortium of eighteen of the leading universities in Asia-Pacific dedicated to furthering the integration of sustainability into postgraduate education and research.

The events began with the ProSPER.Net Board meeting on June 2, chaired by AIT's Vice President for Academic Affairs. The meeting was opened with re-



From left: Dr. Ian Charles Anderson (University of Western Sydney), winner of the award for Agriculture and Natural Resources with Prof. Peter Haddawy.

marks by Prof. Govind Parayil, Vice Rector and Director of UNU-IAS and by Mr. Daisuke Ari of the Ministry of Environment of Japan. Despite the continuing financial crisis, the Ministry has been able to increase the ProSPER.Net budget for next year, indicating the initial success of the project. Mr. Nick Innes-Taylor presented the concept of AIT's developing professional undergraduate program in Poverty Reduction and Agriculture Management. The General Assembly meeting was held the next day where it was agreed to create a new project within ProSPER.Net concerned with the role of higher education in poverty reduction. The project will initially focus on the PRAM and the related program (Bioresources Management and Productivity Systems) that is being launched by the University of the Philippines in collaboration with AIT. Gaja Mada University and ARIES will also partner in this project.

AlT hosted a symposium on "Sustainable Development: Emerging Issues and New Leaders" in conjunction with the first annual ProSPER.Net-Scopus Young Scientist Award in Sustainable Development. Distinguished expert panelists decided on winners from finalists coming from throughout the Asia-Pacific region.

The workshop also marked the inaugural or launch of the ProSPER.Net-Scopus Award in Sustainable Development. The award is designed to recognize young scientists in the Asia-Pacific region who have made outstanding contributions to sustainable development in the areas of Business, Engineering & Technology, and Agriculture & Natural Resources. Over one hundred applications were received from seventeen countries. Nine distinguished expert panelists (three in each area) selected fifteen finalists from among the applicants. As the final step in the judging, the finalists came to campus and presented their work to the panelists in an open symposium format. The award winners were:

#### **Business**

Winner: Dr. Kee-hung Lai, Hong Kong Polytechnic University.

First Runner-up: Dr. Ming Yu Cheng, Multimedia University, Malaysia.

#### **Agriculture and Natural Resources**

Winner: Dr. Ian Charles Anderson, University of Western Sydney.

First Runner-up: Dr. Chi-Fai Chau, National Chung Hsing University.

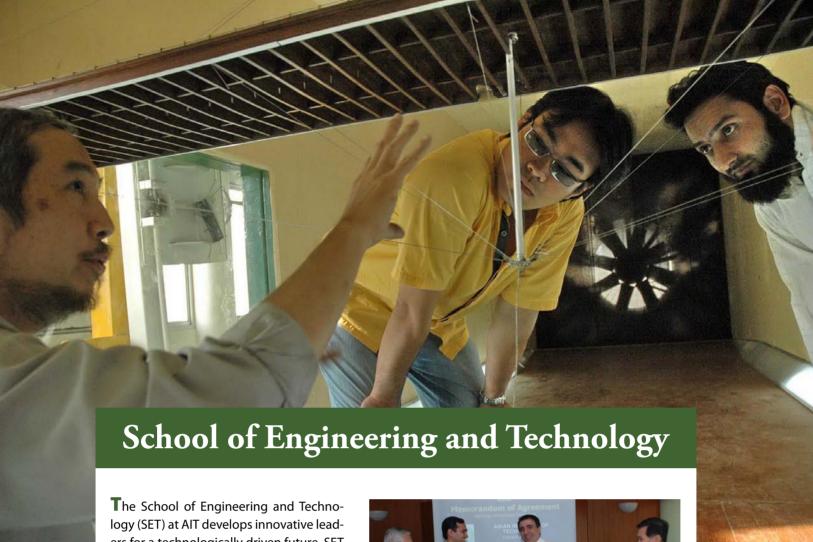
### **Engineering and Technology**

Winner: Dr. Jiangyong Hu, National University of Singapore.

First Runner-up: Dr. Nam-Trung NGUYEN, Nanyang Technological University.

Dr. Parag Ratnakar Gogate, Institute of Chemical Technology, Mumbai, India.

The week culminated with the ProSPER.Net Symposium on Sustainability in Business Education on June 4-5. The symposium was organized as part of AIT's project on integrating Sustainable Development into Business School Curricula, lead by Dr. Mark Neal of the School of Management. The symposium included keynote talks by Prof. Kate Kearins of Auckland University, Prof. Craig Deegan of RMIT and Prof. Richard Welford of Hong Kong University and CSR Asia. Project members Shinshu University, Universiti Sains Malaysia, Yonsei University, and AIT presented reports on project activities. The symposium also included presentations of about fifteen papers. Addressing issues of sustainability in business education and research is still very much at its infancy in most of Asia-Pacific. The event confirmed that AIT is very much at the cutting edge in leading this project.



The School of Engineering and Technology (SET) at AIT develops innovative leaders for a technologically driven future. SET encourages critical thinking and learning that transcends disciplines, and emphasizes entrepreneurial approaches to applied research that exudes the highest quality. Students at SET are natural problem solvers who want to contribute to Asia and the world by engineering green, sustainable solutions through the advance of science and technology. The School values solid understanding of the fundamentals in many fields of study to meet today's global challenges for a better tomorrow.

In 2009 SET had a primary aim of being able sustain growth in students, faculty and other resources. Through a consolidated effort the School made its targets in enrollment, financial performance and research collaborations.

SET initiated a new field of study in Nanotechnology, and new professional degree program in the fields of Geothechnical Engineering and Management (GEM), Geosystem Exploration and Petroleum GeoEngineering (GEPG) and Software Engineering (SoE), as well as an undergraduate degree programs in ICT, Mechatronics and Electronics that will offer an



AIT President Professor Said Irandoust signs partnership agreements with the Vishwakarma School of International Studies (VSIS), Pune, India for a unified bachelor's-master's program and a two-stage master's program in Nanotechnology.

International Bachelor of Engineering Degree at its home campus in Thailand, and at AIT partner institutions in Vietnam, Myanmar, and Sri Lanka. SET also initiated a total of 65 research projects this year.

### Academic Highlights

**AIT Nanotechnology Partnership in India:** Under AIT's partnership agreement with VSIS, two-stage masters programs have already been launched in Energy Technology and Mechatronics and a third one in Nanotechnology was launched from July 2009. News on AIT's partnership with the Vishwakarma School of International Studies (VSIS), Pune, India, was featured in the Indian Express newspaper.

Signing of MoU and MoA with VSIS, India: On January

26, AIT signed a Memorandum of Understanding (MoU) and a Memorandum of Agreement (MoA) with Vishwakarma School of International Studies (VSIS), Pune, India, for a unified bachelor's-master's program and a two-stage master's program in Nanotechnology.

**MoU Signing with Universiti Putra Malaysia (UPM):** On Friday, 30 January, a delegation from the Universiti Putra Malaysia (UPM) led by Professor Datuk Dr. Nik Mustapha R. Abdullah, Vice Chancellor of UPM signed an MoU for academic exchange and research activities. This partnership was brought to AIT through the coordination and connection of Dr. Nitin Kumar Tripathi, faculty in the Remote Sensing and GIS field of study.

### Thailand's first Professional Master's in Software Engineering (PMSE):

AIT and the National Science and Technology Development Agency (NSTDA), Thailand, signed a Memorandum of Agreement (MoA) to offer the PMSE, the first of its kind in Thailand and one of the first in the world. The concept is one of a tripartite partnership between an institute of higher learning (AIT), government (Thailand Science Park, NSTDA) and industry (the International Association of Software Architecture-IASA Thailand Group) which will help Thailand to provide innovative products and solutions in this important field.

**MoU** with University of Nice, France: On October 28, AIT signed an MoU with the University of Nice-Sophia Antipolis. The MoU was expected to open the door to cooperation at both academic and scientific levels.

### Launching of Undergraduate Program at AIT:

Twelve students from five countries attended their first day of classes as AIT undergraduates on 2 November 2009. Nine intend to major in ICT, two will focus on Mechatronics and one student will major in Electronics. By their third year, the Pathumthani campus based students will be

joined by AIT undergraduates currently studying through partnerships in Sri Lanka and Vietnam.



# School of Environment, Resources and Development

At the School of Environment, Resources and Development (SERD), students are challenged to find solutions for some of the great challenges facing the planet. Faculty, researchers and students investigate issues of global concern such as food, water and energy. The School emphasizes an interdisciplinary approach to teaching and applied research that integrates new knowledge in technology and social science into its academic programs, training and outreach activities.

This year, SERD initiated new research initiatives and international academic programs which included

partnerships with several universities in the region. Key academic developments were the new dual degree master's programs in Agricultural Systems (AS) and Agribusiness Management (ABM) with the University of Jember (UNEJ), and in Energy and Environment (EE) in collaboration with Universitas Sriwijaya (UNSRI, Indonesia).

Specialists from the Environmental Engineering and Management (EEM) and Water Engineering Management (WEM) fields of study initiated a partnership with UNESCO-IHE to conduct a dual degree program in Water Education. In its initial semester, four stu-

dents were accepted into this highly selective program through AIT. A Professional Master's Degree in EEM for Vietnam will be launched in January 2010, pending confirmation of support from Asian Disaster Reduction Center (ADRC).

Promotional activities were also a priority for the School this year, beginning with the creation of a standardized website and promotional materials.

Trips to target countries such as Vietnam and Indonesia were taken during the course of year, reaping several promising partnerships with state universities.

In 2009 the School of Environment, Resources and Development (SERD) launched two new interdisciplinary programs, namely the program on Greater Mekong Sub-Region Development Studies, and the two-stage dual degree Master's program in Energy and Environment with UNSRI, Indonesia.

### **Key Results**

A total of 664 students were enrolled in the January and August 2009 semesters, and 231 SERD students graduated in May and December 2009. A total of 43 sponsored research projects valued at more than Baht 68 million were initiated. Moreover, 95 research publications were produced during the year. Finally, cost control measures contributed to the School generating a surplus of Baht 24.6 million.

# **Energy and Sustainability**

In 2009 the Thai Ministry of Energy granted 10 Ph.D. His Majesty the King Scholarships from the Energy Conservation Promotion Fund to the Energy Field of Study in the amount of Baht 12.5 million Baht for the period October 2009 to September 2013. These scholarships will be available from January 2010 onwards.





### School of Management

The School of Management (SOM) is one of the Asian region's leaders in management education and research. SOM provides exceptional individuals with a supportive environment in which they can develop their skills and aptitudes, helping them to reach their professional goals and to serve the interests of countries in the Asia-Pacific region. The School's core strength lies in tailoring entrepreneurship and leadership education to match local needs, and in expanding Asian entrepreneurship concepts to other regions.

The academic programs of the School are highly regarded, winning awards for their internationality and ranking highly in the region. The School has continuously diversified to match the needs of the market. Besides its academic MBA and PhD programs, the School also runs highly successful Executive MBA (EMBA), and Doctor of Business Administration (DBA) and Professional Masters Programs. The School is dedicated to producing managers who can drive their organizations to prosperity and profitability without compromising ethics and social responsibility.

In 2009, the School was comprised of 11 full-time faculty members and 29 adjunct faculty members from 14 countries. With an increasing diversity in its student and faculty bodies, the School of Manager

ment has been able to recruit students from regions that have not been traditionally represented, such as South Africa. During the year SOM welcomed 27 exchange students from Asian and European partners in France, Spain, Germany, Switzerland, Republic of Korea, Denmark, India, Pakistan and Lithuania. Ninety-two students were enrolled in SOM's professional Doctor of Business Administration (DBA) which is conducted in centers in five countries: namely Vietnam, Sri Lanka, India, Taiwan and Thailand.

This year, SOM finalized an agreement with the Aston Business School in Birmingham, U.K. to carry out collaborative research projects and faculty exchanges. A cooperative agreement with the University of Applied Sciences HTW Chur in Switzerland, covering fluid exchanges of faculty, staff and students, was also confirmed in March 2009.

SOM continued to build and strengthen its linkages with the professions by developing strategic partnerships with both public and private sectors through its executive development and research projects. SOM faculty members were also involved in the management of the High-tech Business Incubation Program in collaboration with Thailand's National Electronics and Computer Technology Center and Thailand Science Park





### **ProSPER.Net**

In March 2009, the School of Management began hosting ProSPER.Net's Secretariat for research programs on integrating sustainability in management education. SOM has been extensively involved in research and activities of ProSPER.Net, and was expected to receive a grant in 2001 for developing social and business case studies. This Secretariat is also involved in integrating courses for the UN Global Compact Forum and reports for publication on the status of integrating sustainability into business education curricula in the Asia-Pacific region.

### **Research Themes**

The School of Management's thematic research areas reflect the growing importance in the business environment of Social and Environmentally Responsive Management, Good Governance, Innovation and Entrepreneurship, Managing Global Supply Chains, Corporate Social Responsibility and Sustainable Business Models. SOM continues to contribute to development of management knowledge through its high quality research and publications.



### **ACADEMIC PROGRAMS**

#### SCHOOL OF ENGINEERING AND TECHNOLOGY

#### **CIVIL & INFRASTRUCTURE ENGINEERING GROUP**

- Construction, Engineering & Infrastructure Management
- · Geotechnical & Geoenvironmental Engineering
- · Structural Engineering
- Transportation Engineering
- Water Engineering & Management

### **INDUSTRIAL SYSTEMS ENGINEERING GROUP**

- · Industrial & Manufacturing Engineering
- Mechatronics
- Microelectronics
- Nanotechnology

#### **INFORMATION & COMMUNICATIONS GROUP**

- Computer Science
- Information Management
- Remote Sensing & Geographic Information Systems
- Telecommunications

#### **INTERDISCIPLINARY PROGRAMS**

- Offshore Technology & Management
- Information & Communications Technologies
- Disaster Preparedness, Mitigation & Management
- Geosystem Exploration & Petroleum Geoengineering
- Gender, Transportation and Development

#### SCHOOL OF ENVIRONMENT, RESOURCES AND DEVELOPMENT

- Agricultural Systems & Engineering
- Aquaculture & Aquatic Resources Management
- Energy
- · Environmental Engineering & Management
- Food Engineering & Bioprocess Technology
- Gender & Development Studies
- Natural Resources Management
- Pulp & Paper Technology
- · Regional & Rural Development Planning
- · Urban Environmental Management

### INTERDISCIPLINARY PROGRAMS

- · Agri-Business Management
- Disaster Preparedness, Mitigation & Management
- · Energy and Environment
- Energy Business Management
- Greater Mekong Sub-region Development Studies

### **SCHOOL OF MANAGEMENT**

- Full-time MBA Program with specializations in Finance, Human Resources Management, Marketing, Technology Management, Entrepreneurship, Strategy, Public Management, International Management
- Executive MBA Program
- Dual Degree Arrangements:
   Two degrees AIT's MBA degree and a special-ized degree from one of Europe's premier business schools

- Exchange Program Arrangements with partner institutions in Asia or Europe
- · Doctor of Philosophy (PhD) Program
- Doctor of Business Administration (DBA) Program in AIT Thailand, Sri Lanka, Vietnam, Taiwan, and India
- Professional Master's Program in Technology Management (PMTM)



### RESEARCH

As a leading network institution of higher learning in the region, the Asian Institute of Technology (AIT) has long been at the forefront of initiating new ventures and innovative research. Research at AIT is premised on the application of highly complex fields of technological inquiry towards achieving sustainable development solutions for the region. AIT aims to be a major center for knowledge, development, research and development activity and is creating specific niche areas for itself.

A total of 574 research activities were underway in 2009. More than half of these projects were planned for multi-year implementation. Collectively, 611 publications were completed by faculty and staff members. Two hundred and fifty-four were contributions to peer-reviewed journals and 45 were chapters to books.

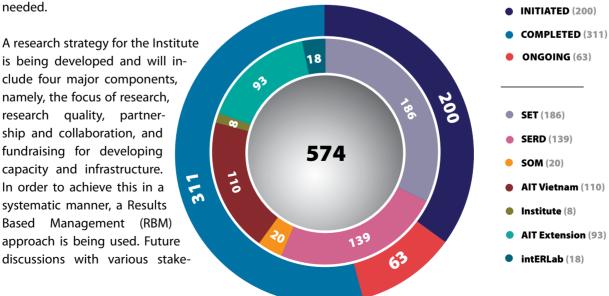
After considerable deliberation, in 2009 a Center of Excellence in "Sustainable Development in the Context of Climate Change" was launched at AIT. The six themes under its research umbrella are Vulnerability and Risk Reduction, Adaptation and Livelihood Strategies, Urban and Rural Sustainability, Water and Food Security, Energy Security and Low Carbon Society, Cleaner Production and Waste Refining. The launch of the Center facilitated work to identify societies that are vulnerable and where adaptation and mitigation options are urgently

holders will include donors, government agencies and the private sector.

AIT will serve as a common neutral platform for private sector, government and public institutions, local communities and other stakeholders to bond together in common purpose and work towards poverty alleviation and a better quality of life for everyone in the region.

The Institute stresses a proactive approach in terms of scoping opportunities for research and development both at local and regional levels. It aims to serve as a center for technology transfer and diffusion, as well as for the development of best practices and the dissemination of knowledge. Key Performance Indicators (KPI) for research are also being developed which will take into account the quality of publications, the number, type and impact of sponsored research in terms of strengthening all research conducted at AIT.

Through its interdisciplinary teams, the injection of funds for better infrastructure, targeted support and incentives for faculty and scientific staff, greater networking and collaboration with partners, entrepreneurship and innovation, AIT's research will continue to grow from strength to strength.



### **OVERVIEW OF RESEARCH ACTIVITIES FOR 2009**

Overall during the period January to December 2009, there were **574** sponsored and contracted projects which were conducted by the faculty and staff from within the Field of Studies (FoS) of the three schools, SET, SERD and SOM, as well as in AIT Extension, IntERLab, and Institute wide projects. The total Publications for the same period stood at **611** from across AIT. The breakdown of which is indicated in the table below.

		CONTRACTED	TOTAL PROJECTS	PUBLICATIONS			TOTAL PUBLICA- TIONS	
SCHOOL/FoS	Completed	On-going		Refereed Journal	Conference Proceedings	Refereed Book/Chapters	Other Publications	HONS
SET	71	115	186	121	164	12	21	318
ACECOMS	7	6	13	-	2	-	-	2
CS/IM	10	7	17	1	9	-	-	10
CEIM	2	3	5	7	2	-	1	10
GGE	8	13	21	12	31	-	-	43
IME	7	7	14	23	35	2	6	66
Mech/Mic	6	12	18	16	37	3	-	56
RSGIS	6	22	28	16	7	1	7	31
StE	9	10	19	5	2	-	1	8
TC	1	2	3	10	20	-	-	30
TrE	5	8	13	10	5	-	-	15
WEM	10	24	34	21	14	6	6	47
ICT	-	1	1	-	-	-	-	-
ОТМ	-	-	-	-	-	-	-	-
4555								
SERD	51	88	139	104	77	29	29	239
ASE	6	4	10	10	12	1	2	25
AARM	1	7	8	8	8	1	2	19
E	9	12	21	10	-	-	-	10
EEM	11	28	39	38	18	5	3	64
FEBT	5	10	15	13	13	-	16	42
GDS	2	12	14	2	7	3	3	15
NRM	7	2	9	12	5	5	2	24
PPT	2	2	4	2	-	1	-	3
RRDP	2	2	4	5	-	2	-	7
UEM	6	9	15	4	14	11	1	30
ABM	-	-	-	-	-	-	-	-
GTD	-	-	-	3	14	1	1	19
SOM	5	15	20	26	4	3	2	35
								. 35
intERLab	9	9	18	-	-	-	-	-
AIT EXTENSION		15	93	-	-	-	-	-
INSTITUTE WIDE		4	8	-	-	-	-	-
AIT VIETNAM	93	17	110	-	-	-	-	-
TOTAL	311	263	574	254	259	45	53	611

### **AIT MASTERS THESIS COMPETITION 2009**

A total of 52 students participated in the 4th Annual AIT Masters Thesis Competition held on 18 May 2009. Distinguished experts from international and regional organizations, partner universities, private sector, media, and AIT served as judges in their respective expertise categories.

#### **Categories:**

### For the School of Engineering and Technology

- 1. Civil Engineering
- 2. Industrial Systems Engineering
- 3. Information & Communications Technologies

### For the School of Environment, Resources and **Development**

- 1. Development
- 2. Energy & Environment
- 3. Resources

### For the School of Management

1. Management

The winners and runners up of the Fourth AIT Masters Thesis Competition are listed below:

### School of Engineering & Technology

### **Civil Engineering**

Winner: Ms. Chollada Rojrungtavee Water Engineering & Management Field of Study

"Assessment of Water Demand and Supply under Future Climate Change Conditions in Mae Klong River Basin, Thailand"

Adviser: **Dr. Mukand Singh Babel**  **Runner-up:** Mr. Victor Rana Shinde

Water Engineering & Management Field of Study

"Urban Water Demand Forecasting Using Artificial Neural Network - A Case Study of Bangkok"

Adviser: Dr. Mukand Singh Babel

### **Industrial Systems Engineering**

Winner: Mr. Tanujjal Bora

Microelectronics Field of Study

"Studies of Zinc Oxide Nanorod Dye Sensitized Solar Cell"

Adviser: **Prof. Joydeep Dutta** 

Mr. Methee Srisupundit Runner-up:

Mechatronics Field of Study

"Development of a Localization System for an Intelligent Vehicle"

Dr. Manukid Parnichkun Adviser:

#### **Information & Communications Technologies**

Winner Mr. Kugamoorthy Gajananan Information Management Field of Study

"Haptic Rendering of Arbitrarily Shaped Cutting Tools Interacting with 3D Volumetric Models with Application to Dental Surgery Simulation"

**Adviser: Prof. Peter F Haddawy**  Runner-up: Mr. Mahawaduge Lesli **Newton Perera** 

Information & Communications Technologies Field of Study

"Multi-constrained Optimal Path QoS Routing with Inaccurate Link State Information"

Adviser: Dr. Teerapat Sanguankotchakorn

### **School of Environment, Resources & Development**

#### **Development**

Winner: Ms. Tran Thanh Tu

*Urban Environmental Management Field of Study* 

"Adaptation to Flood Risk in Coastal Urban Area under Rapid Urbanization and Climate Change in Ho Chi Minh City, Vietnam"

Adviser: Dr. Vilas Nitivattananon

Runner-up: Ms. Sujata Manandhar

Natural Resources Management Field of Study

"Perception of and Adaptation to Climate Change by Farmers in Different Ecological Zones of the Western Development Region of Nepal"

Adviser: Dr. Dietrich Schmidt-Vogt

### **Energy & Environment**

Winner: Mr. Efren Laguda Linan

Environmental Engineering & Management Field of Study

"Cumulative Effects Assessment in the Developing World: A Case of Asian Multi-Functional Coastal Wetlands"

Adviser: Dr. Oleg V Shipin

Runner-up: Mr. Amila Abeynayaka

Environmental Engineering & Management Field of Study

"Thermophilic Aerobic Membrane Bioreactor for Industrial Wastewater Treatment"

Adviser: Prof. C Visvanathan

### Resources

Winner: Mr. Narayanan Srikanth

Pulp & Paper Technology Field of Study

"Effect of Biopolymer Latex on Properties of Coated Paper"

Adviser: Dr. Mousa Nazhad

Runner-up: Mr. Noratat Prachom

Aquaculture & Aquatic Resources Management Field of Study

"Replacement of fishmeal component of Thai red tilapia (Oreochromis niloticus x Oreochromis mossambicus) feeds by enzyme treated feather meal"

Adviser: Dr. Amararatne Yakupitiyage

### **School of Management**

### Management

Winner: Ms. Thitiya Kiatrabile

"Digital Divide: The Case of Internet Usage in Thailand"

Adviser: Dr. Donyaprueth Krairit

Runner-up: Mr. Pranay Kumar Das

"New Business Opportunities in the Mobile Telecommunication Market of Bangladesh"

Adviser: Prof. Ilkka Kauranen

### Real-Time Weather Monitoring

A weather station was deployed at Khopra (3600m), Annapurna Region of Nepal, for real-time weather monitoring of high Himalayan air routes between the popular tourist destinations of Pokhara and Jomsom in October, 2009.

The deployment of this weather station is a non-formal project between AIT's Remote Sensing & Geographic Information System (RS-GIS) Team, under the leadership of Dr. Kiyoshi Honda, and the Nepal Wireless Network.

Together with partners such as the Asian Institute of Technology, Nepal Wireless sets up wireless relay stations and network nodes using only solar and wind power in remote areas. The founder Mr. Mahabir Pun, like AIT itself, and AIT alumnus Mr. Yu Xiaogang (featured on page 20 of this report), is also a Ramon Magsaysay Award recipient.

The weather station in Khopra, which was installed by AIT RS-GIS experts, aims to procure weather data for aircraft using the air route between Pokhara and Jomsom to reduce the number of flights turning back due to harsh and inconsistent weather conditions. With this weather station in place, airlines are provided more accurate and advanced information to aid decision-making. This has resulted in reduction of unsuccessful flight attempts.

AIT's technical experts foresee that this technology may also reduce CO2 emissions.

A second weather station is planned for deployment in the Annapurna mountain range area in August 2010. The future site is a national park and is under Nepal's National Trust for Nature Conservation's jurisdiction. Installing the second weather station in the mountains would enable more studies to be conducted on weather data for climate change research work.

The infrastructure of Nepal Wireless will also be used to sustain power supply and Internet connections.



### **AIT EXTENSION**







In 2009, AIT Extension continued to focus on building strong partnerships, enabling new relationships and the reinforcement of several strong multi-year partnerships. AIT Extension hosted 81 specialized training programs and capacity building activities within the AIT campus.

AIT Extension was also involved in several projects central to the Institute's efforts to redefine itself including partnering with CSR Asia to establish the Asian Center for CSR at AIT, proactively seeking opportunities to establish an AIT center in China and spearheading a potential summer program with North American universities. Together with the Wetlands Alliance Program and the Office of the Vice President for Academic Affairs, AIT Extension began exploring a quality assurance system for the innovative Regional Professional Bachelors Degree Program in Poverty Reduction and Agricultural Management (PRAM). This system is also expected to become a point of reference for other hybrid, problem-based programs.

Many of AIT's customized training programs wit-

nessed an increase in the number of participants. The Punjab Resource Management Program, which is being administered through Government of Punjab with funding from the Asian Development Bank (ADB), was fully operational with up to 500 participants choosing to undertake the program.

AIT Extension's program with Bangladesh's Department of International (DFID), Managing at the Top (MATT2), witnessed a jump in the number of participants from 45 in 2008 to 135 this year. This two-week program consists of a Regional Exposure Visit Program on "Public Administration Reform, Performance Management and Service Delivery" and is designed to draw lessons from best practices to improve public administration, performance management, and service delivery across sectors and facilitate the transplanting of success stories to areas of concern.

The office also implemented several activities in Sri Lanka geared towards public service enhancement through the Ministry of Education, the Ministry of Finance and Planning and the Hayleys Group of Companies.







Three different training programs were held at AIT for the "Secondary Education Modernization Project" (SEMP), which is funded by the ADB through the Ministry of Education, Sri Lanka. The program aims to assist the Government in modernizing Sri Lanka's secondary school system and is comprised of core topics on facilitation of school-based assessment implementation, ICT application in school for teachers and facilitation of computer-assisted learning centers.

# Maldives: Work Ethics in Public Service

Showing itself to be a regional leader for in-service training and capacity building, AIT's continuing education center AIT Extension conducted a two-day seminar on Work Ethics in Public Service in Male, the Republic of Maldives. The training was requested by the Governance Reform Unit of the President's Office (formerly known as the Public Service Division of the Republic of the Maldives) to tackle gaps existing be-

tween the current civil service community and ongoing changes sought by the new government.

A total of 44 high-ranking participants comprised of state ministers, deputy ministers, permanent secretaries and other senior public officials attended the sessions from 4-5 March 2009. Some key discussions involved topics such as transparency, accountability, conflicts of interest, public scrutiny and corruption.

After the seminar, the AIT Extension team, composed of consultant Mr. Michael Lowe and program officer, Mr. Bahul Shrestha, was requested to brief H.E. the President of the Republic of Maldives, Mr. Mohamed Nasheed on the outcomes of the training.

The President said the exercise was a significant step in establishing good ties within the current government in order to move forward. The President emphasized the challenge of establishing an affordable civil service in the Maldives and reinventing the way the government functions.

### **AIT Center**



### Vietnam

### **AIT Vietnam**

This year, AIT Vietnam was able to capitalize on Vietnam's highly dynamic state of progress. New potential markets were identified especially in outer provinces. Strategic activities on exploration of areas of interest and the long-term sustainability of possible programs were put in place, such as the establishment of an office in Can Tho City.

#### **Can Tho City**

Initially, the government of Cantho City requested AIT Vietnam to implement a training needs assessment of government staff in their respective positions. AIT Vietnam assisted Can Tho City and was also selected to undertake training programs.

### **Lam Dong and Danang Provinces**

In order to enlarge AIT Vietnam's network, assessments are ongoing in two potential provinces. AIT Vietnam is expected to launch a joint program with the University of Danang. Danang is widely regarded as a potential industrial hub in Central Vietnam.

#### **Other Initiatives:**

- 1. Joint program with the Graduate Institute (Geneve): International Masters in Development Program (IMAS), funded through the Swiss Agency for Development and Cooperation (SDC).
- 2. Can Tho University (CTU) partnership on possible programs such as a Master's in Business Administration in Aqua Business.
- 3. South East Asian Ministry of Education Organization (SEAMEO) partnership on creative ways to grant degrees.
- 4. University of Transport and Communications (UTC) faculty training at AIT with possible support from the Ministry of Education and Training (MoET) of Vietnam.

AIT Vietnam continues to promote efficient and harmonious working environment for the AIT staff. The center also places high emphasis on strengthening new initiatives to support developmental agenda of governments, international organizations and the private sector.

### Indonesia

### AIT Center in Indonesia (AITCI) becomes AIT Indonesia (AIT-ID)

The official three-year collaboration between Indonesia's Ministry of Public Works and the Asian Institute of Technology ended in 2009. In consultation with our partner ministries in Indonesia, it was decided that AIT Center in Indonesia (AITCI) would be restructured and renamed as AIT Indonesia (AIT-ID). This is as a collaborative partnership between AIT and various Indonesian government ministries, namely the Ministry of National Education (MNE), Ministry of Public Works (MPW) and Ministry of Agriculture (MOA).

From 2010 onwards, AIT-ID is expected to be self-sufficient. It is now in the process of restructuring in terms of its organization, activities, funding, partnerships and networks. AIT Indonesia will also be relocated to Jakarta to a venue suitable for academic programs, short-term training programs, seminars and workshops, as well as for research and development activities.

### Accomplishments in 2009

The first batch of the Dual Degree Program on Transportation Engineering and Management graduated in June 2009. The program was revised during the year so that all courses for the initial batch are conducted at Gadjahmada University and all courses in the second batch are taken at AIT. Previously, there was a one semester component conducted at AIT-CI. In 2009, AIT-CI devised a proposal for a one-year professional degree program in urban planning, which is now being reviewed by the Directorate General of Human Settlement as well as the World Bank. Some discussions with stakeholders involved conducting degree programs in Integrated Water Resources and Management.

AIT-CI conducted two batches of training programs on Integrated Urban Planning for Sustainable Management and assisted another on Reduce, Reuse, and Recycle. As a core team member of the UNESCO-SWITCH-in-Asia Project, AIT-CI submitted a proposal to UNESCO designed to solve urban water and sanitation problems by providing curriculum modules to high schools. The Indonesian Aerospace Industry reported that AIT-CI's suggestion regarding the production of amphibious aircraft was approved. It is now being designed and will be marketed starting 2012. AIT-CI will propose some feasibility studies for the development of seaports in Indonesia. AIT-CI outreach to the National Agency for Disaster Mitigation has resulted in engagement with the agency in some of its projects.

### **GMSARN**

The Greater Mekong Subregion Academic and Research Network (GMSARN) comprises of eleven of the region's top-ranking academic and research institutions. GMSARN carries out activities in the following areas: human resources development, joint research, and dissemination of information and intellectual assets generated in the Greater Mekong Subregion (GMS). GMSARN seeks to ensure that the holistic intellectual knowledge and assets generated, developed and maintained are shared by organizations within the

region. Primary emphasis is placed on complementary linkages between technological and socio-economic development issues.

This year, the network published the third volume of the GMSARN International Journal series. The fourth GMSARN International Conference 2009 on "Energy Security and Climate Change: Problems & Issues in GMS" was held on 25-27 November 2009 at Ha Long City, Vietnam.

### intERLab

The Internet Education and Research Laboratory (intERLab), a regional hub for Internet human resources development, training and education, continued to carry forward collaborations across the Asia-Pacific region in developing cutting edge information and communication technologies (ICT). Its core activities were highlighted in Training (TEIN3 HRD) and three specific areas of Research: DUMBO, CarTalk, e-Education: CanalAVIST with VClass. In 2009, intERLab trained 287 students, consultants, and IT professionals. In total, intERLab has trained over 900 engineers from Asia-Pacific region.

#### Research

### 1. **DUMBO 2**

Digital Ubiquitous Mobile Broadband OSLR (DUMBO) is a collaboration among three main research groups: the IntERLab at the AIT, HIPERCOM/INRIA (France), and the WIDE Project (Japan) to develop an emergency network based on Mobile Ad hoc Network. Its main objective is to provide a multimedia communication network without any pre-existing network infrastructure in the least possible time. A public demonstration in 2006 confirmed that DUMBO could effectively enable communications via wireless satellite connections, using IPStar satellite, among simulated disaster sites with wireless mobile ad hoc networks in Phuket and the headquarters at IntERLab. DUMBO-2 (the second phase of DUMBO) focused on extending an emergency wireless network to include vehicle-to-infrastructure for post-disaster rescue operation where

limited fixed network infrastructure can be reached. DUMBO-2 prototypes were demonstrated at the 8th International Conference on ITS Telecommunications (ITST 2008) in Phuket, Thailand, and the technology platform was subsequently used in Wireless Internet-Emergency Workshop (WirelessU) in 2009. To collectively and extensively provide up-to-date information on emergency related issues, the emergency network website http://dumbo-isif.interlab.ait.asia was developed by intERLab.

### 2. CarTalk

CarTalk is an innovative research test bed based on the OLSR routing technology and the Disruption Tolerance Networking (DTN) that aims to enable effective communication among the vehicles themselves (Vehicle-to-Vehicle: V2V), and among vehicles and the infrastructure (Vehicle-to-Infrastructure: V2I) to disseminate substantial information such as traffic information, sensor information, vehicular-specific information, accident warnings and even commercial messages to drivers and passengers.

#### e-Education

#### CanalAVIST with VClass

Together with the ASEAN Virtual Institute of Science and Technology (AVIST) and the ASEAN Science and Technology Research and Education Network Alliance (ASTRENA), intERLab operates CanalAVIST, a network that provides channels for seamless education,

teaching, training, conferencing, lectures and talks for ASEAN countries.

CanalAVIST makes use of intERLab's own VClass e-learning platform to deliver lectures and streaming VDO ranging from low-bitrate to high-definition quality. Live and archived materials are streamed over the high bandwidth TEIN3 network. Broadcasting events in 2009 included (i) International Conference on Sustainable Development in the Context of Climate Change from AIT in Thailand to AIT Center in Vietnam and Polytech Nice in France (ii) The ACGRID School on Advanced Computing and Grid Technologies for Research from Institut de la Francophonie pour l'Informatique in Hanoi, Vietnam to AIT, Kasetsart University and University Network.

### 4. Training

#### **TEIN3 HRD**

IntERLab has evolved to become the center for the third generation of the Trans-Eurasia Information Network in Human Resource Development (TEIN3 HRD), under the management of the Delivery of Advanced Network Technology to Europe (DANTE). intERLab played a vital role in supporting TEIN3 project's main objectives in promoting the development of national research and education networking and collaborative advanced network application in TEIN members in the Asian region. The TEIN3 KICK-OFF workshop was conducted in 2009 with participants representing Network Operation Center (NOC) teams from respective National Research and Education Networks of 11 countries.





### RESEARCH AND OUTREACH CENTERS

# ASEAN Regional Center of Excellence on Millennium Development Goals (ARCMDG)

The ASEAN Regional Center of Excellence on Millennium Development Goals (ARCMDG) is dedicated to the promotion and achievement of the MDGs in Southeast Asia through education, training and research. The Center avails of the considerable intellectual strengths of AIT's world-class faculty and its extensive international partners. ARCMDG is a regular member of the UN NGO Informal Regional Network (UN-NGO-IRENE), a regulating body that facilitates NGO actions aiming to achieve the Millennium Development Goals (MDGs). Through a Memorandum of Understanding, ARCMDG works with the United Nations Development Fund for Women to carry out MDG-related activities of mutual interests in the region.

This year, ARCMDG organized an international research colloquium, several training programs and a workshop on several key knowledge areas such as the "Role of NGOs and Academia in Achieving the MDGs in Asia"; "Project Management for Sustainable Hygiene, Sanitation and Water Supply"; and "Information Technology for Development Planning, Management and Governance".

### Center for Excellence (CoEN) in Nanotechnology

The Center of Excellence in Nanotechnology (CoEN) at AIT is supported jointly by the National Nanotechnology Center (NANOTEC) of the National Science and Technology Development Agency (NSTDA) of Thailand and the Asian Institute of technology (AIT). CoEN supports innovative research suited to the region, education and training of highly qualified personnel and seeks to increase public and industrial awareness of nanotechnology. The unifying concept in the Center is to make use of inexpensive wet-chemical methods to fabricate innovative materials and futuristic device components. Research encompasses working in the domain of "poor-man's nanotechnology".

Current research activities at CoEN focuses on dyesensitized solar cells, piezotronic devices, gas sensors, bio-diagnostic tools, environmental mitigation





### Center of Excellence in Nanotechnology opens modern new facility

A modern new facility for the Center of Excellence in Nanotechnology (CoEN), under the School of Engineering and Technology (SET), was officially opened at AIT in 2009. The unveiling event for the new facility was part of SET's Open House to celebrate AIT's 50th Anniversary on September 8. The Center's new home is jointly funded by AIT and NANOTEC/NSTDA (National Nanotechnology Center/National Science and Technology Development Agency, Thailand) and is housed at the Outreach Building in the center of AIT's main campus.

through visible light photocatalysis, self-organization of nanoparticles, and layer-by layer growth from colloidal particles, amongst others. The Center's researchers carry out cutting-edge cross-disciplinary research. More than eighteen peer-reviewed journal and international conference papers were published in 2009. A textbook, *Fundamentals of Nanotechnology*, which was co-authored by Visiting Professor Gabor L. Hornyak (Colorado School of Mines) and Prof. Joydeep Dutta, Director of CoEN, was acclaimed as one of the "World's Outstanding Academic Titles for 2009" by "Choice: Current Reviews for Academic Libraries", which is printed by the Association of College and Research Libraries, and a Division of the American Library Association.

### Asian Center for Soil Improvement and Geosynthetics (ACSIG)

AlT's Asian Center for Soil Improvement and Geosynthetics (ACSIG) has continuously catered to the industrial and construction industry of both public and private sector. In Thailand, they included Ceteau Fareast Limited, Thailand Marine Department, Tencate Geosynthetics Limited., Thai Wiring System Company Limited, and Vigor Merger Company Limited among others. Apart from Thailand, ACSIG also catered to companies from Malaysia, India and Iran. The center organized two major activities this year a One-Day Short Course on Geosynthetics Applications and PLAXIS Numerical and an International Symposium on Geotechnical Engineering, Ground Improvement, and Geosynthetics for Sustainable Mitigation and Adaptation to Climate

Change including Global.

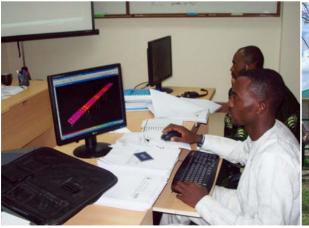
#### **Habitech Center**

AlT's Habitech Center focused on establishing new relationships with agencies and successfully created satellite centers mainly in Nepal, Bhutan and Myanmar. The Center conducted several training programs and successfully transferred its interlocking brick technology to various organizations, private entrepreneurs and the United Nations Children's Fund (UNICEF) through its new satellite centers. Manuals on the production and construction of soil-cement interlocking bricks were published this year.

Habitech Center responded to the destruction caused by Cyclone Nargis and worked with several agencies such as Oxfam-Novib, Sitagu Buddhist Missionary Center and UNICEF to build a total of forty new child-friendly primary schools located within the Irrawaddy Delta, Myanmar. The interlocking-bricks technology developed by Habitech Center of SET, AIT was used to construct the schools. Habitech Center provided technical support by providing equipment to produce interlocking bricks and conducted training programs on production and effective construction with interlocking bricks.

#### **ACECOMS**

In 2009, the Asian Center for Engineering Computations and Software (ACECOMS) conducted a wide range of activities including seminars, workshops, re-





search and consulting projects, as well as working on software development. Over 10 events on computational and design aspects were organized in Thailand and others countries. Participants ranged from professional engineers, public officials and academics. Several new projects were initiated and completed ranging from development of new construction technologies for earthquake resistance to performance based evaluation and wind tunnel testing of some of the tallest buildings in the Philippines. ACECOMS together with the Structural Engineering field of study was involved in the design of the tallest free-standing stack in Thailand.

ACECOMS was also involved in the organization of the 33rd International Association for Bridge and Structural Engineering (IABSE) Symposium 2009, which was brought to Southeast Asia for the first time. ACECOMS provided support to the organization of the symposium as the Coordinator of scientific activities; including abstract review, paper review, and preliminary registration. To further develop its collaboration, a Memorandum of Understanding was signed with the Association of Structural Engineers of the Philippines, Inc. (ASEP). As the first activity of this collaboration, the 3rd Asia Conference on Earthquake Engineering (ACEE) 2010 is being organized jointly with Association of Structural Engineers of the Philippines, Inc. (ASEP), Asian Institute of Technology (AIT), Tokyo Institute of Technology (TIT), and Engineering Institute of Thailand (EIT).

### Asian Center for Transportation Studies (ACTS)

In 2009, a major research project involved Asian Center for Transportation Studies (ACTS), Toyota Motor Thailand Co., Ltd. (TMT), WHO Collaborating Center for Injury Prevention and Safety Promotion Khon Kaen Hospital, and Department of Rural Highways. The project sought to study the role of knowledge dissemination in improving road safety for rural communities. Community leaders were selected to lead the initiative at Ban Gota, Khon Kaen, where a significant improvement in the risk behavior of motorists and a reduction in black spots was observed. ACTS also conducted two in-house road safety training programs for 30 government officials from Vietnam.

### **WHO Collaborating Centre**

The Center continued its operation in accordance with its mandate to perform basic and applied research on community (rural, peri-urban and urban) drinking water supply, waste disposal, wastewater use, water resources development, soil and air pollution in relation to human health. It conducted research on health impact assessment, health risk assessment and environmental management for health risk reduction and to provide technical guidance and consulting to WHO, its Member States and development partners. The Center continued to educate and train engineers, scientists and health professionals in the field of environmental health, related to drinking water supply and waste disposal, water management and wastewater use, and other related areas. Work on introduction of Water Safety Plans into the AIT curricula was initiated. Research on the impact of the 2004 tsunami on household water treatment practices by the population of affected areas in Sri Lanka was carried out in the framework of participation of the centre in the Network to Promote Household Water Treatment and Safe Storage (HWTS) and reported to and integrated into the Network operations at the 2009 Dublin meeting.

### **Thailand Accident Research Center (TARC)**

In 2009, the Thailand Accident Research Center (TARC) conducted a comprehensive study on the roadside hazards accidents. The study sponsored by the Department of Highways and the World Bank revealed that deficient run-off road protection systems contribute predominantly to accidental death on the national highways. TARC was invited to serve as a member of Board of Directors of the Thailand National Road Safety Center. TARC delivered lectures at conferences, seminars, and training programs at the annual meeting of the Transportation Research Board (TBB), Washington D.C.; Accident In-Depth Study at the Thai Senate Commission; Foundation of Consumers; Ministry of Public Health; and others. This year, TARC also prepared 14 road safety knowledge books. All were disseminated during the Thailand National Road Safety Seminar. Experts are TARC were also interviewed by eight television and radio programs during the year.



Activities at the Center of Excellence in Nanotechnology AIT include, but not exclusively, research and development focused on the application of nanoparticles, nanomaterials, devices and sensors such as synthesizing conductive coatings of zinc oxide with fluoride for solar cell applications (shown above).



# **HONORARY FACULTY**

The Institute is deeply grateful that Her Royal Highness Princess Maha Chakri Sirindhorn has seen fit to share her expertise and experience with faculty, staff and students, as an Honorary Faculty Member. In this singular position, Her Royal Highness is associated with the Remote Sensing and Geographic Information Systems Field of Study.

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B.E., Univ. of Western Australia; M.Eng.Sc. & Ph.D., Univ. of New South Wales, Australia Visiting Associate Professor, Transportation Engineering Field of Study

#### John C. S. Tang

B.S., M.S., Ph.D., Univ. of Florida, U.S.A.

Professor, School of Management

#### Gopal B. Thapa

B.Sc., Tribhuvan Univ., Nepal; M.Sc., D.Tech.Sc., AIT, Thailand Professor, Coordinator Regional & Rural Development Planning Field of Study

#### Nitin Kumar Tripathi

B.Tech., Regional Eng. College, India; M.Tech., IIT.; Ph.D., IIT., Kanpur, India Associate Professor, Coordinator Remote Sensing & Geographic Information Systems Field of Study and Director, Academic Quality Assurance and Accreditation

#### **Sundar Venkatesh**

B.Sc.,B.L.,Univ. of Calcutta; Ph.D., Indian Inst. of Management, India Visiting Associate Professor, School of Management

#### Chettiyappan Visvanathan B.Tech.,

IIT, Madras, India; M.Eng., AIT, Thailand; D.Eng., Inst. Nat'l. Polytech., Toulouse, France Professor, Environmental Engineering & Management Field of Study

#### Esa Matti Juhani Viljakainen

M.Sc. and Ph.D., Helsinki Univ. of Technology, Finland Visiting Faculty, Coordinator Pulp & Paper Technology Field of Study

#### Pennung Warnitchai

B.Eng., Chulalongkorn Univ., Thailand; M.Eng., Ph.D., Tokyo Univ., Japan Associate Professor, Coordinator, Structural Engineering Field of Study

#### Winai Wongsurawat

Ph.D., Managerial Economics & Strategy, Kellogg School of Management, Northwestern University, U.S.A.; B.A.S., Economics & Mathematical Computational Sciences, Stanford University, U.S.A. Assistant Professor, School of Management

#### Vilas Wuwongse

B.Eng., M.Eng., D.Eng., Tokyo Inst. of Tech., Japan Professor, Computer Science Field of Study, and

#### **Amararatne Yakupitiyage**

B.Sc., Univ. of Kelaniya, Sri Lanka; M.Sc., AIT, Thailand; Ph.D., Univ. of Stirling, Scotland Associate Professor, Aquaculture & Aquatic Resources Management Field of Study

#### **Badir Yuosre**

B.Sc., Univ. of Garyounis, Libya; M.Sc., Univ. of Putra Malaysia, Malaysia; M.Sc., Swiss Federal Inst. of Tech., Switzerland Assistant Professor, School of Management

# **PARTNERS IN 2009**

As an independent and autonomous institute with international status, AIT partners with public and private sector partners throughout the region and with some of the top universities and international organizations around the world.

#### **GOVERNMENTS**

#### Austria

· Austrian Development Agency (ADA)

#### **Azerbaijan**

 Ministry of Communication and Information Technologies (MICT) of the Republic of Azerbaijan

#### Canada

 Her Majesty the Queen in right of Canada represented by the Minister for International Cooperation acting through the Canadian International Development Agency

#### China

- State Bureau of Surveying and Mapping of China (SBSM)
- Department of International Cooperation and Exchanges, Ministry of Education

#### **Ethiopia**

· Ministry of Agriculture and Rural Development

#### Finland

· The Ministry of Foreign Affairs

#### France

· Ministry of Foreign Affairs

#### Indonesia

- Deputy of Facilities and Infrastructure, Ministry National Development Planning/National Development Planning Agency (BAPPENAS), Republic of Indonesia
- The Ministry of Public Works, Republic of Indonesia

#### Iran

 The Iranian Space Agency (ISA), Ministry of Communication and Information Technology

#### Japan

- Japan Aerospace Exploration Agency (JAXA)
- The National Space Development Agency
- Korea International Cooperation Agency (KOICA)

#### Nepal

- International Centre for Integrated Mountain Development (ICIMOD)
- The Ministry of Science and Technology; High Level Commission for Information Technology (HLCIT)

#### Norway

The Norwegian Ministry of Foreign Affairs

#### Pakistan

- The Higher Education Commission
- Commission on Science and Technology for Sustainable Development (COMSATS)
- Government of the Punjab

#### **Philippines**

Department of Science and Technology (DOST)

#### Sri Lanka

- · Ministry of Housing and Common Amenities
- The Urban Development Authority (UDA)
- Ministry of Human Resource Development, Education and Cultural Affairs
  - "Secondary Education Modernization Project"

#### Sweden

· Swedish International Development Agency (Sida)

#### **Thailand**

- Software Park Thailand, Technology Management Center, National Science and Technology Development Agency
- National Science Museum (NSM)
- Office of the Non-Formal and Informal Education (ONIE)
- Sirindhorn International Environmental Park Foundation (SIEP) under the Patronage of HRH Princess Maha Chakri Sirindhorn
- Electricity Generating Authority of Thailand
- NECTEC, NSTDA National Electronics and Computer Technology Center and WD - Western Digital (Thailand)
  - Department of Mineral Fuels, Ministry of Energy
  - Petroleum Institute of Thailand
  - $\bullet\,$  PTT Exploration and production Public Co., Ltd
- Chevron Thailand Exploration and Production Ltd.
- CUEL Ltd.
- Thai Nippon Steel Engineering and Construction Corporation Ltd.
- WorleyParsons (Thailand) Ltd.
- The Pollution Control Department, Thailand and The Swiss National Centre of Competence in Research North-South Switzerland
- Department of Mineral Resources (DMR)
- National Electronics and Computer Technology Center, National Science and Technology Development Agency

#### The Netherlands

 The Minister for Development Cooperation of the Kingdom of the Netherlands

#### Vietnam

- The Ministry of Education and Training (MOET), Government of Vietnam
- · Department of Home Affairs, Can Tho City
- Department of Science and Technology, Can Tho City
- Ho Chi Minh City Project 300
- Petrovietnam
- · Electricity of Vietnam (EVN)

#### **UNIVERSITIES**

#### Australia

- The International Centre of Excellence in Water Resources Management (ICE WaRM)
- Royal Melbourne Institute of Technology
- · Deakin University, Geelong, Victoria
- University of Wollongong

#### Austria

 Centre for Geoinformatics, University of Salzburg, Salzburg, Austria

#### Bangladesh

- · Independent University
- BRAC University
- · ASA University Bangladesh (ASAUB)
- Southeast University (SEU)
- · Ahsanullah University of Science and Technology (AUST)
- · Eastern University
- · Chittagong University of Engineering & Technology
- East West University (EWU)
- Asian University for Women (AUW)
- · American International University, Bangladesh (AIUB)
- · Institute of Water Modelling

#### Cambodia

 The Faculty of Law and Economics of Phnom Penh; The University of Lyon II AND Royal University of Law and Economics (RULE)

#### Canada

• Universite de Montreal

#### China

- International Research and Training Center for Rural Education
- · Yunnan University
- · Guanxi University
- Peking University Resource College (PKURC)
- · Kunming University of Science and Technology
- · Chinese Academy of Engineering
- · Chinese Academy of Surveying and Mapping
- Wuhan University
- Lingnan (University) College, Zhongshan University
- The School of Management & Economics of Beijing Institute of Technology

#### Denmark

- Technical University of Denmark
- Roskilde University Center (RUC)
- Copenhagen Business School (CBS), Denmark

#### Finland

- · University of Jyvaskyla
- · University of Oulu
- Helsinki University of Technology
- Helsinki School of Economics & Business Administration (HSEBA), Finland

#### France

- University of Nice-Sophia Antipolis
- Universite Pierre et Marie Curie
- Centre de Cooperation Internationale en Recherche Agronomique pour le Developpement
- University of La Rochelle
- CERAM Sophia-Antipolis
- Ecole Superieure de Commerce de Nantes Atlantique (ESCNA)

- · Higher Education Commission
- The Institut National Des Sciences Appliquees De Toulouse (INSAT)
- Institut Des Sciences Et Des Techniques De L'equipement Et De L'environnement Pour le Developpement
- The Institut d'Etudes Politiques de Paris
- National Institute of Telecommunications
- The Institut National des Telecommunications EVRY
- The Network of Instituts Nationaux Polytechniques (Grenoble, Lorraine, Toulouse -France)
- University of Pantheon-Sorbonne (Paris I)
- University Pantheon-Assas (Paris II)
- · University of Paris-Sorbonne (Paris IV) -IUE
- University of Paris Dauphine (Paris IX)
- University Jean Moulin Lyon 3
- · LM Lyon
- ESCP-EAP

#### Germany

- · Bremen University of Applied Sciences
- Technische Universitaet Muenchen (TUM) / Technical University of Munich
- · The International University of Germany
- European Business School (EBS), Schloss Reichartshausen, Oestrich-Winkel
- Stuttgart Institute of Management & Technology (SIMT)
- Leipzig Graduate School of Management, Handelshochschule Leipzig (HHL)

#### **Hong Kong**

 University of Hongkong (Department of Real Estate and Construction)

#### India

- TempleCity Institute of Technology and Engineering (TITE)
- · Allahabad Agricultural Institute Deemed University
- Kalinga Institute of Industrial Technology (KIIT) University, Orissa
- K.J. Somaiya Institute of Management Studies and Research (SIMSR)
- Sri Jayachamarajendra College of Engineering, Mysore
- Vishwakarma School of International Studies
- Pearl School of Business
- Padampat Singhania School of Engineering (PSSE)
- Shivaji University (SU)

#### Indonesia

- · Universitas Katolik Parahyangan
- · Universitas Padjadjaran
- Universitas Andalas (UNAND)
- · Udayana University, Bali
- University of Sriwijaya
- Universitas Mulawarman
- State Islamic University
- Islamic University of Indonesia
- Universitas Gadjah Mada
- Faculty of Engineering, Universitas Gadjah Mada
- AIT Center Indonesia (AIT-CI) and School of Engineering and Technology (SET/AIT)
- Pt. Damba Intra
- Institut Teknologi Sepuluh Nopember (ITS) or Sepuluh Nopember Institute of Technology
- Bogor Agricultural University
- Petra Christian University, Surabaya
- Universitas Atma Jaya Yogyakarta

#### Iran

- University of Science and Culture (USC)
- · Agricultural Engineering Research Institute (AERI)
- University of Tabriz
- · Amirkabir University of Technology
- Iranian Research Organisation for Science and Technology (IROST)
- Islamic Azad University (IAU)

#### Japan

- Nagaoka University of Technology
- Research and Development Center of Nippon Koei Co., Ltd
- · Hokkaido University
- Institute for Global Environmental Strategies (IGES)
- · The National Institute of Informatics, Tokyo
- · Utsunomiya University
- The University of Tsukuba
- International Center for Urban Safety (ICUS) Engineering, Institute of Industrial Science, The University of Tokyo
- · Saga University
- Toyo University
- · The University of Tokyo
- Mie University (Tsu, Japan)
- Tokyo Institute of Technology
- Keio Research Institute at SFC (KRIS)
- · Keio University
- Department of Civil and Earth Resources Engineering, Kyoto University, Japan
- · Department of Urban Management, Kyoto University
- The University of Tokyo, Institute of Industrial Science, Asian Association of Remote Sensing
- University of Yamanashi, Center of Excellence for Research and Education on Integrated River Basin Management in Asian Monsoon Region
- Ochanomizu University
- Tohoku University
- · Korea University

#### Kazakshtan

- JSC New University Astana
- Almaty Institute of Power Engineering & Telecommunication (AIPET)

#### Korea

- Korea Institute of Geoscience and Mineral Resources
- Yeungnam University
- Korea University of Science and Technology
- Seoul National University
  - SK Construction & Engineering Co., Ltd.
- Korea Infrastructure Safety & Technology Corporation
- · Konkuk University
- · Hanyang University
- Korea Advanced Institute of Science and Technology
- Korea Institute of Science and Technology
- Korea Institute of Science and Technology, International R&D Academy
- Kumoh National University of Technology
- Institute of Energy Systems and Climate Change (IECC),
   The Ajou University

#### Kyrgyz Republic and Tajikistan and His Highness Aga Khan

University of Central Asia (UCA)

#### London

- · University of East London
- · The City University, London

#### Malaysia

Universiti Putra Malaysia (UPM)

#### Myanmar

- · Water, Research and Training Center (WRTC)
- Yangon Technological University
- Mandalay Technological University

#### Nepal

- South Asian Institute of Management (SAIM)
- Pokhara University
- · Local Development Training Academy (LDTA)
- Nepal Academy of Science and Technology
- National Centre for Educational Development (NCED)
- · Tribhuvan University
- High Level Commission for Information Technology (HLCIT), Ministry of Science and Technology, His Majesty's Government of Nepal (MOST)
- Kathmandu University, School of Science, School of Engineering and School of Arts
- · Purbanchal University

#### Nigeria

• Federal University of Technology, Akure, Nigeria

#### Norway

- · Norwegian University of Life Sciences
- The Foundation for Scientific and Industrial Research (SINTEF)
- Norwegian University of Science and Technology

#### Pakistan

- Balochistan University of Engineering and Technology, Khuzdar (BUETK)
- National College of Business Administration and Economics (NCBA&E)
- Mehran University of Engineering and Technology, Jamshoro (MUET)
- University of Engineering & Technology, Lahore (UET)
- NED University of Engineering and Technology, Karachi
- Sukkur Institute of Business Administration (SIBA)
- University of Engineering & Technology, Taxila (UET)
- National University of Sciences & Technology, Islamabad (NUST)
- The University of Faisalabad (TUF)
- University of Science & Technology, Bannu, Pakistan
- University of Balochistan (UOB)
- · Lahore College for Women University
- University of Engineering and Technology, North-west Frontier Province

#### **Philippines**

- Asian Institute of Management
- Mindanao Polytechnic State College

#### **Poland**

• Poznań University of Economics

#### Singapore

Nanyang Business School, Nanyang Technological University

#### Spain

- Universitat Politecnica de Catalunya (UPC)
- Escuela de Alta Direccion y Administracion (EADA), Barcelona

#### Sri Lanka

- · South Asian Institute of Technology and Management
- International College of Business and Technology (ICBT), a member of Ceylinco Consolidated
- · Sabaragamuwa University of Sri Lanka
- · Rajarata University of Sri Lanka
- University of Peradeniya

#### Sweden

- University of Boras
- · KTH, Kungliga Tekniska hogskolan
- · Chalmers University of Technology
- · The University of Kalmar
- · Linköping University

#### **Switzerland**

- · University of Applied Sciences Eastern Switzerland
- National Centre of Competence in Research North-South (NCCR N-S), Center for Development and Environment, University of Berne Steigerhubelstrasses 3
- Swiss Federal Institute of Technology Zurich (ETH Zurich) and Asian Disaster Preparedness Center (ADPC)

#### Taiwan

- National Yunlin University of Science and Technology
- · National Cheng Kung University
- · Yuan Ze University
- · National Taiwan Ocean University
- · Chia Nan University of Pharmacy and Science
- · National Taiwan University, Department of Civil Engineering
- · National Taiwan University
- · National Chung Hsing University

#### **Thailand**

- · Faculty of Engineering, Chulalongkorn University
- Chulabhorn Research Institute and Mahidol University
- Srinakharinwirot University Software Industry Promotion Agency
- Srinakharinwirot University Institute for the Promotion of Teaching Science and Technology
- Software Industry Promotion Agency (SIPA)
- Asian University (AU)
- Environmental Research and Training Center (ERTC)
- Kasetsart University, Faculty of Forestry
- Chiang Mai University
- Prince of Songkla University
- Ruamrudee International School
- National Nanotechnolgy Center (NANOTEC), National Science and Technology Development Agency (NSTDA)
- · Rangsit University
- Pathumthani Province and Educational and Research institutions in Pathumthani Province
- · Chulabhorn Research Institute
- · Chulachomklao Royal Military Academy

#### The Netherlands

• The UNESCO-IHE Institute for Water Education (UNESCO-IHE)

#### **United States**

- · University of Rhode Island, The Coastal Resources Center
- Robert Morris University
- Oregon State University (OSU)
- The University of Texas at Austin
- Michigan State University, College of Agriculture and Natural Resources, Office of International Studies and Programs, East Lansing, Michigan
- Department of Agricultural Economics, Kansas State University, Kansas

#### Vietnam

- Danang University of Technology (DUT)
- · FPT University
- · International University
- University of Transport and Communications
- · Hanoi University of Technology
- · Hanoi University of Agriculture
- Hue University of Agriculture and Forestry
- · Vietnam National University
- AIT in Vietnam and School of Engineering and Technology
- Vietnam Petroleum Institute
- The Academy of Bank, Vietnam (AB,Vn)
- The Banking University of Ho Chi Minh City (BU)
- The University of An Giang
- · The University of Fisheries (UoF)

#### Yugoslavia

• University of Novi Sad, Faculty of Technical Sciences, Serbia

#### PRIVATE SECTOR

#### Bangladesh

• Design Planning and Management Consultants Ltd. (DPM)

#### Finland

• Metso Paper, Inc

#### India

- Global Reach
- GIS Development Private Limited, Noida
- Speck Systems Ltd., Hyderabad, India
- Tata Technologies Ltd. (TTL)

#### Iran

· Research and Consulting Company of Shakhes-Sazan

#### Myanmar

- · Myanma Computer Company Ltd
- United Network Co., Ltd (UNCL)

#### Norway

Norwegian Electricity and Vietnam Electricity (EVN)

#### Singapore

LifeWay Holdings Pte Ltd

#### Sri Lanka

- Sri Lanka Land Reclamation & Development Corporation
- Ceylinco Education Group
- Sri Lankan Airlines Limited

#### Taiwan

• ST International Co., Ltd., BVI

#### **Thailand**

- Amata Corporation Public Company Limited
- Commerce Siam Institute
- · Sodexo Support Services (Thailand) Ltd.
- Innotech Golf Co., Ltd.
- Siam City Bank Public Company Ltd.
- Western Digital (WD) (Thailand) Co., Ltd.
- · Donaldson (Thailand) Ltd.
- . IRM
- · Total Gas & Power Thailand
- · Thai Carbon Black PCL

#### **ASSOCIATION**

#### France

• Chamber of Commerce and Industry

#### France & Thailand

 Total E&P Thailand (TEPT) and Total Professors Association (TPA)

#### Myanmar

• Myanmar Engineering Society (MES)

#### **Thailand**

· The AIT Alumni Association

#### INTERNATIONAL ORGANIZATIONS

#### Bangladesh

Yunus Center

#### Denmark

• UNEP Collaborating Centre on Water and Environment

#### **European Commission**

• COGEN 3 PMU

#### France

• Télécoms Sans Frontiéres (TSF)

#### Germany

· Katholischer Akademischer Auslander-Dienst (KAAD)

#### Indonesia

- ASEAN Foundation
- ASEAN Centre for Energy (ACE)
- UN Partnership Research Fund OWATER Project

#### Japan

• Internation Bank for Reconstruction and Development

#### Tanzania

• The Global Horticulture Initiative (GlobalHort)

#### **Thailand**

- The Asian and Pacific Centre for Transfer of Technology (APCTT), ESCAP
  - Asian Development Bank (ADB)
  - UNEP RRC.AP United Nations Environment Programme Regional Resource Centre for Asia and the Pacific
  - UNESCAP United Nations Economic and Social Commission for Asia and the Pacific
- Asian Development Bank (ADB)
- · Habitat for Humanity Thailand
- Thai Network Information Center Foundation
- The Siam Cement Public Company Limited (SCG)
- Asian Disaster Preparedness Center (ADPC)
- Coordinating Committee for Geoscience Programmes in East and Southeast Asia
- United Nations Environment Programme (UNEP)

#### **The Netherlands**

- · Gender and Water Alliance (GWA)
- International Agricultural Centre, Wageningen

#### **United States**

- International Fellowships Fund, Inc.
- The Bridge Fund (TBF)

# AUDIT REPORT OF CERTIFIED PUBLIC ACCOUNTANT

#### To the Board of Trustees of Asian Institute of Technology

I have audited the accompanying balance sheet of Asian Institute of Technology as at 31 December 2009, and the related statements of revenues and expenses, changes in fund balances and cash flows for the year then ended. These financial statements are the responsibility of the Organization's management. My responsibility is to express an opinion on these financial statements based on my audit. The financial statements of Asian Institute of Technology Limited for the year ended 31 December 2008 were audited by another auditor whose report dated 11 March 2009 expressed an unqualified opinion on those statements.

I conducted my audit in accordance with generally accepted auditing standards. Those standards require that I plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. I believe that my audit provides a reasonable basis for my opinion.

In my opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Asian Institute of Technology as at 31 December 2009, and the revenues and expenses, the changes in fund balances and cash flows for the year then ended, in accordance with generally accepted accounting principles appropriate for non-profit organization as set out in Note 2 to the financial statements.

(Bongkot Amsageam) Certified Public Accountant Registration No. 3684

KPMG Phoomchai Audit Ltd. Bangkok 5 March 2010

## **BALANCE SHEETS**

as at 31 December 2009 and 2008

	Note	2009	2008
Assets		(in	Restated Baht)
Current assets			
Cash and cash equivalents	4	605,278,622	148,976,413
Current investments	5	236,158,048	609,535,835
Accounts receivable	6, 18	79,756,827	81,715,132
Receivables from Program fund		18,675,399	18,004,086
Inventories		111,803	111,803
Assets held on behalf of donors	9	522,019,500	523,882,777
Assets held on behalf of UNEP RRC.AP	10	204,563,502	110,681,075
Other current assets	18	41,033,573	20,806,655
Total current assets		1,707,597,274	1,513,713,776
Non-current assets			
Restricted deposits of financial institutions	5	15,273,741	15,273,741
Property and equipment	7	647,171,126	678,370,400
		86,073	
Advance deposits			
Advance deposits  Total non-current assets  Total assets		662,530,940	693,644,141 2,207,357,917
Total non-current assets		662,530,940	
Total non-current assets  Total assets		662,530,940	
Total non-current assets		662,530,940	
Total non-current assets  Total assets  Liabilities and fund balances	8, 18	662,530,940	
Total non-current assets  Total assets  Liabilities and fund balances  Current liabilities	8, 18 17	662,530,940 2,370,128,214	<b>2,207,357,91</b> 7
Total non-current assets  Total assets  Liabilities and fund balances  Current liabilities  Accounts payable and accrued expenses		<b>2,370,128,214</b> 142,607,952	2,207,357,917
Total non-current assets  Total assets  Liabilities and fund balances  Current liabilities  Accounts payable and accrued expenses  Advances from Program fund		<b>2,370,128,214</b> 142,607,952 270,310,962	<b>2,207,357,91</b> 7  112,012,129 269,873,183
Total non-current assets  Total assets  Liabilities and fund balances  Current liabilities  Accounts payable and accrued expenses  Advances from Program fund  Deposit payables	17	2,370,128,214 142,607,952 270,310,962 6,220,146	<b>2,207,357,917</b> 112,012,129  269,873,183  6,337,132
Total non-current assets  Total assets  Liabilities and fund balances  Current liabilities  Accounts payable and accrued expenses  Advances from Program fund  Deposit payables  Amounts due to donors	17 9	662,530,940 2,370,128,214 142,607,952 270,310,962 6,220,146 522,019,500	2,207,357,917 112,012,129 269,873,183 6,337,132 523,882,777
Total non-current assets  Total assets  Liabilities and fund balances  Current liabilities  Accounts payable and accrued expenses  Advances from Program fund  Deposit payables  Amounts due to donors  Amounts due to UNEP RRC.AP	17 9	2,370,128,214 142,607,952 270,310,962 6,220,146 522,019,500 204,563,502	2,207,357,917 112,012,129 269,873,183 6,337,132 523,882,777 110,681,075
Total non-current assets  Total assets  Liabilities and fund balances  Current liabilities  Accounts payable and accrued expenses  Advances from Program fund  Deposit payables  Amounts due to donors  Amounts due to UNEP RRC.AP  Total current liabilities	17 9	2,370,128,214 142,607,952 270,310,962 6,220,146 522,019,500 204,563,502	2,207,357,917 112,012,129 269,873,183 6,337,132 523,882,777 110,681,075
Total non-current assets  Total assets  Liabilities and fund balances  Current liabilities  Accounts payable and accrued expenses  Advances from Program fund  Deposit payables  Amounts due to donors  Amounts due to UNEP RRC.AP  Total current liabilities  Fund balances	17 9	662,530,940 2,370,128,214 142,607,952 270,310,962 6,220,146 522,019,500 204,563,502 1,145,722,062	2,207,357,917 112,012,129 269,873,183 6,337,132 523,882,777 110,681,075 1,022,786,296
Total non-current assets  Total assets  Liabilities and fund balances  Current liabilities  Accounts payable and accrued expenses  Advances from Program fund  Deposit payables  Amounts due to donors  Amounts due to UNEP RRC.AP  Total current liabilities  Fund balances  Endowment fund balances	17 9	662,530,940  2,370,128,214  142,607,952 270,310,962 6,220,146 522,019,500 204,563,502 1,145,722,062	2,207,357,917 112,012,129 269,873,183 6,337,132 523,882,777 110,681,075 1,022,786,296
Total non-current assets  Total assets  Liabilities and fund balances  Current liabilities  Accounts payable and accrued expenses  Advances from Program fund  Deposit payables  Amounts due to donors  Amounts due to UNEP RRC.AP  Total current liabilities  Fund balances  Endowment fund balances  Capital funds balances	17 9 10	662,530,940  2,370,128,214  142,607,952 270,310,962 6,220,146 522,019,500 204,563,502 1,145,722,062  162,304,747 646,992,642	2,207,357,917 112,012,129 269,873,183 6,337,132 523,882,777 110,681,075 1,022,786,296 160,481,765 693,306,321

## **STATEMENTS OF REVENUES AND EXPENSES**

for the years ended 31 December 2009 and 2008

	Note	2009	2008
		(in	Restated Baht)
Revenues			
Tuition and other fees - net	18	611,127,114	615,287,276
Research grants and contracts	18	152,662,952	167,178,39
Support operations	18	158,743,126	164,828,626
Training	18	198,836,685	220,471,64
Other contributions		2,954,699	17,491,610
Faculty secondments		57,582,027	62,415,369
Total revenues		1,181,906,603	1,247,672,930
Expenses			
Salaries and benefits	11	495,097,262	485,945,250
Materials, supplies and services	18	235,111,058	251,664,000
Contracted services		179,186,448	101,779,000
Communication and travel		69,655,006	73,030,200
Utilities and insurance		53,014,040	51,364,479
Faculty secondments		57,582,027	62,415,369
Total expenses		1,089,645,841	1,026,198,304
Excess of revenues over expenses		92,260,762	221,474,620
Depreciation	7	66,488,330	71,653,774
Excess of revenues over expenses including depreciation		25,772,432	149,820,852
Non operating income/(expenses)			
Investment Income		22,137,693	35,251,318
Gains on exchange rate		1,813,565	4,957,584
Losses on disposal of assets		(773,505)	(235,425
Net excess of revenues over expenses		48,950,185	189,794,329
Net excess of revenues over expenses of on - going			
project of program fund	17	5,830,645	54,357,10
Net excess of revenues over expenses of project close			
of program fund		43,119,540	135,437,220

**BALANCE SHEETS** 

As at 31 December 2009 and 2008

				Restric	Restricted funds			Restricted capital funds	tal funds	Total	al
Note	'	Unrestricted Current fund	Restricted fund-general	Endowment fund	Program fund	Integrated facility management	Restricted general reserve	Property and equipment	Liquid	31 December 2009	31 December 2008
						(in Baht)					
Balances 1 January, as previously reported				160,481,765	•	ı	388,288,944	693,306,321		1,242,077,030	1,063,716,564
Change in accounting policy	17	•	1	•	•		(57,505,409)		1	(57,505,409)	(22,811,471)
Reatated balance		1	1	160,481,765	1		330,783,535	693,306,321		1,184,571,621	1,040,905,093
Accumulated surplus of agency fund from											
AITVN as of 1 January		•	1	1	•	•	(2,475,470)		1	(2,475,470)	1
Adjusted loss on ROE of AITVN		•	ı	1	•		(7,419,538)	(285,684)	1	(7,705,222)	1
Adjusment of Fund Balances of AITVN as at 1 January		1	1	1		1	(330,319)		1	(330,319)	
Adjusted Balances as at 1 January		•	•	160,481,765	•		320,558,208	693,020,637	•	1,174,060,610	1,040,905,093
Additional (Deductions):											
		128,201,770	1,531,529	1,822,982	13,783,400	(51,145,445)	2,947,810	(64,878,510)	1	32,263,536	129,998,196
	71	1	06/'/96'9		0,525,539	1	•	(2,235,325)	1	10,856,004	5,439,030
Total additional (deductions) for the year	128,	128,201,770	8,099,319	1,822,982	20,306,939	(51,145,445)	2,947,810	(67,113,835)	•	43,119,540	135,437,226
Total	128,	128,201,770	8,099,319	162,304,747	20,306,939	(51,145,445)	323,506,018	625,906,802	•	1,217,180,150	1,176,342,319
Transfer to/ (from) other funds:											
<ul> <li>General Fund</li> <li>Restricted current fund</li> </ul>		•	ı	1			128,201,770		ı	128,201,770	145,911,783
- General		ı			1	ı	8,099,319	٠		8,099,319	38,952,960
- Intergrated facility management		1	•	•	•	•	(51,145,445)		•	(51,145,445)	•
- General Reserve	(128,	(128,201,770)	(8,099,319)	•	(20,306,939)	51,145,445	•	14,603,856	1	(90,858,727)	(180,438,968)
- Program fund		1	•	•	•	1	20,306,939	6,064,178	1	26,371,117	22,679,502
- Capital fund - Property and equipment		,	,	ı	(6 064 179)	ı	(14 603 854)	ı	,	(20,668,033)	(27 105 276)
					(5.11, 50.6)					(55)(55)(54)	(0.14(0.14(1.14))
Transfers (to) from funds held on behalf of others	v	•	•	•	•		744,016	417,806	•	1,161,822	(917,410)
Reclassification to receivables from Program fund		٠	•	ı	171,966,552	ı	ı	٠	•	171,966,552	113,735,597
Reclassification to advance from Program fund		1	1	1	(165,902,373)		1	1		(165,902,373)	(104,588,886)
Total	(128,2	(128,201,770)	(8,099,319)	•	(20,306,939)	51,145,445	91,602,745	21,085,840	1	7,226,002	8,229,302
Balances as at 31 December		'	'	162,304,747	•	•	415,108,763	646,992,642	'	1,224,406,152	1,184,571,621

# **STATEMENTS OF CASH FLOWS**

for the years ended 31 December 2009 and 2008

	Note	2009	<b>2008</b> Restated
		(in	Baht)
Cash flows from operating activities			
Opening fund balances	17	1,184,571,621	1,040,905,093
Closing fund balances		1,224,406,152	1,184,571,621
Movement in fund balances		39,834,531	143,666,528
Adjustments to reconcile movement of fund balances			
Doubtful debts (reversal)	6	(5,008,980)	6,822,723
Losses on disposal of assets		773,505	235,425
Depreciation		66,488,330	71,653,774
Unrealised (gain) loss on exchange rate		11,995,251	(9,317,643
Movement in fund balances from operating activities			
before changes in operating assets and liabilities		114,082,637	213,060,80
Changes in operating assets and liabilities:			
Accounts receivable		3,923,641	(38,436,552
Receivables from Program fund		(671,313)	2,053,18
Inventories		-	29,16
Other current assets		(20,226,918)	6,841,210
Advanced deposits		(86,072)	
Accounts payable and accrued expenses		30,595,823	(12,924,156
Advances from Program fund		437,778	43,157,21
Deposit payables		(116,986)	(176,253
Net cash provided by operating activities		127,938,590	213,604,61
Cash flows from investing activities			
Decrease (increase) in current investment		373,377,786	(315,161,901
Purchase of property and equipment		(36,474,354)	(32,910,860
Proceeds from sale of equipment		411,794	4,054,182
Decrease in restricted deposits of financial institutions		-	14,726,259
Net cash provided by (used in) investing activities		337,315,226	(329,292,320
Net increase (decrease) in cash and cash equivalents		465,253,816	(115,687,702
Cash and cash equivalents at beginning of year		148,976,413	257,962,510
Effects of exchange rate changes on balances held in foreign currencies		(8,951,607)	6,701,599
Cash and cash equivalents at end of year	4	605,278,622	148,976,413

**BALANCE SHEETS** 

As at 31 December 2009 and 2008

			Œ	Restricted funds				Restricted capital funds	oital funds		Total	tal
	Note	Unrestricted Current fund	Restricted fund-general	Endowment fund	Program fund	Integrated facility management	Restricted general reserve	Property and equipment	Liquid	Agency	31 December 2009	31 December 2008 Restated
Assets						(in Baht)						
Current assets												
Cash and cash equivalents	4	37,221,188	2,333,172	36,459	177,552,991	1,707	385,938,732	2,180,232	14,141	1	605,278,622	148,976,413
Current investments	5	1,468,261	1	162,300,113	43,297,261	1	29,092,413		1	1	236,158,048	609,535,835
Accounts receivable	6, 18	18,509,664	13,587,517	-	47,659,646	-	•	-	1	1	79,756,827	81,715,132
Receivables from Program fund		1	1	1	18,675,399	1	1	1	1	1	18,675,399	18,004,086
Inventories		1	111,803	-	1	1	1	-	1	1	111,803	111,803
Assets held on behalf of donors	6	1	1	1	1	1	•	1	1	522,019,500	522,019,500	523,882,777
Assets held on behalf of UNEP RRC.AP	10	1	1	1	1	1	1	-	1	204,563,502	204,563,502	110,681,075
Other current assets	18	27,870,968	958,513	4,634	11,890,661	(1,707)	77,618	232,886	-	-	41,033,573	20,806,655
Total current assets		85,070,081	16,991,005	162,341,206	299,075,958		415,108,763	2,413,118	14,141	726,583,002	1,707,597,274	1,513,713,776
Non-current assets												
Restricted deposits of financial statements	5	1	1	•	15,273,741	•	1	•	1	1	15,273,741	15,273,741
Property and equipment	7	1	1	1	•	1	1	647,171,126	1	1	647,171,126	678,370,400
Advance deposits		86,073	1	-			1	-	'	'	86,073	'
Total non-current assets		86,073	1	•	15,273,741	•	•	647,171,126	•	-	662,530,940	693,644,141
Total assets		85,156,154	16,991,005	162,341,206	314,349,699		415,108,763	649,584,244	14,141	726,583,002	2,370,128,214	2,207,357,917
Liabilities and fund balances												
Current liabilities												
Accounts payable and accrued expenses	8,18	84,162,679	11,764,334	36,459	44,038,737	1	1	2,591,602	14,141	1	142,607,952	112,012,129
Advances from Program fund	17	1	1	1	270,310,962	1	1	•	1	1	270,310,962	269,873,183
Deposit payables		993,475	5,226,671	1	•	1	1	1	1	ı	6,220,146	6,337,132
Amounts due to donors	6	ı	ı	1	1	ı	1	ı	ı	522,019,500	522,019,500	523,882,777
Amounts due to UNEP RRC.AP	01	-	-			-			-	204,563,502	204,563,502	110,681,075
Total current liabilities		85,156,154	16,991,005	36,459	314,349,699	•	•	2,591,602	14,141	726,583,002	1,145,722,062	1,022,786,296
Fund balances				1							1	100
Endowment fund balances		1	1	162,304,747	•	•	•	' '	1	•	162,304,747	160,481,765
Capital funds balances		1	1	,	•			646,992,642	1	1	646,992,642	693,306,321
General reserve		1		1		1	415,108,763		1	-	415,108,763	330,783,535
Total fund balances	17			162,304,747	·	•	415,108,763	646,992,642	'		1,224,406,152	1,184,571,621
Total liabilities and fund balances		85,156,154	16,991,005	162,341,206	314,349,699	•	415,108,763	649,584,244	14,141	726,583,002	2,370,128,214	2,207,357,917

# STATEMENT OF REVENUES AND EXPENSES

For the years ended 31 December 2009 and 2008

				Restric	Restricted funds			Restricted capital funds	tal funds	Total	tal
	Note	Unrestricted Current fund	Restricted fund-general	Endowment fund	Program fund	Integrated facility management	Restricted general reserve	Property and equipment	Liquid assets	31 December 2009	31 December 2008 Restated
						(in Baht)					
Revenues											
Tuition and other fees - net	18	464,228,000	116,732	ı	146,782,382	,	1	1	1	611,127,114	615,287,276
Research grants and contracts	18	9,381,046	281,392	ı	140,346,924	,	2,653,590	1	1	152,662,952	167,178,397
Support operations	18	2,928,678	41,204,288	ı	1	115,328,419	(718,259)	1	1	158,743,126	164,828,626
Training	18	ı	4,012,973	ı	194,823,712	,	1	1	1	198,836,685	220,471,646
Other contributions		(513,772)	2,497,734	822,737	1	ı	ı	148,000	•	2,954,699	17,491,616
Faculty secondments		ı	57,582,027	1	•	•	1	ı	1	57,582,027	62,415,369
Total revenues		476,023,952	105,695,146	822,737	481,953,018	115,328,419	1,935,331	148,000	'	1,181,906,603	1,247,672,930
Expenses											
Salaries and benefits	11	300,221,369	9,817,265	ı	165,064,430	19,994,198	ı	1	•	495,097,262	485,945,250
Materials, supplies and services	18	32,393,117	17,871,448	273,618	156,341,385	28,231,490	1	1	1	235,111,058	251,664,000
Contracted services		17,036,624	17,278,735	ı	76,859,203	68,011,886	1	1	1	179,186,448	101,779,006
Communication and travel		9,458,152	5,881,893	ı	54,254,605	958'09	1	1	1	900'559'69	73,030,200
Utilities and insurance		180,020	(637,725)	•	3,295,811	50,175,934	1		1	53,014,040	51,364,479
Faculty secondments		1	57,582,027						1	57,582,027	62,415,369
Total expenses		359,289,282	107,793,643	273,618	455,815,434	166,473,864	•	-	•	1,089,645,841	1,026,198,304
Excess of revenues over (under) expenses	1	116,734,670	(2,098,497)	549,119	26,137,584	(51,145,445)	1,935,331	148,000	•	92,260,762	221,474,626
Depreciation	_	1		1			1	66,488,330	1	66,488,330	71,653,774
including depreciation		116.734.670	(2.098.497)	549,119	26.137.584	(51,145,445)	1,935,331	(66,340,330)		25.772,432	149,820,852
Non operating income/(expenses)											
Investment income		13,561,919	6,289,432	1,273,863	1	,	1,012,479	ı	1	22,137,693	35,251,318
Gains (losses) on exchange rate		(2,094,819)	3,908,384	•	1	1	1	ı	1	1,813,565	4,957,584
Losses on disposal of assets		1	1	1	1		1	(773,505)	1	(773,505)	(235,425)
Net excess of revenues over (under) expenses	es	128,201,770	8,099,319	1,822,982	26,137,584	(51,145,445)	2,947,810	(67,113,835)	•	48,950,185	189,794,329
Net excess of revenues over expenses											
of on - going project of program fund	17	1	1	1	5,830,645	1	1	1	•	5,830,645	54,357,103
Net excess of revenues over (under) expenses of project closed of program fund	S	128.201.770	8.099.319	1.822.982	20.306.939	(51,145,445)	2.947.810	(67,113,835)	,	43,119,540	135,437,226
				-02/1-0/1							

# Notes to the financial statements For the years ended 31 December 2009 and 2008

These notes form an integral part of the financial statements.

The financial statements were authorized for issue by the President of the Institute on 5 March 2010.

#### 1. General information

The Asian Institute of Technology ("the Institute") is a regional post-graduate institution. The Institute operates on a not-for-profit basis. The Institute is located at Km 42 Paholyothin Highway, Klong Luang, Pathum Thani, Thailand

The principal activities of the Institute are providing programs in engineering, science, advanced technologies and related management and administration.

#### 2. Basis of preparation of financial statements

The financial statements issued for Thai reporting purposes are prepared in the Thai language. This English translation of the financial statements has been prepared for the convenience of readers not conversant with the Thai language.

The financial statements are prepared in accordance with Thai Accounting Standards ("TAS") and Thai Financial Reporting Standards ("TFRS") including related interpretations and guidelines promulgated by the Federation of Accounting Professions ("FAP") and with generally accepted accounting principles in Thailand.

On 15 May 2009, the FAP announced (Announcement No. 12/2009) the re-numbering of TAS to the same numbers as the International Accounting Standards ("IAS") on which the TAS/TFRS are based.

The Institute has adopted the following revised TAS/TFRS which were issued by the FAP during 2008 and 2009 and effective for accounting periods beginning on or after 1 January 2009.

Framework for the Preparation and Presentation of Financial Statements (revised 2007) (effective on 26 June 2009)

The adoption of these revised TAS/TFRS does not have any material impact on the Institute's financial statements.

The FAP has issued during 2009 a number of revised TAS/TFRS which are not currently effective and have not been adopted in the preparation of these financial statements. This revised TAS/TFRS are disclosed in note 16.

The financial statements are presented in Thai Baht unless otherwise stated. They are prepared on the historical cost basis except as stated in the accounting policies.

The Institute has taken advantage of exemptions available under the announcement made by the FAP on 20 July 2007 and has not adopted the following TAS:

TAS 14 Segment Reporting (formerly

TAS 24)

TAS 36 (revised 2007) Impairment of Assets

The preparation of financial statements in conformity with TAS and TFRS requires management to make judgements, estimates and assumptions that affect the application of policies and reported amounts of assets, liabilities, income and expenses. Actual results may differ from estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which estimates are revised and in any future periods affected.

#### **Fund accounting**

To ensure observance of limitations and restrictions placed on the use of the resources available to the Institute, the books of account of the Institute are maintained in accordance with the principles of "fund accounting" which is appropriate for a non-profit organisation. This is the procedure by which resources for various purposes are classified for accounting and reporting purposes into funds, which are in accordance with activities or objects specified. Within each fund group, fund balances which are restricted by outside sources are so indicated and are distinguished from unrestricted fund allocated to specific purposes by action of the governing board. The governing board retains full control of unrestricted funds to use in achieving institutional objectives.

#### The purposes and objects of the funds are as follows:

#### **Unrestricted Current Fund (Fund 10)**

This fund is the operating account of the Institute. It is available for general operating purposes without restrictions, such as might be imposed by a grant agency or donor.

#### Restricted Fund-General (Fund 21)

The use of this fund is restricted to those units holding nonprofit making status. This includes: academic-related services supporting academic units and certain administrative functions.

#### **Restricted Endowment Fund (Fund 22)**

The Endowment Fund is used where donors have stipulated, as a condition of their gift, that the principal is to be maintained inviolate and in perpetuity. Some, or all, of the income from the investments may be used to further the objectives of the endowment.

#### Restricted Fund-General Reserve (Fund 23)

Donors and other agencies have granted funds to the Institute on the basis that the principal is held inviolate and in perpetuity. The income from the fund is available to the Institute to be expended in accordance with agreements established by the gifting party at the point of the donation or grant. The Board of Trustees stipulates that the surplus of the unrestricted current fund, restricted fund – general and the excess of the activities under Program fund which were completed during the year each year are transferred to the General Reserve and that the funds must be held for future use.

#### Integrated facility management (Fund 24)

This fund includes the operating account of the Institute for asset maintenance and for the provision of the Institute's non-core operations, mainly on integrated facilities management service.

#### Sponsored Program Fund (Fund 30)

The sponsored program fund is subject to restrictions by donors or other agencies limiting its use for funding specific research projects, conferences, short courses, workshops or similar projects.

#### Capital Fund (Fund 41)

This fund holds the Institute's property, plant and equipment, including library books.

#### Capital Fund - Liquid Assets (Fund 42)

This fund records the renovations, repairs and replacement to the existing assets.

#### Agency Fund (accounted for as Fund 50 and Fund 60)

These funds are held on behalf of donors and other agencies and are disbursed in accordance with their instructions. The Institute has no title to these funds and the associated revenues and expenses have been excluded from the statement of revenues and expenses. The assets held on behalf of these others have been disclosed in the balance sheet together with the associated liability for the same amount to these other parties.

#### 3. Significant accounting policies

#### (a) Basis of preparation

The financial statements of the Institute comprise the funds of the Institute and those of its branch to which it holds title.

#### Branch

A Branch is an autonomous or semi-autonomous operating entity within an organisation which does not have a separate legal identity. The Branch will have separately identifiable assets, liabilities, cash flows, revenues and expenses over which it has accountability.

#### (b) Foreign currencies

Foreign currency transactions

Transactions in foreign currencies are translated into Thai Baht at the foreign exchange rates ruling at the dates of the transactions.

Monetary assets and liabilities denominated in foreign currencies at the reporting date are translated to Thai Baht at the foreign exchange rates ruling by the Bank of Thailand at that date. Foreign exchange differences arising on translation are recognised in the statement of revenues and expenses.

Non-monetary assets and liabilities measured at cost in foreign currencies are translated to Thai Baht using the foreign exchange rates ruling at the dates of the transactions.

#### Foreign entities

The assets and liabilities of foreign entities are translated to Thai Baht at the foreign exchange rates ruling at the reporting date.

The revenues and expenses of foreign entities are translated to Thai Baht at rates approximating the foreign exchange rates ruling at the dates of the transactions.

Foreign exchange differences arising on translation are recognised in the statement of revenues and expenses.

#### (c) Cash and cash equivalents

Cash and cash equivalents comprise cash balances, call deposits and highly liquid short-term investments.

#### (d) Accounts and other receivables

Accounts and other receivables are stated at their invoice value less allowance for doubtful accounts.

The allowance for doubtful accounts is assessed primarily on analysis of payment histories and future expectations

of customer payments. Allowances made are based on historical written-off patterns. Bad debts are written off when incurred.

#### (e) Inventories

Inventories are stated at the lower of cost and net realisable value.

Cost is calculated using the first in first out principle and comprises all costs of purchase and other costs incurred in bringing the inventories to their present location and condition.

Net realisable value is the estimated selling price in the ordinary course of business less the estimated costs necessary to make the sale.

An allowance is made for all deteriorated, damaged, obsolete and slow-moving inventories.

#### (f) Property and equipment

#### Owned assets

Property and equipment are stated at cost less accumulated depreciation and impairment losses.

Donated assets are stated at fair value at the time of donation, deemed cost. Subsequently they are stated at the deemed cost less accumulated depreciation.

#### Depreciation

Depreciation is charged to the statement of revenues and expenses on a straight-line basis over the estimated useful lives of each part of an item of assets. The estimated useful lives are as follows:

Campus development 10 years
Buildings 40 years
Furniture and equipment 5, 10 years
Transportation equipment 8 years
Library assets 6 years

No depreciation is provided on assets under construction.

#### (g) Impairment

The carrying amounts of the Institute's assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, the assets' recoverable amounts are estimated.

An impairment loss is recognised if the carrying amount of an asset exceeds its recoverable amount. The impairment loss is recognised in the statement of income unless it reverses a previous revaluation credited to equity, in which case it is charged to equity. Adoption of this accounting policy does not constitute full compliance with all the requirements of TAS 36: Impairment of Assets.

#### (h) Payables

Payables are stated at cost.

#### (i) Employee benefit

#### Defined contribution plans

Obligations for contributions to the Social Securities Fund, Provident Fund and Insured Saving Fund are recognised as expenses in the statement of revenues and expenses as incurred.

#### (j) Provisions

A provision is recognised in the balance sheet when the Institute has a present legal or constructive obligation as a result of a past event, and it is probable that an outflow of economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. If the effect is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and, where appropriate, the risks specific to the liability.

#### (k) Revenue

Revenue received for the provision of goods and services are recognised in the period in which the goods are provided or the services rendered.

#### Tuition and fees

Tuition and fees is recognised on an accrual basis.

#### Grant income

Grant income is recognised when it is received due to the inherent uncertainty involved in both the rights to the revenue and the timing of the revenue.

#### **Donations**

Due to the absence of any obligation on the donor to make the donation and the uncertain nature of the timing of receipt, donations have to be recognised on a cash basis.

#### Contribution in kind

These represent services donated to the Institute in the form of a secondment of faculty or staff and where the value is estimated based on the approved Institute professional salary scale. The amounts are recognised as revenues and expenses in the restricted general fund.

#### Investment income

Investment income is recognised on an accrual basis.

#### (I) Expenses

#### **Operating leases**

Payments made under operating leases are recognised in the statement of income on a straight line basis over the term of the lease. Contingent rentals are charged to the statement of revenues and expenses for the accounting period in which they are incurred.

Expenses are recognised in the period they are incurred. Interest expense is recognised in the statement of revenues and expenses as it accrues.

#### (m) Income tax

No income tax provision is made in the financial statements as the Institute is exempt from payment of income tax in accordance with the notification issued in the Royal Gazette dated 25 October, 2510 B.E. (1967).

Except for services rendered by the Conference Center, the Institute has been exempted from Value Added Tax (VAT), under Section 4(4) of the Royal Decree issued under the Revenue Code governing exemption from Value Added Tax (No. 239), B.E. 2534 which was additionally amended under the Royal Decree (No. 254) B.E. 2535.

#### 4. Cash and cash equivalents

	<b>2009</b> (in thous	<b>2008</b> and Baht)
Bank accounts Fixed deposits with maturity	199,824	90,965
three months or less	<u>405,455</u>	<u>58,011</u>
Cash and cash equivalents	<u>605,279</u>	<u>148,976</u>

As at 31 December 2009, fixed deposits of Baht 22.7 million were pledged as collateral for bank overdraft and outstanding letters of guarantee issued by the same bank (see note 14).

The currency denomination of cash and cash equivalents as at 31 December was as follows:

	<b>2009</b> (in thous	<b>2008</b> and Baht)
Thai Baht (THB) United States Dollars (USD) Vietnamese Dong (VND)	530,182 21,950 53,147	143,826 5,150
Total	605,279	148,976

#### 5. Current investments

	<b>2009</b> (in thous	<b>2008</b> and Baht)
Fixed deposits with maturity more than three months  Less Deposits pledged	251,432	624,810
as collateral	(15,274)	(15,274)
Net	236,158	609,536

As at 31 December 2009 and 2008, fixed deposits of Baht 15.27 million were pledged as collateral for bank overdraft and outstanding letters of guarantee issued by the same bank (see note 14).

The currency denomination of fixed deposits as at 31 December was as follows:

	2009	2008
	(in thous	and Baht)
=1 (-1.1)		
Thai Baht (THB)	197,108	588,176
United States Dollars (USD)	6,314	36,634
Vietnamese Dong (VND)	<u>48,010</u>	
Total	<u>251,432</u>	<u>624,810</u>

#### 6. Accounts receivable

I e

	2009	2008
	(in thous	and Baht)
Tuition and other fees	56,282	72,800
Others	<u>40,375</u>	<u>30,824</u>
	96,657	103,624
Less allowance for doubtful accounts	(16,900)	(21,909)
Net	<u>79,757</u>	<u>81,715</u>
Doubtful debts expenses (reversal) for the year	<u>5,009</u>	<u>6,823</u>

#### Aging analyses for accounts receivable were as follows:

	2009	2008
	(In thous	and Baht)
Current	36,336	38,707
Overdue:		
Less than 3 months	11,341	7,505
3-6 months	13,977	27,953
6-12 months	19,376	6,611
Over 12 months	<u>15,627</u>	<u>22,848</u>
	96,657	103,624
ess allowance for doubtful accounts	(16,900)	(21,909)
Net	<u>79,757</u>	<u>81,715</u>

# The currency denomination of accounts receivable as at 31 December was as follows:

	<b>2009</b> (in thous	<b>2008</b> sand Baht)
Thai Baht (THB)	39,492	38,634
United States Dollars (USD)	53,232	64,831
Canadian Dollars (CAD)	-	-
Swedish Krona (SEK)	2,291	-
Euro (EUR)	1,074	159
Korean Won (KRW)	<u>568</u>	
Total	<u>96,657</u>	103,624

#### 7. Property and equipment

•	Campus developmen	t Buildings	Furniture and equipment	Transportati equipmen (in thousand b	t assets	Assets under constructi	on Total
Cost							
At 1 January 2008	48,771	1,143,511	860,243	18,868	260,466	683	2,332,542
Additions	2,334	851	23,083	-	6,493	149	32,910
Disposals	-	(550)	(2,905)	(881)	-	(683)	(5,019)
Transfers							
At 31 December 2008 and 1 January 2009	51,105	1,143,812	880,421	17,987	266,959	149	2,360,433
Additions	580	2,517	20,704	133	7,056	5,484	36,474
Disposals	-	-	(471)	(3,195)	-	-	(3,666)
Transfers			(695)	695			
At 31 December 2009	51,685	1,146,329	899,959	15,620	274,015	5,633	2, <u>393,241</u>
Accumulated depreciation							
At 1 January 2008	43,275	538,482	785,115	9,897	234,370	-	1,611,139
Depreciation charge for the year	1,291	28,576	30,395	1,489	9,903	-	71,654
Disposals		(1)	(307)	(422)			(730)
At 31 December 2008 and 1 January 2009	44,566	567,057	815,203	10,964	244,273	-	1,682,063
Depreciation charge for the year	1,244	28,824	26,481	1,453	8,486	_	66,488
Disposals	-	-	(446)	(2,035)	-	-	(2,481)
Transfers	-	66	(1,120)	(1,054)	-	-	-
At 31 December 2009	45,810	595,947	840,118	11,436	252,759		1,746,070
Net book value							
At 31 December 2008	6,539	576,755	65,218	7,023	22,686	149	678,370
At 31 December 2009	5,875	550,382	59,841	4,184	21,256	5,633	647,171

The gross amount of fully depreciated property and equipment that was still in use as at 31 December 2009 amounted to Baht 1,027.35 million (2008: Baht 1,012.04 million).

#### 8. Accounts payable and accrued expenses

	2009	<b>2008</b> isand Baht)
	(III LIIOL	isana bant)
Owing to suppliers	19,814	21,830
Provision for insured saving fund tax	10,526	15,520
Advance from students	23,142	14,105
Withholding tax payable	7,119	8,667
Accrued expenses	13,799	10,992
Payables to staff	30,286	5,579
Advance received from donors	1,051	906
Others	<u>36,871</u>	<u>34,413</u>
Total	142,608	112,012

# The currency denomination of accounts payable and accrued expenses as at 31 December was as follows:

	<b>2009</b> (in thou	<b>2008</b> sand Baht)
Thai Baht (THB) United States Dollars (USD) United States Dollars (USD) Euro (EUR)	139,234 3,357 17	104,879 7,124 - 9
Total	142,608	112,012

# 9. Assets held on behalf of, and amounts due to, donors

The agency fund represents amounts held on behalf of donors and other agencies and are disbursed in accordance with their instructions. The Institute has no title to these funds or the associated revenues and expenses. The fund balances as at 31 December 2008 and 2007 and revenues and expenses for the years then ended were as follows:

	<b>2009</b> (in thou	<b>2008</b> Isand Baht)
Funds received from donors	511,434	419,876
Application of funds		
- Salaries and other benefits	5,376	6,375
- Scholarships	441,278	521,662
- Contracted services	64,831	64,633
- Communication and travel	<u>7,844</u>	3,523
Total funds applied	<u>519,329</u>	<u>596,193</u>
Deficit for the year	<u>(7,895)</u>	(176,317)
Assets held on behalf of donors		
Cash and deposits at financial		
institutions	309,480	•
institutions Fixed deposits	309,480 211,277	
	•	

522,020 523,883

of donors

	<b>2009</b> (in thou	<b>2008</b> usand Baht)
Balance at 1 January		
Amounts due to donors	510,586	685,985
Amounts due to donors - AITVN	2,475	-
Deficit for the year	(7,895)	(176,317)
Transfers from other funds	-	1,305
Transfers to other funds	(1,162)	<u>(387)</u>
Balance at 31 December	<u>504,004</u>	<u>510,586</u>
Liabilities	<u>18,016</u>	<u>13,297</u>
Total amounts due to donors	522,020	523,883

# 10. Assets held on behalf of, and amounts due to, UNEP RRC.AP

	<b>2009</b> (in thou	<b>2008</b> Isand Baht)
Funds received from UNEP RRC.AP Total funds applied Surplus/ (Deficit) the year	184,305 95,203 <b>89,102</b>	75,640 119,021 (43,381)
Assets held on behalf of UNEP RRC.A Cash and deposits at financial institutions Accounts receivable Fixed assets	198,407 3,992 2,165	107,421 1,844 1.416
Total assets held on behalf of UNEP RRC.AP	204,564	110,681
Amounts due to UNEP RRC.AP Balance at 1 January Surplus/(Deficit) for the year Balance at 31 December	94,775 89,102 183,877	138,156 (43,381) 94,775
Liabilities  Total amounts due to	20,687	<u>15,906</u>
UNEP RRC.AP	<u>204,564</u>	<u>110,681</u>

#### 11. Personnel expenses

	<b>2009</b> (in thou	2008 Isand Baht)
Wages and salaries	449,279	433,043
Social security costs	4,679	6,409
Contribution to provident fund		
and insured saving fund	16,270	17,330
Merit expenses	11,444	-
Personal income tax of employees	9,513	7,460
Other costs	<u>3,912</u>	<u>21,703</u>
Total	<u>495,097</u>	<u>485,945</u>

2009 2008 (number of employees)

#### Number of employees as at 31 December

Total	<u>755</u>	<u>913</u>
Other sections	<u>213</u>	<u>120</u>
Unrestricted and Restricted Funds	542	793

#### **Provident Fund and Insured Saving Fund**

The Institute and its staff jointly operate the Insured Saving Fund, a post-retirement defined contribution scheme. Effectively from 1 February 2004, a Provident Fund has replaced the Insured Saving Fund. The Institute contributes to the fund at the rate of 10% of their basic salary, and the employees contribute to the fund at rates 3% to 10% of their basic salary. Effectively from 1 April 2006, the Institute contributes to the fund at the rate of 5% of their basic salary, and the employees contribute to the fund at rates 3% to 5% of their basic salary. The fund is managed by TISCO Assets Management Co., Ltd. The assets of the Insured Saving Fund were substantially transferred to the new Provident Fund.

#### 12. AIT Center in Vietnam (AITCV)

The Institute has a branch operation in Hanoi, Vietnam of which the purpose of the its operation is to:

- Educate and train students, technocrats, business managers and other professionals; and
- Organize research outreach and development activities as well as the transfer of technologies as required by the economic development of the country.

The results of the operations which have been included as part of the results of the Restricted Fund - General (Fund 21), Program Fund (Fund 30), and Capital Fund (Fund 41) were summarised below:

	<b>2009</b> (in thous	2008 sand Baht)
Revenues	142,887	128,391
Expenses	104,489	88,258
Excess of revenue over expenses	38,398	40,133
Less Net excess of revenues over		
expenses of on - going projects of		
program fund	27,542	34,694
Net excess of revenues over		
expenses of closed projects of		
program fund	10,856	5,439

Financial statements for the years ended 31 December 2009 and 2008 have been prepared and approved by the management of the branch.

Significant accounting transactions between the Institute and its branch were eliminated from these financial statements.

#### 13. Financial instruments

#### Financial risk management policies

A financial instrument is any contract that gives rise to both a financial asset of one enterprise and a financial liability or equity instrument of another enterprise at the same time. The Institute does not hold or issue derivative financial instruments for speculative or trading purposes.

Risk management is integral to the whole business of the Institute. The Institute has a system of controls in place to create an acceptable balance between the cost of risks occurring and the cost of managing the risks. The management continually monitors the Institute's risk management process to ensure that an appropriate balance between risk and control is achieved.

#### Interest rate risk

Interest rate risk is the risk that future movements in market interest rates will affect the results of the Institute's operations and its cash flows.

The Institute's exposures to interest rate risk relate primarily to its cash and cash equivalents at banks as well as fixed deposits. However, since most of its financial assets bear floating interest rates or fixed interest rates which are close to the current market rates, the interest rate risk is expected to be minimal.

#### Foreign currency risk

Currency risk occurs when the value of financial instruments changes in accordance with the fluctuations of the exchange rate, which may affect gain/loss on foreign exchange currency of the present and future years.

The exposure of the foreign currency risk to the Institute relates primarily to the receipts for tuition and sponsored funds, and the receipts and payments for sponsors and donors. The adverse impact from foreign exchange rate fluctuations forced the Institute to revise the tuition fee from USD to Thai Baht, starting August 2006. Regarding the receipts and payments to sponsors and donors, the Institute has maintained the level of USD 1 million, which is sufficient for natural hedging. The USD 1 million level was approved by the Audit and Executive Committees at their meetings on 5 November 2007. The management will be closely monitoring the optimal level given the changing composition of foreign currencies. Having said all the above, the foreign currency risk has been minimised.

At 31 December, the Institute was exposed to foreign currency risk in respect of financial assets and liabilities denominated in the following currencies in Baht equivalent:

	2009	2008
	(in thou	sand Baht)
Assets		
Vietnamese Dong (VND)	101,157	-
United States Dollars (USD)	81,496	111,061
Swedish Krona (SEK)	2,291	2,221
Euro (EUR)	1,074	159
Korean Won (KRW)	<u>568</u>	-
Total	186,586	113,441
	<u> </u>	<u> </u>
Liabilities		
United States Dollars (USD)	3,357	7,124
Australian Dollars (AUD)	17	-
Euro (EUR)		9
Tatal	2 274	7 122
Total	<u>3,374</u>	<u>7,133</u>
Net exposure	183,212	106,308

#### Credit risk

Credit risk refers to the risk that counterparty may default on its contractual obligations, which may result in a financial loss.

Although the Institute has established the credit policy which includes policies and procedures with regards to tuition, fees, and other costs, it remains exposure to the risk primarily for the supply of educational services to self-support students. While proof of availability of funds is required before those students are accepted for enrollment (in the form of bank statement, land title deed, or authorised documentary proof of third party sponsorship), and also advanced payment of the first semester tuition and fees are mandatory. However, these are not sufficient and are not fully considered as collateral in respect of fees for future semesters of enrollment.

#### Liquidity risk

The Institute monitors its liquidity risk and maintains a level of cash and cash equivalents deemed adequate by management to finance the Institute's operations and to mitigate the effects of fluctuations in cash flows.

#### Fair values

The fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction.

The fair value of cash and cash equivalent, current investments, accounts and other receivable and accounts and other payable are approximate to their carrying value presented in balance sheet due to the relatively shortterm maturity of these financial instruments.

#### 14. Commitments

#### Land lease

The Institute successfully renewed the lease with the Thammasat University on 10 June 2005. The new lease also contains a Memorandum of Understanding between the Institute and Thammasat University, concerning academic co-operation, as an integral part of the new lease agreement to lease land for 30 years from 19 January 2001 to 18 January 2031 in the amount of Baht 600,000; on expiry of the lease agreement it will give the Institute the right to continue to lease the land. However, the consideration for this discount is that should the lease not be renewed and the land reverts to Thammasat University (University), so all buildings and infrastructure on the Institute's site will become the property of the University.

Furthermore, the Lease is contingent on a Memorandum of Understanding (MOU) between the University and the Institute. The MOU provides that the Institute will make available and fund a total of sixty scholarships over the thirty-year life of the Lease. Scholarships made in accordance with the MOU will cover tuition fees for qualified lecturers from the University, selected by the University, to pursue a Doctoral degree at the Institute. As at 31 December 2009, the scholarship commitment amounted to totalling Baht 77.8 million (2008: Baht 77.8 million).

#### **Bank guarantees**

As at 31 December 2009, bank guarantees which were issued by the bank on behalf of the Institute in respect of bank overdraft facility and certain performance bonds as required in the normal course of operations of the Institute amounted to totalling Baht 0.3 million (2008: Baht 5.5 million).

#### 15. Contingent liabilities

As at 31 December 2009, there are six labour cases pending for trial at the Court involving with the claims under the Labour Protection Law and the Labour Relation Law. Four cases have been decided by the Central Labour Court favourably to the Institute. However, the four cases are still pending in the Supreme Court. Other two cases are pending for trial in the Central Labour Court. The Management believes that the outcome of all these cases will be in favour of the Institute.

# 16. Thai Accounting Standards (TAS) not yet adopted

The Company has not adopted the following revised TAS that has been issued as of the reporting date but is not yet effective. This revised TAS is anticipated to become effective for annual financial period beginning on or after 1 January 2009 in the year indicated

TAS	Topic	Year
		effective
TAS 24 (revised 2007)	Related Party Disclosures	2011

Management is presently considering the potential impact of adopting and initial application of these new and revised TAS on the Institute's financial statements.

#### 17. Changes in accounting policy

Until 31 December 2008, net surplus of consolidated ongoing projects of program fund (Fund 30), AIT and AITVN (Vietnam) had been included in Statements of revenues and expense. The net surplus of on-going projects for AITVN (Vietnam) had been yearly closed to General Reserve Fund in Consolidated account whilst surplus of ongoing projects for AIT were closed to either Advances/ Receivables from Program Fund.

The Institute has changed its accounting policy to realize net surplus only for completed projects effective 1 January 2009 by reversing the net surplus of on-going projects from Statements of revenues and expense to Advances/ Receivables from Program Fund. Only surplus from completed projects will be closed to General Reserve Fund.

The change in accounting policy has been applied retrospectively and the Institute's 2008 financial statements, which are included in the Institute's 2009 financial statements for comparative purposes, have been restated accordingly. The effects of the change in accounting policy on the Institute's annual 2009 and 2008 financial statements are as follows:

	2009	2008
	(in thousand Baht)	
Advances from Program Fund		
Balance at 1 January before restated	212,368	203,905
Increase in net excess of revenues over expenses of on - going project		
of program fund	<u>57,505</u>	<u>22,811</u>
Balance at 1 January after restated	<u>269,873</u>	<u>226,716</u>
Total fund balances		
Fund balances for the year before restated	1,242,077	1,063,716
Decrease in net excess of revenues over expenses		
of on - going project of program fund, net	<u>(57,505)</u>	(22,811)
Fund balances for the year after restated	<u>1,184,572</u>	<u>1,040,905</u>
Net excess of revenues over expenses for the year		
Net excess of revenues over expenses for the year before restated	48,950	189,794
Decrease in net excess of revenues over expenses		
of on - going project of program fund, net	<u>(5,830)</u>	<u>(54,357)</u>
Net excess of revenues over expenses for the year after restated	<u>43,120</u>	<u>135,437</u>

#### 18. Reclassification of accounts

Certain accounts in the 2008 financial statements have been reclassified to conform to the presentation in the 2009 finangcial statements.

	Before reclassification	2008 reclassification	After reclassification
	(in thousand Baht)		
Balance sheet			
Accounts receivable	78,939	2,776	81,715
Other current assets	53,695	(32,888)	20,807
Account payable and accrued expenses	(142,124)	<u>30,112</u>	(112,012)
		<del></del>	
Statement of income			
Tuition and other fees	(569,608)	(45,679)	(615,287)
Research grants and contracts	(174,024)	6,846	(167,178)
Support operations	(165,288)	459	(164,829)
Training	(270,712)	50,240	(220,472)
Materials, supplies and services	263,530	(11,866)	251,664
		<u>-</u>	

The reclassifications have been made because, in opinion of management, the new classification is more appropriate to Institution.







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