

ASIAN INSTITUTE OF TECHNOLOGY

1998

ANNUAL
REPORT

CONTENTS

1998 In Brief	2
President's Message	4
Academic Developments	6
Students	8
International Partnerships for Education	10
Graduates	14
Alumni	16
Faculty	18
Research	20
Outreach	24
Resources and Administration	26
APPENDIX	
Financial Statements and Auditor's Report	32
Board of Trustees	38
1998 List of Faculty Members	40
On-Going Grant and Sponsored Research (1998)	46
Research Contracts Signed in 1998	50
Graduation Award Sponsors	51
Abbreviations	52

1998 Annual Report

of the Asian Institute of Technology

Released in April 1999

by the Office of Media and Information Services

Editor: Teresita M. Padilla

Production Staff:

Natnpha Vimuktanon, Pio Jose D. Bariata (Editorial Assistants)

Apichart Ngarmniyom, Wiwat Upalakalin (Artists)

Paitoon Tinapong, Somsak Supakorn (Photographers)

The range of research
activities carried out in

1998



reflects AIT's
diverse fields of
expertise, as it
pursues its
transformation from a
modest graduate
school of engineering
into a research
university of
international repute.



1998 IN BRIEF



Royal Audience

Her Royal Highness Princess Maha Chakri Sirindhorn graciously granted a Royal Audience on 9 October 1998 to 25 recipients of Their Majesties the King and Queen Scholarships for 1997/98.



Prof. Armand

In mid-1998, a specially constituted Presidential Search Committee began its work in earnest following the resignation of Dr. Roger G. H. Downer in May. The rigorous search culminated with the appointment of Prof. Jean-Louis Armand as the new AIT President. His appointment was announced at

PRESIDENTIAL SEARCH

the January 1999 meeting of the Board of Trustees.

Prof. Armand's term of office will begin in May 1999, coinciding with the completion of Prof. Charas Suwanwela's Interim Presidency which began on 17 August 1998.

Prof. Armand, M. Sc., 1968, and Ph.D., 1971, in Aeronautics and Astronautics, from Stanford University, California, brings to AIT extensive experience as a university administrator, a distinguished academic and a senior technology and engineering adviser and consultant to eminent organizations, including the European Parliament, the

Council of Europe and the European Commission. He has been Professor of Applied Mechanics at the University of Aix-Marseille since 1987 and is the founding President of the Institut Méditerranéen de Technologie, Marseille. Prof. Armand served as President until 1992.

Prof. Armand has written extensively in the fields of applied mechanics, ocean engineering, science and technology policy research evaluation, technology transfer, and related topics. He was awarded a Knighthood (Order of the Legion of Honor) by the French Republic in 1991.

AIT HONORS FORMER PHILIPPINE PRESIDENT

The Institute conferred the Honorary Degree of Doctor of Technology on former Philippine President, General Fidel V. Ramos, at a ceremony held at the Malacanang Palace in Manila on 20 February 1998.

General Ramos described AIT as Asia's premier technological institute for higher learning, citing the growing number of Filipino alumni who hold key positions in the public and private sectors in the Philippines. M.L. Birabhongse Kasemsri, Chair of the AIT Board of Trustees, led AIT officials at the conferment ceremony.



Welcome to Malacanang Palace. Former Philippine President, General Fidel V. Ramos, and Mrs. Amelita Ramos greet Dr. Roger G. H. Downer, former AIT President, as M. L. Birabhongse Kasemsri, Chair of the AIT Board of Trustees, looks on.

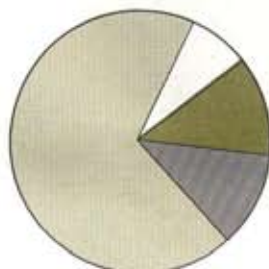
Prof. Charas Suwanwela speaks on AIT's accomplishments and the challenges in the years ahead.

"Global socio-economic changes, the development of national higher education systems in the region, and rapid advancements in science and technology suggest the need for changes in AIT's vision, strategies, management and modes of action.

"To realize AIT's potential to its full extent, these changes must be made in the right direction, and AIT's friends, partners and benefactors must be mobilized. If AIT's potentials are realized, the Institute faces a very prosperous future."

RESOURCE GENERATION

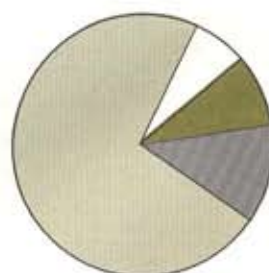
Total Contributions in FY 1997-1998: Baht 1,000,442,000.-



Total Contributions Received by Sector

FY 1997-1998

- Governments 64.06%
- International Organizations 9.15%
- National Government Agencies 15.49%
- Business, Foundations, Private Individuals and Others 11.30%



FY 1959-1998

- Governments 73.59%
- International Organizations 7.61%
- National Government Agencies 8.63%
- Business, Foundations, Private Individuals and Others 10.17%

STUDENTS AND ALUMNI

1998 Student Enrolment

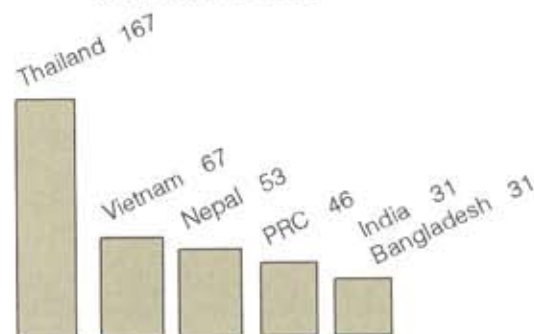
	Jan	May	Sept
Doctoral	213	215	221
Master's	1096	1023	1052
Diploma	2	2	1
Other Programs*	84	94	99
Total	1395	1334	1373

* Certificate of Advanced Studies, Certificate, Special Programs, Bridging Program.

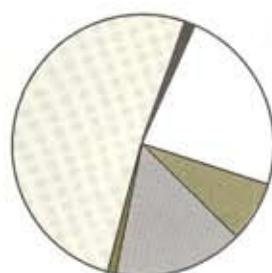
Degrees Awarded in 1998

	Apr	Aug	Dec	Total
D.Eng.	5	5	7	17
D.Tech. Sc.	2	5	2	9
Ph.D.	1	2	2	5
M.Eng.	123	84	93	300
M.Sc.	4	110	37	151
MBA	90		7	97
Dip.AIT		12	1	13
Total	225	218	149	592

Five Largest Groups of Graduates in 1998



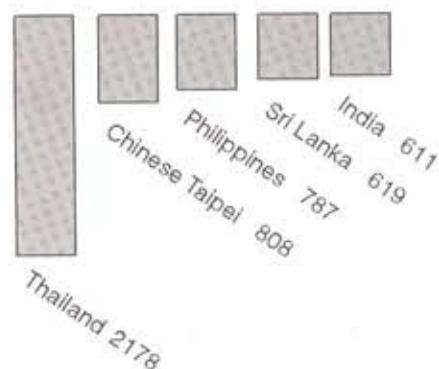
Alumni Distribution by Region of Residence



- South East Asia, the Pacific and Australia (50.97%)
- South Asia and West Asia (19.56%)
- North & South America, and Europe (4.82%)
- East Asia and Central Asia (12.52%)
- Middle East (0.39%)
- Africa (0.29%)

(11.5% residence unknown)

Five Largest Groups of Alumni (1961-1998)



PRESIDENT'S MESSAGE

It is my great honor and privilege to serve the Presidency of this noble institution during this interim period. I owe this opportunity to the Board of Trustees, especially the Chair and the Chair Emeritus, and I would like to thank them for their trust and confidence. I would also like to acknowledge the understanding and cooperation of the AIT community.

AIT is justifiably proud of its achievements. Firstly, AIT is firmly established as one of the region's few reputable international institutions of higher learning that is committed to the development of Asian countries, through engineering and technology education, research and outreach.

Secondly, the AIT alumni have transformed AIT into an institution whose role in Asia's development truly extends beyond the campus. Large numbers of alumni occupy leadership positions in governments, universities, and private enterprises, helping to build-up infrastructure and human resources in many Asian countries. The alumni's loyalty to AIT is, in my opinion, exceptionally remarkable. I commend the AIT Alumni Association and its national chapters for their dedication and strength.

Thirdly, AIT's management systems and structures have evolved over the years and now represent a basic strength for the Institute. I would like to cite the termly evaluation of academic programs, the careful assessment of students by our



President Charas welcomed H. E. Mr. Pekka Haavisto, Finnish Minister of Environment and International Development Cooperation, and his party to the AIT campus on 24 August 1998. Since the signing of the first AIT/Finland MoU in 1979, Finland has become one of AIT's largest supporters.

Council of Examiners and Appeal Panel, and the annual evaluation of all faculty. At a campus-wide level, the Senate and its Executive Council and committees provide opportunities for broad participation in the affairs of the Institute.

However, these achievements do not leave room for complacency. AIT is facing serious challenges brought about by global socio-economic changes, the development of national higher education systems in the region, advances in science and technology, as well as the emergence of information technologies. These now necessitate changes in our vision, strategies, management and modes of action.

A top priority of my Interim Presidency has been a re-orientation of central administration aimed at coordinating the work of senior administrators. Thus, a Vision and Action Team was organized to provide concerted collective leadership and decision-making. The Team coordinated the iterative development of the Institute's policy framework, for presentation at the January 1999 meeting of the

Board. The process, I must point out, brought AIT constituents together to discuss their common future. Policy questions and issues concerning AIT's goals and means were duly addressed. Through discussions in various circles, options for future action were evaluated and the most promising ones selected.

The Vision and Action Team, assisted by the Treasurer, was responsible for the budget formulation process, which aimed to link financial allocation to the Institute's policy and action plan.

Another top priority has been quality assurance. A quality improvement plan, formulated following a series of committee and group discussions, requires existing mechanisms for quality assurance to be made more effective through measurable indicators, reliable information, and fair judgment by accountable committees and panels.

I have also identified as a priority the need for our academic programs to undergo re-engineering in order to make them really effective, flexible,

dynamic, and innovative. The on-going initiatives in this regard must be strengthened and accelerated. We need to maximize the opportunities offered by new information and communications technologies, and to enhance delivery of distant, experiential, and student-centered modular education. I am happy to report that some members of the AIT faculty are assisting in the development of a curricular and faculty improvement package, designed to assist the quality-upgrading of undergraduate engineering and technological education in Asian universities. Related activities are being discussed in many circles dealing with academic quality.

The quality of our programs and outputs hinges on the quality of our faculty and staff. Consultations paving the way for a major reform of our personnel management have been initiated and are continuing.

On the financial front, we need to improve AIT's revenue so that in addition to operations, it can support investments in facilities, especially scientific and computational equipment, and personnel development. AIT will have to diversify its sources of financing, including, for example, large contracts for research and consultancy projects. The establishment of the AITA-NET, a consortium founded by a core group of alumni investors, together with on-going discussions concerning the formation of AIT Inc., an entrepreneurial arm of

AIT, represent potential sources of new financing.

I cannot disregard the need for efficient management of our existing resources. More than ever, our management information system must be upgraded and put to maximum use, particularly in view of the implementation of the cost center concept, which places the responsibility for decision-making and resource generation on the Schools and Centers. On the other hand, we need to recognize that over-emphasizing self-sufficiency of each unit and inappropriate costing of cross-unit functions could create fragmentation and redundancy. To ward off these potential dangers, we have initiated a re-organization of our investment, budgeting, accounting and auditing systems.

Being a dynamic institution, AIT needs to be nurtured by constant improvements in all fronts: personnel, financial and academic management as well as governance.

With its achievements and intrinsic strength, AIT has a great potential to institute changes in the right direction over the coming years. I wish it a very prosperous future.

Prof. Charas Suwanwela
President



Prof. Charas has played a key role in the introduction and development of higher education, not only in Thailand but worldwide. Prof. Charas is a member of the UNESCO Advisory Committee on Higher Education and the Steering Committee of the World Conference on Higher Education, which was held in Paris in October 1998. His other international positions include chairmanship of the Executive Board of the Council on Health Research for Development and membership on the Executive Board of the International Clinical Epidemiology Network, the Council of Global Forum for Health Research, and the Administrative Board of the International Association of Universities.

In Thailand, Prof. Charas is particularly known for initiatives that led to breakthroughs and innovations in the way medicine is taught and practised in the country. Prof. Charas has devoted much of his career to Chulalongkorn University, serving as the first Director of the Institute of Health Research, first Vice-President for Research Affairs, Dean of the Faculty of Medicine, Director of Chulalongkorn Hospital, and as two-term University President from 1989 to 1996. Prof. Charas' presidency is particularly remembered for its commitment to intensifying the internationalization of Chulalongkorn University, promoting programs for moral and ethical education, and encouraging the arts and culture.

ACADEMIC DEVELOPMENTS

NEW VENTURES

Medical Technology R&D

The Institute's first-ever medical technology R&D project is underway in the Industrial Systems Engineering (ISE) Program in the School of Advanced Technologies. It is being carried out in collaboration with the Division of Biomechanics and Engineering Design, Katholieke Universiteit Leuven, Belgium.

The R&D project concerns the design and production of medical devices based on digital medical images, such as those acquired using computer tomography (CT) and magnetic resonance imaging (MRI) scans. The images are imported into computer-aided design software to produce computer models of the bones of individual patients. The data provide the basis for custom-designing orthopaedic implants and medical tools. These include advanced cutting

and drilling guides which are used to ensure optimal fit with selected sections of specific bones. The project will also evaluate CAD applications in the production of plastic sockets used to attach limb-restoring prostheses.

At a later stage, research in semi-automatic design of tumor replacement implants and the design of low-cost limb-restoring prostheses will be introduced at the Master's level.

A rapid prototyping machine for the actual production of medical devices will be installed at the ISE laboratory.

The four-year project, which is funded by the Belgian Administration for Development Cooperation, is supporting the secondment of a Belgian expert and a Ph.D. scholarship. Another Ph.D. scholarship has been provided by the National Metal and Materials Technology Center under the National Science and Technology Development Agency of Thailand.



A drill guide to assist spine surgeons during pedicle screw insertion. The design is based on CT images.



Design of a custom-made orthopaedic implant for total knee replacement (metal backing of a tibial component), based on CT images.

Distributed Education Center

The establishment of the Distributed Education Center supports the delivery of AIT courses off campus, using latest information technologies.

In 1998 the newly established center was engaged in the planning, design and implementation of the Web Class on demand pilot project. Two courses, computer-aided design of production systems and inventory management, offered by the Industrial Systems Engineering (ISE) Program, were used as experimental courses. The Web application utilizes a LAN-based multimedia delivery concept with enhanced user's interactivity. The prototype of the developed application was demonstrated to ISE students at AIT and the AIT Center Vietnam in Hanoi.

The center is also currently involved in the design and development of the integrated tool box Web application project. The aim is to integrate all necessary Web-based course development tools for different types of data, such as text audio, video and collaborative data into a single application environment called integrated toolbox.

NEW DEGREE PROGRAMS

Microelectronics

The proliferation of new generation products embedded with intelligent microchips, micro sensors and micro actuators attests to the semiconductor industry's growing need for improved expertise and technological capability in the production and operation of microelectronic devices and systems.

A proposed Master's Program in Microelectronics Program, to be launched in May 2000, responds to this need.

Microelectronics will be offered in collaboration with Thailand's National Electronics and Computer Technology Center (NECTEC) under the National Science and Technology Development Agency. A course structure for the academic program is under development by a joint task force composed of faculty from the School of Advanced Technologies, NECTEC researchers, and representatives from the Thailand Graduate Institute of Science and Technology. Inputs will be provided by international experts from the academe and industry.

A series of workshops, seminars and training activities are planned in 1999, starting with the Microelectronics Initiative Workshop in January.

Biotechnology via Distance Learning

Jointly with Wageningen Agricultural University in the Netherlands, AIT launched the delivery by distance of a Master's Program in Biotechnology, at a ceremony presided over by The Prince de Lignac on 2 November 1998.

The first two courses to be delivered by distance are plant molecular biology, focusing on latest developments in genetic engineering in plants, and agrification, pertaining to the application of bioprocess technology in agriculture and food production. These will be followed by the delivery of industrial microbiology and enzyme and DNA technologies.

A complete biotechnology curriculum for transmission by Internet and satellite is expected within the next two years.

ACRD Program

To enhance administrative efficiency, a review of the Schools' structures is underway. The review is aimed at consolidating programs, fields of study and areas of specialization.

In 1998, three fields of study in the School of Environment, Resources and Development were merged to form the Agriculture, Conservation and Rural Development (ACRD) Program. The merged fields of study were Rural and Regional Development Planning, Natural Resources Conservation, and Agricultural Systems.

Ph.D. in Urban Environmental Management

By the year 2020, over 50 percent of the world's population is expected to reside in urban areas, many of which will be the size of mega-cities with population in excess of 10 million.

The Ph.D. Program in Urban Environmental Management responds to the need to develop the knowledge and skills necessary to solve problems arising from rapid urbanization. It focuses on management and planning, social sciences, systems analysis and modeling, analytical techniques, and environmental sciences and technology. Potential responses such as decentralization, deregulation and privatization of urban facilities and services require careful evaluation. Cities have unique opportunities to develop and implement local solutions to many of these problems.

The Ph.D. curriculum emphasizes theory as well as practice, linking the academic world with real-life issues defined by communities and the private and public sectors. The Ph.D. doctoral dissertation emphasizes a mastery of different theoretical approaches and methods.

Scholarships and financial assistance have been made available by the Canadian Universities Consortium (CUC), the Japanese Government and other donors. CUC scholarships are awarded to qualified students from South East Asia to support their first two years of studies. Subsequent support will come from student employment in a UEM research project or in a sponsored research project.

STUDENTS

ENROLMENT RECORD

1998 Student Enrolment

by Program

	Jan	May	Sept	1998 Average	1997 Average
Doctoral	213	215	221	217	196
Master's	1096	1023	1052	1057	940
Diploma	2	2	1	2	1
Other Programs*	84	94	99	92	108
	1395	1334	1373	1368	1245
<i>Total Degree Enrolment</i>	1309	1238	1273	1274	1136
<i>Doctoral Enrolment as a percentage of Total Degree Enrolment</i>	16.2%	17.3%	17.3%	17%	17.2%

* Including Bridging, Certificate of Advanced Studies, Certificate and Special Program.

- In 1998, Master's students accounted for some 77% of the annual average enrolment.
- The Doctoral enrolment reached an annual average of 217, representing 17% of the total degree program enrolment, a level similar to the previous year but still below the 20% target set by the Board of Trustees.

APPLICATION TRENDS

The 1998 total of 3809 applications represented a 10% increase from the previous year, with the number of applications received for the September term being the largest.

The average application-to-intake ratio of 4.7 is higher than last year's. A placement ratio of one student per five applicants

Applications Received in 1998

January	1412
May	980
September	1417
Total	3809

was maintained during the May and September terms.

by Country

	Jan	May	Sept
Argentina	1	1	1
Australia	1	1	1
Azerbaijan	2	2	
Bangladesh	70	62	57
Belgium	2	1	2
Bhutan	2	3	3
Cambodia	61	50	50
Canada	1	3	2
Chinese Taipei	28	19	28
Denmark		1	
Finland	2	2	7
France	3	2	5
Germany	11	10	2
India	63	59	50
Indonesia	44	37	29
Iran	4	4	4
Japan	11	7	9
Kazakhstan	9	8	7
Korea	10	9	8
Kyrgyzstan	2	1	3
Laos	38	38	57
Lebanon			1
Malaysia	6	4	2
Mongolia	12	8	9
Myanmar	61	63	59
Nepal	109	93	86
Norway	2		
Pakistan	41	36	36
PNG	1	1	1
Philippines	47	41	36
PRC	94	74	76
Peru	1	1	1
Solomon Islands	1	1	1
Sri Lanka	53	49	41
Sweden		1	
Switzerland	2	2	2
Thailand	466	477	543
Tuvalu	1	1	1
USA	2	1	2
Uzbekistan	1	1	
Vietnam	130	157	148
Stateless		3	3
Total	1395	1334	1373

by School

	Jan	May	Sept
Advanced Technologies	201	337	321
Civil Engineering	303	179	305
Environment, Resources and Development	599	591	431
Management	292	227	316
Total	1395	1334	1373

*Note:
Excluding PCAD trainees and
TALKBASE students*

Women accounted for some 30% of the average annual enrolment in 1998, with the School of Environment, Resources and Development and the School of Management accounting for the largest number of women enrollees.

In the September 1998 term, women enrollees accounted for 44% of all students from Thailand, 10% of all students from Vietnam, 8% from the People's Republic of China, 7% from Myanmar, 5% from Indonesia and 4% from the Philippines.

1998 Women Enrolment*

School	Jan	May	Sept
Advanced Technologies	26.4	25.9	26.4
Civil Engineering	12.3	12.5	12
Environment, Resources and Development	36.8	36.7	38.3
Management	35.6	36.5	39.5

(as a percentage of total enrolment for each school)

STUDENT AFFAIRS

The Office of the Dean of Student and Community Affairs (DSCA), working closely with the Student Union, provides a wide range of services to the student community. Arrangements have been put in place for student counselling, medical care, housing accommodation, faculty/student liaison, and safety and security.

The Student Union carries out a variety of enrichment programs through social, cultural and sports activities. Responsibility for the Student Union rests with the General Assembly and the Executive Council led by the Union President.

Student Union activities range from cultural activities to debates, literary contests to study trips, and other activities on- and off-campus.

EMPLOYMENT AND CAREER DEVELOPMENT

Technology and Job Fairs, organized by the DSCA, assist graduating students in penetrating the employment market. About 20 to 25 multinational companies participate in each fair, to recruit new employees as well as to promote their products, services and technical expertise.

The search for employment opportunities through e-mail exchanges is a new facet of the Technology and Job Fairs. In the future, an exhibition of student research will be organized to complement the product and technology exhibit of participating companies. The fairs also facilitate the Institute's initiatives in developing partnerships with industry.



International Partnerships for Education

AIT has been forging an extensive network of institutional linkages throughout the world. Through student exchange programs, AIT offers valuable opportunities to spread knowledge in various disciplines and to promote international understanding among diverse nationality groups. Some of these exchange programs are featured in these pages.

Postgraduate Technological Studies Program

The Postgraduate Technological Studies (PTS) Program signed by AIT and the European Commission (EC) in September 1997 supports the advanced technology education of postgraduate students from Asia and the European Union.

Explaining the PTS objectives, H.E. Mr. Michel Caillouët, Ambassador-Head of the EC Delegation to Thailand, says, "The European Union is working hard to develop closer relations and cooperation with Asia in order to bring mutual benefits. Asia, the world's most dynamic region, has excellent long-term growth prospects. On the other hand, the European Union, the world's largest single market with 370 million inhabitants, accounts for one-fifth of the world's trade and is at the cutting edge of modern technology. If we can develop mutual understanding between our respective societies, the potential for cooperation is limitless."

The first group of students from the European Union joined the Master's program at AIT in September 1998. An essential part of their studies is a one-term internship at a university or a research center in South or Southeast Asia. In the same year, the first group of selected AIT students traveled to the European Union for a one-term internship in a university or a research center. They also used this period to gather data for their Master's research project and to be acquainted with the academic and research world in the European Union as well as with European cultures.



Miss Beatriz Gonzalez Manchon, 27, is a PTS scholar from Spain and a former junior expert at the EC Delegation in Bangkok. She says, "The Gender and Development Studies Program will help me to consolidate my Asian experience. The curriculum is interesting, challenging and progressive. I am interested in forming new perspectives on development issues, particularly on the roles of men and women in Asian societies and how these roles influence the management of natural resources, the direction and pace of socio-economic development and other aspects of the development process."



Mr. Kristian Forars, 27, a PTS scholar from Finland and a graduate from Vasa Swedish Polytechnic, joined the Structural Engineering and Construction Program for two reasons. "I wanted to gain new expertise in structural engineering and, at the same time, to study in Asia in an international environment." It has been a good experience, according to Mr. Forars, who has overcome the initial hurdles of settling down to a new environment and is looking forward to commencing his thesis research.

Institutions in the European Union hosting PTS Asian Students:

Austria

Vienna University of Technology (TU Wien)

Belgium

University of Antwerp
University of Gembloux
Katholieke Universiteit Leuven
Universite Libre de Bruxelles (ULB)
Solvay School of Commerce, ULB

Denmark

Royal Veterinary and Agricultural University, Frederiksberg

Finland

Helsinki University of Technology
Helsinki School of Economics and Business Administration
Technical Research Center of Finland (VTT)

France

Center de Cooperation Internationale en Recherche Agronomique pour le Developpement (CIRAD)
Electricite de France, Paris
Ecole Superieure de Commerce de Paris (ESCP)
Centre d'etudes Spatiales de la Biosphere (CESBIO), Toulouse
Institut d'Economie et de Politique de l'Energie (IEPE), Grenoble

Germany

University of Kassel
Technical University of Berlin
University of Stuttgart
Dresden University of Technology
Technical University of Braunschweig
Institute for Cereal, Potato and Starch Technology, Detmold

Greece

Institute of Computer Science, Crete

Italy

Space Applications Institute/Joint Research Center, Ispra
University of Rome "La Sapienza"

The Netherlands

Delft University of Technology
Erasmus Universiteit Rotterdam
Wageningen Agricultural University
University of Maastricht

Portugal

National Library of Portugal, Lisboa

Sweden

Swedish University of Agricultural Sciences, Uppsala

United Kingdom

University of Surrey
University of Strathclyde
University of Southampton
Cranfield University
European School of Management (EAP Oxford)

Interdisciplinary Program in Mechatronics

The Interdisciplinary Program in Mechatronics is offered jointly with the Technical University of Hamburg-Harburg, Germany, with support from Siemens, AG, and Siemens, Thailand.

The first group of seven Asian students was admitted in May 1997, spending the first term at AIT followed by a year's stay at TUHH to complete the credit requirements for course work. The students have returned to AIT to carry out thesis research. One student graduated in December 1998 and is now working for Siemens, while the six others are expected to graduate in April 1999. The second group of six Asian students is now enrolled at TUHH.

The first group of four German students arrived at AIT in October 1997 for 10 months of research study and industrial training in Thailand. The second group is expected to join AIT in September 1999.

Siemens provides scholarship support and training opportunities to both Asian and German students, and sponsors the secondment of short-term experts and provision of equipment.

Plans are underway to expand the program.



Mr. Charoen Rompet, 36, is Head of the Mechatronics Division at Rajamangala Institute of Technology (Nonthaburi campus). "TUHH has exposed me to the way research is supported and conducted in Germany and given me valuable insights into my research, Hybrid of Global and Local Path Planning for Mobile Robot.

"The AIT/TUHH curriculum is well-organized, and with some modifications, it can be used in our own program at RIT."



Miss Atika Kongwittayapanit, 22, an electrical engineer by training, joined the Mechatronics Program because of her interest in automation and control systems as an area of research.

The AIT/TUHH program familiarized her with advanced research equipment and computer facilities that she used in carrying out her research, Locomotion Control for a Six-Legged Robot.

"I hope that the AIT/TUHH program will facilitate real technology transfer through research," she says.

STUDENTS

Visiting Researchers

The Asian Center for Research on Remote Sensing (ACRoRS) and the Space Technology Applications and Research (STAR) Program collaborate with universities and research organizations in exchange programs for visiting researchers.



Mr. Yasue Shigetaka, 25, a computer scientist and programmer in the GIS Section of Chuo Mapping Co., Ltd. in Japan, is involved in the development of mountain and city area maps.



Mr. Horst-Dieter Heitmann, 26, is on a three-month internship at ACRoRS as part of his study program in Applied Systems Science at the University of Osnabrück, Germany. He is working on a project to link sea surface temperature, obtained from AVHRR satellite data, with the weather and heat island phenomena of Bangkok. "Professionally and personally, I am grateful for the opportunity to be here. I am very interested in Southeast Asia. I feel that I have learned a lot about Asian culture and values."



Dr. Hansa Vathananukij is a member of the Faculty of Engineering, Kasetsart University. She is currently researching NOAA satellite data applications to studies of the Lower Chao Phraya River Basin, the Songkha Lake and His Majesty the King's Royal Projects.

Dr. Hansa graduated from the University of Tokyo, where she met her mentor, Prof. Shunji Murai, Coordinator of the STAR Program and a respected international authority in remote sensing and GIS technologies.

Interdisciplinary Mechatronics Program

Mr. Wei Xiaozhou, 26, speaks highly of the good communication channels between students and faculty at TUHH. He says, "Dialoguing is emphasized, meaning that students learn a lot." He would like to have longer on-the-job training with German industry combined with classroom study. Back at AIT, he is completing his research, Sensor Based Navigation Device Design.



Mr. Vinayak Divate, 24, is engaged in research that involves robotics, image processing, robot vision, and software building. It is entitled Assembly of Robot Vision Cell. "The AIT/TUHH program gave me so much - technologically and culturally. The lectures are a good combination of Asian and European knowledge and expertise."



Mr. Muhammad Azeem Ashraf, 30, is currently involved in a research, Development of an Open Architecture Control for a Three-Axis CNC Milling Machine.

"I hope that the AIT/TUHH Mechatronics Program will improve my communication skills, guide my career planning, and familiarize me with new technologies. So far, I am pleased with the results."



Special Program for Thyssen- Krupp Managers

The School of Management is participating in the international training program offered by the Germany-based multinational Thyssen-Krupp to its young managers. SOM exposes the Thyssen-Krupp managers to Asian business and industry through such courses as International Human Resources Management, Cross Cultural Management, International Joint Ventures and Negotiations, Technical Transfer of Technology, Business-to-Business Marketing, and the Asian Business Environment.



Mr. Christian Fischer is Deputy Managing Director of Polymer Solution Co. Ltd. in Bangkok, a joint venture between Thyssen and the Gaysorn Group. Mr. Fischer will remain in Thailand for another two to three years, giving him ample opportunity to put his SOM training into practical use.



Mr. Christophe Kaczorowski, 33, is Export Project Manager at Thyssen Ascenseurs in France.



Mr. Dong-Hun Jung, 32, is a project engineer at Thyssen Nothelfer GmbH in Wadern and a resident of Germany for the past 17 years. He finds management subjects a good complement to his technical background and is particularly enthusiastic about the practical applications of negotiation and joint venture courses. These courses, he says, have helped him to build new business contacts and given him a better appreciation of the Asian market.



Mr. Di-Chuan Sheng, 40, an engineer at Johann A. Krause Maschinenfabrik GmbH, based in Bremen, Germany, says he has gained insights into the philosophy of Asian marketing. "Asians are very polite but not direct. While this may not be difficult in the early stages of negotiation, it becomes more critical as we approach project execution."

Mr. Sheng considers SOM a great opportunity to build contacts with the Asian market and to promote his company.

He suggests greater participation of high-level managers from industry in SOM seminars, and the inclusion of courses on interfaces to American and European markets, in addition to the Asian market.

SOM Exchange Students



Miss Helene Marchal, 23, a third year student from Ecole Superieure de Commerce de Paris or ESCP (the Paris Graduate School of Management), finds the SOM focus on academic research a good balance to the ESCP emphasis on professional interactions with business and industry.



Miss Nguyen Hoai-Huong Noëlle Truong, 22, a fourth year Law student at the University of Amsterdam, the Netherlands, believes that a management background is ideal for an aspiring corporate legal advisor.



Mr. Sera Loimas, a fourth year Marketing student at the Helsinki School of Economics and Business Administration, is following SOM courses that deal with different aspects of international trade and business.

GRADUATES

They spoke to the 1998 graduates



"To maintain the vitality and dynamism of our region over the long-term, free and open debates on issues that affect all of us must be encouraged. We have come a sufficiently long way to begin asking the kinds of questions that will prepare our societies for development, not only in the technical sense of the word, but in its truest sense: development as liberation from want, fear, suffering - from all limitations."

H. E. Dr. Surin Pitsuwan, Minister of Foreign Affairs of Thailand, elaborating on Asia's coming of age, at the 82nd graduation on 23 April.

"Do not be desirous to have things done hastily, do not look at small advantages. The desire to have things done quickly prevents their being done thoroughly. Looking at small advantages prevents great affairs from being accomplished."

Mr. Lee Seng Tee, Director of the Lee Foundation, speaking on the search for success and fulfillment at the 83rd graduation on 14 August.

"It is impossible to impose global standards on every aspect of life."

Mr. Yoshiro Takasaki, Chairman of Toyo Seikan Kaisha Ltd., Japan, cautioning Asian countries from blindly adopting Western standards and practices in business, industry and other sectors, at the 84th graduation on 18 December.

*Top photos, first row: H.E. Dr. Surin and Mr. Lee
Second row: Mr. Takasaki*

1998 GRADUATE RECORD

The Institute awarded degrees to 592 graduates in 1998, bringing the total number of alumni since 1961 to 9259. There were 144 graduates from SAT, 132 from SCE, 216 from SERD, and 100 from SOM. By nationality, the five largest groups of graduates came from Thailand, Vietnam, Nepal, PRC, and India.

by Degree

	Apr	Aug	Dec	Total
D.Eng.	5	5	7	17
D.Tech. Sc.	2	5	2	9
Ph.D.	1	2	2	5
M.Eng.	123	84	93	300
M.Sc.	4	110	37	151
MBA	90		7	97
Dip.AIT		12	1	13
Total	225	218	149	592

by Program

	Apr	Aug	Dec	Total
<i>School of Advanced Technologies</i>				
CSIM	2	8	46	56
ISE		12	44	56
TC			32	32
<i>School of Civil Engineering</i>				
GTE	33			33
SEC	67	1	2	70
WEM	27	1	1	29
<i>School of Environment, Resources and Development</i>				
AFE		16	3	19
ACRD			2	2
AARM	1	22	3	26
BPT		16	4	20
Energy	1	37	1	39
EE	2	35	3	40
Gendev		4		4
HSD	1	23		24
STAR	1	29		30
UEM		12		12
<i>School of Management</i>				
IB	62	1	6	69
MT	28	1	2	31
Total	225	218	149	592

by Country

	Apr	Aug	Dec	Total
Azerbaijan		2		2
Bangladesh	12	15	4	31
Bhutan		2		2
Cambodia	14	10		24
Chinese Taipei	10		3	13
India	9	14	8	31
Indonesia	10	11	6	27
Japan	5			5
Kazakhstan		1		1
Kyrgyzstan	1			1
Korea	1	3	1	5
Laos	5	6	2	13
Malaysia	2	2		4
Mongolia	3	1	4	8
Myanmar	8	11	7	26
Nepal	20	25	8	53
Pakistan	9	4	5	18
PRC	22	8	16	46
Philippines	7	11	4	22
Solomon Islands			1	1
Sri Lanka	9	11	4	24
Thailand	66	43	58	167
Uzbekistan		1		1
Vietnam	12	37	18	67
Total	225	218	149	592

GRADUATION AWARDEES

April	August	December
<p>Mr. Hem Nath Ghimire (SCE, GTE) Nepal <i>Deeswasmongkol Prize</i></p>	<p>Mr. Hoang Tung (SERD, AAS) Vietnam <i>Chintana Boorntharnjinda Memorial Prize</i></p>	<p>Mr. Le Chi Tuan (SAT, CSIM) Vietnam <i>Hisamatsu Prize</i></p>
<p>Mr. Sushil Kumar Chaudhary (SCE, GTE) Nepal <i>Chin Fung Kee Prize</i></p>	<p>Mr. Nagarajan Ramalingam (SERD, AFE) India <i>Y. Y. Kishida Prize</i></p>	<p>Miss Mayuree Srikulwong (SAT, CSIM) Thailand <i>Hisamatsu Prize</i> <i>Shoichiro Toyoda Prize</i></p>
<p>Mr. Ian C. Espada (SCE, GTE) Philippines <i>Barbara and John Hugh Jones Prize</i></p>	<p>Mr. Sabin Raj Maskey (SERD, BPT) Nepal <i>Albert Stevens Prize</i></p>	<p>Mr. Truong Hoang Tu (SAT, ISE) Vietnam <i>James A. Linen III Memorial Prize</i></p>
<p>Mr. Andi (SCE, SEC) Indonesia <i>Mahesh Varma Prize</i></p>	<p>Mr. Herath M. Wijekoon Banda (SERD, Energy) Sri Lanka <i>James A. Linen III Memorial Prize</i></p>	<p>Mr. Nguyen Thi Hong Minh (SAT, ISE) Vietnam <i>Tim Kendall Memorial Prize</i></p>
<p>Mr. Varameth Vichiensan (SCE, SEC) Thailand <i>Hisamatsu Prize</i></p>	<p>Mr. Keshab Raj Sharma (SERD, EE) Nepal <i>Robert B. Banks Prize</i></p>	<p>Mr. Padam Lal Kafle (SAT, TC) Nepal <i>Telecom-Finland Prize</i></p>
<p>Mr. Paiboon Tirasit (SCE, SEC) Thailand <i>Aoyagi Prize</i></p>	<p>Mr. Phatta Bahadur Thapa (SERD, EE) Nepal <i>Robert B. Banks Prize</i></p>	
<p>Mr. Su Yunsheng (SCE, WEM) PRC <i>Hodaka Prize</i></p>	<p>Mr. Nobbir Ahmed (SERD, HSD) Bangladesh <i>Sukum Navapan Prize</i></p>	
<p>Mr. Rupan Kanti Das (SCE, WEM) Bangladesh <i>Alastair M. North Prize</i></p>	<p>Mr. Dinesh Manandhar (SERD, STAR) Nepal <i>Tim Kendall Memorial Prize</i></p>	
<p>Mr. Le Hung Nam (SCE, WEM) Vietnam <i>Sukum Navapan Prize</i></p>	<p>Ms. Pawar Dhamshree Bhagwat (SERD, UEM) India <i>Hisamatsu Prize</i></p>	
<p>Mr. Rajeev Ranjan (SOM, MT) India <i>Haider Razvi Prize</i></p>	<p>Ms. Vasuhi Rasanayagam (SERD, BPT) Sri Lanka <i>Yoh Kurosawa Prize</i></p>	
<p>Mr. Sanjoy Das (SOM, IB) India <i>Wilhelm Hill Prize</i></p>	<p><i>Note: The entries in parentheses indicate the graduates' respective Schools and Programs. Background information on graduation award sponsors is provided on page 51 of the Appendix.</i></p>	
<p>Mr. D. S. Chetiya P. Perera (SOM, MT) Sri Lanka <i>Wilhelm Hill Prize</i></p>		
<p>Mr. Wasique Waheed Chaudhry (SOM, MT) Pakistan <i>Sandeep Mohapatra Memorial Prize</i></p>		
<p>Ms. Suwannee Sirisuknuntadech (SOM, IB) Thailand <i>Mahesh Varma Prize</i> <i>Hironichi Seya Prize</i></p>		
<p>Ms. Taruna Gupta (SOM, IB) India <i>Mahesh Varma Prize</i> <i>Hironichi Seya Prize</i></p>		

ALUMNI

Mr. Surendra Shrestha,
AITAA President,
reports:

* After several years' discussion and the commissioning in 1997 of a feasibility study, the AIT Alumni Association, at its 1998 annual general meeting in Manila, approved the formation of a new international development consortium to be called AIT Alumni Network Limited (AITA-NET Ltd.). The Board of Directors is chaired by Dr. Subin Pinkayan, alumnus of Class 1 and former member of the AIT faculty.

* The AITA-NET Ltd. is an independent for-profit company registered in Hong Kong. It constitutes a consultancy network of more than 9,000 alumni in almost all Asian countries, together with their

The AITA-NET has been created to organize alumni as a cohesive network of consultants, researchers and contracting engineers - a new development consortium.

companies and with the current members of the AIT Faculty.

* The wide geographical distribution, broad portfolio of skills, and assurance of excellence, make AITA-NET a cogent Asian resource.

* With regard to support for AIT, as well as any dividend return by the possibility of a shareholding, AIT will receive as an endowment donation 10% of the AITA-NET profit. In this way, the AITA-NET will create a new form of alumni support for their Alma Mater, one which is appropriate to this region and is sure to excite interest in many other universities worldwide.

AITA-NET Objectives:

- To compete for national, regional and sub-regional projects in Asia;
- To place project contracts in such a way that quality implementation is assured and member companies are supported and improved in the process;
- To assist AIT by marketing its services, placing personal consultancies with Faculty and Staff, providing financial endowment.



The five largest groups of AIT alumni are from

● Thailand	2178
● Chinese Taipei	808
● Philippines	787
● Sri Lanka	619
● India	611

Alumni Distribution

by School

Advanced Technologies	1754
Civil Engineering	3084
Environment, Resources and Development	3867
Management	554
Total	9259

by Degree

D. Eng.	213
D. Tech. Sc.	70
Ph.D.	32
M. Eng.	5897
M. Sc.	2266
MBA	546
Diploma	235
Total	9259



AITAA President, Mr. Surendra Shrestha (right), and AITA-NET Executive Director, Dr. Alastair North, consulting with AIT faculty, Dr. K. Honda, and Dr. K. Seetharam (IEM '86), an evaluation specialist at the Asian Development Bank.

* In addition, AITA-NET will provide personal consultancies for AIT faculty and staff. AITA-NET application for consultancy will not compete with other faculty consultancies, but will open a new window of opportunity for this important and rewarding activity.

* Former AIT President, Dr. Alastair M. North, has been appointed as AITA-NET Executive Director, and an office established in the Outreach Building on campus.

* AIT and the alumni body look forward to the start of project work and to the visible, ever-increasing collaboration between alumni and the Institute. "

27th AITAA GOVERNING BOARD MEETING

The 27th Governing Board Meeting of the AIT Alumni Association (AITAA) was held on 19-22 February 1998 in Manila. It was hosted by AITAA-Philippines under the leadership of Chapter President, Dr. Primitivo Cal (CRD '70), and GBM organizers, Mr. Anthony S.F. Chiu (IEM '88) and Ms. Fe N. Ferriols (CS '82).

In his speech, M.L. Birabhongse Kasemsri, Chair of the AIT Board of Trustees, expressed his personal interest in the work of all AIT alumni and extended his appreciation for the AITAA's achievements.

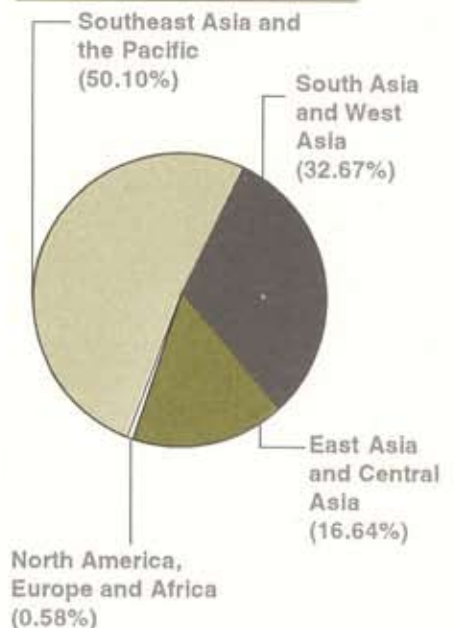
By far the most well attended annual alumni meeting, the 27th GBM provided a meaningful backdrop for the conferment of the AIT Honorary Degree of Doctor of Technology on former Philippine President, General Fidel V. Ramos.

The 1999 AITAA GBM and homecoming will be held in Thailand. Other future venues are India (2000) and Indonesia (2001).

by Nationality

Southeast Asia and the Pacific		South Asia and West Asia		North America, Europe and Africa	
Brunei	10	Afghanistan	19	Belgium	1
Cambodia	73	Bangladesh	610	Bolivia	1
Fiji	1	Bhutan	15	Canada	5
Indonesia	461	India	611	Egypt	1
Laos	47	Iran	12	Ethiopia	1
Malaysia	279	Nepal	551	Finland	2
Maldives	3	Pakistan	582	France	4
Myanmar	201	Sri Lanka	619	Germany	2
Papua New Guinea	9	Turkey	6	Ghana	2
Philippines	787	<i>Sub-total</i>	<i>3025</i>	Honduras	1
Singapore	28			Kenya	4
Solomon Islands	1	East Asia and Central Asia		Malawi	3
Thailand	2178	Azerbaijan	2	Netherlands	2
Tonga	1	Hong Kong	87	Nigeria	1
Vietnam	560	Japan	60	Sweden	2
<i>Sub-total</i>	<i>4639</i>	Kazakhstan	6	Tanzania	8
		Republic of Korea	122	UK	2
		Kyrgyzstan	1	USA	11
		Macau	7	Zambia	1
		Mongolia	18	<i>Sub-total</i>	<i>54</i>
		PRC	429		
		Chinese Taipei	808	Total	9259
		Uzbekistan	1		
		<i>Sub-total</i>	<i>1541</i>		

by Region of Origin



FACULTY

1998 FACULTY WORKSHOP

The need for an external academic quality audit (AQA) was strongly endorsed at the 1998 Faculty Workshop, which was organized by the Institute's Educational Development Working Group (EDWG) in the first quarter of the year.

To provide an impetus to School-based efforts to implement AQA and to develop AQA processes and documentation appropriate to AIT, the EDWG proposed an on-campus workshop to be led by an external resource person with AQA experience in other universities.

Over 60 faculty and senior administrators attended the 1998 Faculty Workshop, making it the largest such gathering to-date.

The workshop focused principally on three issues:

diversity of teaching, learning and assessment at AIT; educational technology and distance education, and its impact on practice at AIT; and language and communication at AIT.

The workshop covered diverse issues, including mechanisms to encourage the development of Web-based courseware; collaborative School/CLET approaches to writing up research, language-across-the-curriculum, shorter assignments focusing on quality rather than quantity, and course support teams with the aim of building communication skills; IT literacy and academic literacy together with the more traditional goal of disciplinary competence.

The workshop acknowledged the EDWG's central role in supporting and promoting the

adoption of diverse approaches to teaching and learning at AIT.

The Curriculum Innovation Award, under the aegis of the Office of the Vice President (Academic) and the EDWG is clearly a success, with several Faculty Workshop presenters using the award for developing state-of-the-art courseware. However, it should be re-oriented toward group awards, thus reinforcing the need for innovations to be sustainable.

The formation of special interest groups and the organization of seminars on educational development issues are some mechanisms proposed by the EDWG to foster and sustain an excitement about what AIT faculty are doing as professional educators.

ACADEMIC QUALITY MANAGEMENT

The introduction of total quality management complements current efforts to maintain a culture of academic excellence throughout the Institute.

Mechanisms for monitoring academic standards and appropriate teaching and learning environments have been incorporated in a conceptual framework developed by the Vice President (Academic), allowing full development of the students' potentials. The conceptual framework encompasses various dimensions of quality and covers the quality of

students, faculty, educational and research processes, facilities and various support services.

As spelt out in the conceptual framework, three issues are central to quality assurance at AIT.

The first of these is a review of procedures currently used to manage academic quality (that is, the quality of programs, methods of instruction, and all other pertinent areas), and to develop new procedures as necessary.

The second is the need to ascertain the effectiveness of quality control procedures, and provide feedback for improvement.

The third is to monitor academic quality management through a quality assurance committee.

The conceptual framework for total quality management has been presented to the Educational Development Working Group and the School Fora. Feedback and reactions have been solicited and will be incorporated in the final framework.

1998 Student-to-Faculty Ratio*

School	Jan	May	Sept	Average
Advanced Technologies**	8.19	13.30	12.29	11.26
Civil Engineering	10.02	5.76	10.54	8.77
Environment, Resources and Development Management	8.89	8.64	5.54	7.69
All Schools	10.16	9.67	9.41	9.71

*Based on student headcount and full-time faculty equivalent, the 1998 average student-to-faculty ratio was 9.7, exceeding the 9.0 target ratio set by the Board of Trustees.

Higher loads of degree-level teaching and student supervision loads were reported by faculty from the School of Management and the School of Advanced Technologies.

** Including 25 students taught at AITCV in Hanoi.

1998 Faculty Headcount

	Jan	May	Sept	Average
Full-time Faculty:	138.65	139.32	145.54	141.17
- Direct-hire	(97.32)	(95.99)	(101.71)	(98.34)
- Seconded	(41.33)	(43.33)	(43.83)	(42.83)
Part-time Faculty:	76	81	80	78.99
- Short-term Visiting	(16)	(8)	(10)	(11.33)
- Associated	(42)	(49)	(48)	(46.33)
- Affiliated	(15)	(17)	(16)	(16.00)
- Adjunct	(3)	(7)	(6)	(5.33)
Total	214.65	220.32	225.54	220.16

1998 Report on Academic Activities

	SAT	SCE	SERD	SOM	CEC	CLAIR	CLET	RCC	1998 Total	1997 Total
Publications*										
Journal Papers	29	21	118	35		2	6		211	203
Conference Papers/Proceedings	44	57	167	21		8	19		316	276
Research Reports	2	7	45						54	67
Books/Chapters in Books	3	1	22	13					39	58
Others**	16	6	27	1	1	16	5		72	79
	94	92	379	70	1	26	30		692	683
Sponsored and Grant Research										
Completed Projects	4	13	44	4	4	3		3	75	70
On-going Projects	22	9	93	6	1	3		3	135	159
	26	22	137	10	5	6		6	210	229
Continuing Education Activities										
Conferences	1	1	6			1	1		10	10
Workshops	3	2	24		4		5		38	23
Seminars	14	7	30	22	2	4	3		82	49
Short Courses	1	2	28		51	5			87	26
Special Lectures				7					7	7
Others***			9		9		2		20	133
	19	12	97	29	66	10	11		244	248

*In 1998, the number of publications, a total of 692, increased slightly from the 1997 figure, with journal papers accounting for 30% of the total output.

**Monographs, Working Papers, Consultancy Reports, Reviews, Academic Unit Research Reports, Occasional Papers, Newsletters, Reference Materials, Handbooks, Lecture Notes, Serial Publications, Databases, Technical Notes, etc.

***Study Trips, Special Projects, etc.

RESEARCH

The transition from a teaching university to a laudable research university that emphasizes research-based education is a typical development in the growth of graduate institutions and AIT is no exception.

The Institute adopts a team approach in its research pursuits in various disciplines. Some of the world's largest industries and educational institutions have become AIT's research collaborators, reflecting growing international confidence in the Institute's research capabilities.

The establishment of the Geoinformatics Center, housing the Asian Center for Research on Remote Sensing and the GIS Applications Center, creates new opportunities to expand AIT's high technology research. So does a water management R&D project in Asia and the Pacific, signed in 1998 with the French multinational Suez Lyonnaise des Eaux. The three-year project, valued at US\$ 1 million, will study hydrology and water quality, the protection of water resources, and the development of state-of-the-art tools for simulating catchments, rivers, lakes, and estuaries.

A complete list of on-going sponsored and grant research starts on page 46.

The following selection of 1998 sponsored and grant research reflects the wide range of research projects carried out at AIT.

SCHOOL OF ADVANCED TECHNOLOGIES

Medical Technology

The project is aimed at the transfer of knowledge in the design and production of medical devices to the South-east Asian region through research, education and broad consultancy, in collaboration with the Division of Biomechanics and Engineering Design of the Katholieke Universiteit Leuven, Belgium. Efforts to efficiently disseminate knowledge in the South-east Asian region will be coordinated with MTEC, Thailand.

Investigators: ISE/AIT, Jos Vander Sloten, KUL Belgium
Sponsors: VLIR (Flemish Inter-University Council), in cooperation with Katholieke Universiteit Leuven

Developing an Open Architecture CNC Machine

The development of an open architecture CNC Machine based on a PC leads the way to better training in all aspects of CNC operations, as well as to improved maintenance of machines. In addition, better integration with other factory automation systems can be achieved. The project is being carried out in cooperation with Thailand's Rajamangala Institute of Technology and the Department of Vocational Education.

Investigators: E.L.J. Bohez, N. Aizulpurkar, M. Parnichkun
Sponsor: Belgian Govt.

Developing curricula for training software developers

In addition to existing and additional academic activities in universities and training institutions, new activities are being explored jointly with IBM to promote its products and improve its training programs, including certification of IBM software developers.

Investigator: D. N. Batanov
Sponsor: IBM

Revenue Summary of Research Projects
FY 1993-94 to FY 1997-98 (Baht '000)

Year	Schools	Centers	Total
1997-1998	121,183	41,871	163,054
1996-1997	141,158	26,529	167,687
1995-1996	104,647	24,689	129,336
1994-1995	112,617	67,413	180,030
1993-1994	66,484	22,879	89,363

SCHOOL OF ENVIRONMENT, RESOURCES AND DEVELOPMENT

GAIA

AIT and a project consortium are developing training and management tools using advanced information technologies to address environmental issues. The consortium is composed of partners from Austria, United Kingdom, Italy, Argentina, China, Egypt, Mexico, Venezuela, and Zimbabwe. Computer models have been developed dealing with various environmental issues, Web pages have been created, and training programs organized. Relevant student research is also being supported.

Investigator: R. Sadananda
Sponsor: EU

Distance Education

Important issues concerning distance education, including the required administrative support, have been reviewed, prior to the adoption of economically viable and technologically-suited delivery methods. Under development is a series of lectures to be delivered by distance.

Investigator: H.N. Phien
Sponsor: NORTEL

Tractor-mounted pineapple dressing machine

A dressing machine mounted at the front of a four-wheel tractor provides a cleaner and faster way to dress pineapples. A hydraulic drive powers the rotating blades of the machine that can dress up to four rows of pineapple plants at a time. Modifications to further improve the efficiency of the machine are underway.

*Investigators: V. M. Salokhe,
C. Kaewprakaisaengkul*
*Sponsors: Siam Agro-Industry
Pineapple and Others Public
Co. Ltd., Thailand*

Standardizing the evaluation of fruit and vegetable quality

Consumers and processors measure the quality of fruits and vegetables based on a set of quality attributes that is different from that used by growers and producers. Quality determination and standards are important tools in the agricultural processing industry as these provide a common language for producers and consumers and serve as a basis for incentive payments. Information about quality standard and determination methods are being gathered for selected fruits and vegetables, such as mangoes, babycorns, papayas, ginger and tomatoes. The data will be used to design and develop commodity-specific evaluation equipment and procedures.

Investigator: A. Noomhorn
*Sponsor: Ministry of Industry,
Thailand*

Improving the YY male technology

The YY male technology is targeted at solving the problem of unwanted fish production, which leads to overpopulation and stunted growth of fish stocked for culture. Field trials in the Philippines have shown genetically male tilapia to increase aquaculture yields by 40% and profitability by over 100%. Self-sustaining dissemination programs in the Philippines and Thailand have helped promote the technology among farmers.

Investigator: G.C. Mair
*Sponsor: Dept. for International
Development (DFID) - Fish
Genetics Program*

Coal and natural gas in APEC countries

Under investigation are the cost-effectiveness, benefits, and scope of a second-phase study to evaluate the long-term economic and environmental costs of alternative energy scenarios. The role of coal and natural gas is stressed in each scenario. Focus is placed on the power sector, which is the largest and most viable market for coal and natural gas. Current developments are expected to present important challenges to coal and natural gas utilization. Production and consumption of coal and natural gas in the 21 APEC member countries will be covered.

*Investigator: T. Lefèvre,
R. Pacudan*
*Sponsors: APEC Secretariat/
APEC Expert Group on Clean
Fossil Energy*

Gender relations and economic development in matrilineal societies

This research examines and documents different matrilineal cultures and aspects that account for gender-egalitarian societies. It also assesses the impact of economic development on gender relations. Recommendations for future policy planning, to ensure that gender equality does not decline as a result of economic development, will be presented.

*Investigator: G. Kelkar
Sponsors: Netherlands Govt., HIVOS, IFAD*

Urban indicators to establish a quality-of-city life index and develop an urban infrastructure assessment model

This research seeks to identify relevant urban indicators to determine the overall quality of city life, taking into account the economic, social and environmental components of sustainable development, as well as good governance. In addition, the research aims to develop a model to assess and rectify infrastructure at the local level, integrating performance and provision indicators and incorporating indicators proposed by the community.

*Investigators: A. Mehta, Yap Kioe Sheng
Sponsor: Urban Management Center*

SCHOOL OF CIVIL ENGINEERING

Traffic-Induced Vibration and Fatigue of Bangkok's Steel Overpass Bridges

Many of Bangkok's light and flexible steel overpass bridges have high traffic-induced responses that could lead to fatigue. Thirteen overpass bridges are the subject of a study that will measure bridge responses under normal traffic conditions and under controlled conditions, the volume of truck traffic, dynamic tests of ten-wheel trucks, and so on. The findings will be used as basis for appropriate recommendations on rehabilitation, repair, improvement, and maintenance of overpass bridges.

*Investigator: P. Warnitchai (jointly with the Sirindhorn Int'l. Inst. of Technology and Arun Chaiseri Consulting Engineers Co., Ltd.)
Sponsor: BMA, Thailand*

Hexagonal Wire Mesh Reinforcement

A full-scale, fully instrumented test embankment has been constructed to develop design criteria and procedures for the analysis of embankment construction using hexagonal wire mesh reinforcement. Data on foundation responses and deformation patterns of the reinforcement and backfill soil will be used to verify a parametric study using the finite element method. Test results will be analysed to obtain the basic properties of soils and reinforcements and the interaction behavior at the soil/hexagonal wire interface.

*Investigator: D.T. Bergado
Sponsor: B.B. Trading Sdn. Bhd., Malaysia*

Navigation Channel for Krabi Thermal Power Plant

The thermal power plant in Krabi, Southern Thailand, with a capacity of 2 x 300 megawatts using 3.286 x 10⁶ liters of bunker oil, is expected to become operational by the year 2000. The study will propose a detailed design for a navigation channel to be used by 4,000-5,000 DWT sea-going oil tankers, as well as 1,000 DWT river barges. A numerical model will be used to study sedimentation and to design all navigation aids, analyze the dispersion and impact of dredging material, propose appropriate disposal location and dredging method together with time intervals for dredging maintenance.

*Investigators: S. Vongvisessomjai, N. Phien-wej, S. Weesakul, C. Charoenngam
Sponsor: EGAT, Thailand*

Collapse of Pumping Station

Under investigation is the collapse of the concrete diaphragm walls of an intake pumping station in a wastewater treatment plant now being constructed on RAMA III Road in Bangkok. The walls collapsed while excavation was underway inside the tank. A conceptual proposal for remedial and reconstruction work will be submitted after the investigation.

*Investigators: W. Kanok-Nukulchai, N. Phien-wej, N. Anwar
Sponsor: Cunninggham International (Thailand) Ltd.*

Incorporating Waste Materials in Highway Construction for Southeast Asia

The waste material identified for investigation is fly ash. Lignite fly ash is the residue generated from the burning of lignite coal. An effective method of utilizing large volumes of fly ash is to manufacture aggregates from fly ash for plain and structural concrete. In order to obtain a better understanding of the properties and behavior of fly ash aggregate (FAA), its mechanical and durability properties have been studied.

Investigators:

A. C. Wijeyewickrema,

C. Charoeringam

Sponsor: Netherlands Faculty Research Grant-AIT

Water Pumping from Pumduang River

Considering the river's existing geometry, the study provides the design of water intake structures for a pumping station of Pumduang River in Surat Thani Province in Southern Thailand, and determines whether the condition of river flow and transport of sediment are under equilibrium condition. The annual average flow and low flow are considered in the design. The design of the intake canal will take into account its appurtenance structures and appropriate location and the acceptable amount of flow and sediment transport that can be withdrawn from the river. Design modification will be recommended, if necessary.

Investigator: T. Tingsanchali

Sponsors: Aspac Consultant Co. Ltd., Bangkok Engineering Services and Technology Co. Ltd., Thailand

SCHOOL OF MANAGEMENT

Asia's Comparative Financial Markets

Financial markets in Asia outside Japan are the fastest growing in the world, with the largest growth in the equity (stock) markets. Globalization has increased competition in these markets and deregulation has opened many new business opportunities. European banks and finance companies have been very active. Recent initiatives to set up an ASEAN financial executives group as well as an ASEAN stock exchange reflect an interesting trend towards professionalism and regionalism.

This project will examine these trends and their impact on the performance of stock markets and changes in financial companies in terms of strategy technology and organizational change.

Investigators: F.W. Swierczek,

J. P. Gupta

Sponsor: EC

Investments in Thailand's Distance Training Network

This study will identify the engineering, technical and related managerial training needs of companies in key sectors of industry: manufacturing, automobile, electronics and computer, telecommunications, and petro-chemical/energy. It will also assess the potential of universities, training institutions and companies as well as government agencies, to provide training and use distance media such as satellite or cable. Media companies will be interviewed on the costs and benefits of appropriate technology for distance training.

Investigator: F.W. Swierczek

Sponsor: NSTDA, Thailand

Technology Parks - Case Studies in Asia

The effective organization and management of science, technology, and industrial parks in the Republic of Korea, Chinese Taipei, Singapore, Malaysia and Thailand are the subject of these case studies to demonstrate best practices in the region.

Investigator: F.W. Swierczek

Sponsor: NSTDA, Thailand

Entrepreneurship in Thailand's High-tech Firms

In past research on technological entrepreneurship, firms were considered as independent units of economic activity which pursue rapid growth, the innovation process was accorded a linear sequential view, individual strategic choice was assumed, the focus was on the personalities of individual entrepreneurs or on cultural determinants, and the time frame was narrow.

This study analyzes the innovation process in entrepreneurial, technology-based firms in the light of modern innovation theory, which views the process as complex, iterative and systemic in character, and relying on strategic integration and networking. Some 40 new, technology-based firms in Thailand are included in the study.

Investigator: B. Igel

Sponsor: Self-support

OUTREACH

The establishment of new School-based outreach centers and fora highlighted outreach efforts in 1998.

The Geoinformatics Center, which houses the Asian Center for Research on Remote Sensing (ACRoRS) and the GIS Applications Center (GAC), advances the integration of geoinformatics technology research, training and consultancy at AIT. Another SERD outreach arm established in 1998 is the AIT Agro-Food-Bioprocess Industries Forum.

The two new centers in the School of Civil Engineering are the Asian Center for Soil Improvement and Geosynthetics, established in July, and the Asian Center for Transportation Studies, established in November.

Revenue Summary of Outreach Activities
FY 1993-94 to FY 1997-98 (Baht '000)

SCHOOLS				
Year	Seminar	Conference	Symposium	Training + Short Course
1997-1998	4,930	6,967		18,212
1996-1997	3,135	3,444	134	9,627
1995-1996	5,065	845		9,335
1994-1995	3,687	1,154	1,385	16,580
1993-1994	5,532	3,009	876	13,598
CENTERS				
Year	Seminar	Conference		Short Course + Symposium + Training
1997-1998	17,563	5,253		46,024
1996-1997	23,170	35,945		13,758
1995-1996	2,665	1,965		36,386
1994-1995	13,547			33,126
1993-1994	6,164	478		8,165

AIT IN VIETNAM

In Vietnam, AIT operates the Swiss-AIT-Vietnam (SAV) Management Development Program in Ho Chi Minh City and the Hanoi-based AIT Center Vietnam.

The target participants for the SAV Program are Vietnamese management teachers, some of whom later join the MBA Program of the School of Management at AIT.

Thirty-eight participants (34 university lecturers and four business executives) are currently enrolled in SAV's sixth academic program, covering the period 1999-2001.

The 25 participants in the fourth program (1997-1999) have completed their second term at the School of Management at AIT and have returned to Vietnam to prepare their

MBA thesis research. The fifth program covers the period 1998-2000.

SAV conducts management training seminars for universities and the business community. The 1998 outreach program provided training in business simulation models, enterprises in a market economy environment, public administration reform, quality management and applications in Vietnam, effective selling skills, recruitment and performance management, total quality management, and related topics.

The AIT Center Vietnam (AITCV) held its first alumni homecoming on 19 September 1998. The event coincided with AITCV's fifth anniversary, during which it presented the 1999 training programs and discussed plans to open an

Executive MBA Program and expand collaborative activities with AIT's four schools and relevant academic centers.

AITCV's first academic program in Industrial Systems Engineering produces some 25 graduates annually and to-date has awarded Certificates and Diplomas to some 80 graduates, many of whom now hold key positions in industry and the public sector. AITCV graduates are given the opportunity to apply for admission into the ISE Master's Program at AIT.

AITCV's third ISE graduation ceremony held on 25 November 1998 was complemented by a special forum on human resources development for Vietnam.

In 1998 AITCV offered more than 80 short-term courses in high technology management and language training.

GEOINFORMATICS CENTER

Asian Center for Research on Remote Sensing (ACRoRS)

Since its establishment in 1995, ACRoRS has been receiving and archiving data from NOAA AVHRR. The data are distributed worldwide and are transferred via the Internet to the University of Tokyo for near real time environmental monitoring. The near real time feature of ACRoRS' reception has made the Center an attractive research partner for various agencies.

ACRoRS' research findings are used as inputs to training courses organized by GAC. ACRoRS provides research opportunities to students of the STAR Program.

GIS Applications Center (GAC)

Established in 1995 with initial funding from the UNEP/EAP-AP, GAC conducts training courses in fast-growing GIS and space technologies. To-date, GAC has trained close to 400 technicians and professionals from the Asia-Pacific region. GAC training courses in 1998 included advanced courses in remote sensing and GIS for watershed management and disaster mitigation, SAR data and potential, and basic GIS courses. Two programs were conducted in Indonesia and Vietnam, and support was extended to a French Government-sponsored basic GIS course on tropical diseases.

Asian Center for Transportation Studies (ACTS)

ACTS carries out research, training, information dissemination activities and consultancies focusing on new traffic management systems that utilize modern information and communications technologies. Its inauguration was part of an international seminar, Intelligent Transportation Systems: the 21st Century Asian Challenge.

Asian Center for Soil Improvement and Geosynthetics (ACSIG)

The ACSIG seeks to consolidate activities pertaining to soil and ground improvement. It also serves as a catalyst to advance soil and ground improvement techniques and to promote the application of geosynthetics to geotechnical problems.



Software products on structural analysis, concrete design, and geotechnical engineering, have been developed by the Asian Center for Engineering Computations and Software, established in 1995 by the School of Civil Engineering. They are widely used throughout the region.

SCHOOL FORA

Advanced Technology Forum (ATF)

ATF presentations in 1998, focusing on HRD and research activities of member companies, featured Seagate Technology (Thailand) Ltd. and Unocal Thailand Ltd. on 21 May, Siemens Ltd. on 18 June, Alcatel (Thailand) Co. Ltd. on 16 July, Miller Freeman (Thailand) Co. Ltd. on 24 September, Ericsson (Thailand) Ltd. on 22 October, and Siam Cement Plc. on 19 November.

ATF Members (as of November 1998): Advanced Info Service Public Co. Ltd., Alcatel (Thailand) Co. Ltd., Ericsson (Thailand) Ltd., Miller Freeman (Thailand) Co. Ltd., Nokia Telecommunications (Thailand) Ltd., Read-Rite (Thailand) Co. Ltd., Samart Corp. Plc., Seagate Technology (Thailand) Ltd., Siam Cement Plc., Siemens Ltd., and Unocal Thailand Ltd.

AIT Agro-Food-Bioprocess Industries Forum (AFBIF)

The AFBIF provides a platform for the exchange of technical information between AIT and companies engaged in agricultural and food production and bioprocess technology.

To support real needs in the industry and to ensure the relevance of thesis research, AFBIF members are encouraged to propose topics for student research in agro-food and bioprocess technologies. They are given access to the research output and to the profiles of graduating students for future reference.

AFBIF membership is open to business establishments and organizations with interests in agro-food and bioprocess technologies and relevant industries.

RESOURCES AND ADMINISTRATION

RESOURCE GENERATION

Resource generation efforts during the year under review were challenged by the continuing economic downturn throughout the Asia-Pacific region. Particular attention was given to maintaining partnerships with traditional donor countries.

The Royal Thai Government approved a grant of US\$ 2,506,234 covering the RTG 1998 fiscal year. The Government of Japan approved a grant of US\$ 3,058,600 for FY 1997-98. A proposal requesting US\$ 5,065,960 for FY 1999 has been submitted and is awaiting approval. Partnership opportunities with Japanese affiliated business companies in Thailand are being explored.

A result of the Institute's first venture into the Gulf region is an agreement signed with Sharjah College in the United Arab Emirates, for the admission of qualified Sharjah students into AIT's Management and Computer Science Programs on a fee-paying basis.

New Collaborations Signed in 1998

Thailand

NEPO
NSTDA
Department of Fisheries
TISTR
NESDB
Department of Agriculture
Bangkok University
Assumption University
Suranaree University of Technology

Sri Lanka

University of Colombo
Pramuka Savings and Development Bank

Institute of Technological Studies
University of Peradeniya
University of Kelaniya
University of Moratuwa

Private sector

Hitachi Plant Engineering Construction Co., Ltd., Japan
Ahlstrom Ltd., Thailand
Tipco Asphalt Public Co. Ltd., Thailand
Pulp and Paper Plc., Thailand
Advance Agro Plc., Thailand
A.A. Pulp Mill, Thailand
Coffey MPW Pty. Ltd., Australia
Petro Vietnam

Renewal of Support from European Donor Countries

In anticipation of the completion of the Institute's current MoUs with major European donors, requests for extensions and/or renewals have been put forward, taking into account modifications to reflect the priorities of funding agencies as well as AIT.

The **AIT/Danida MOU** will end in June 1999. A task force has been constituted to prepare a proposal for the next phase of the cooperation program.

The **AIT/Sida Agreement** will end in December 1999. Annual consultation was held between Sida and AIT in November 1998 to review the ongoing programs and to discuss the possibility of Sida-AIT cooperation beyond 1999.

A new **AIT/NORAD Agreement** was signed on 9 December 1998, providing support valued at NOK 27.6 million in the form of Master's scholarships (1998-2001) for nationals from Bangladesh, Bhutan, Nepal, Sri Lanka, Laos, and Vietnam, faculty support and other components.

A proposal for **Phase II of the AIT/Austria Academic Cooperation Program** (January 1999-December

2001), submitted to the Austrian Embassy in October 1998, covers Austrian support amounting to US\$ 1,234,852 in the form of Master's and Doctoral scholarships. Phase I ended in December 1998.

The **AIT/SDC Agreement** will end in June 1999. A draft proposal for the next phase (July 1999-June 2002) includes 36 Master's scholarships, faculty support, and the Asian Case Clearing House Project in the School of Management.

A proposal for the renewal of the **AIT/French Government Collaboration** for FY 1999 was submitted to the French Embassy in December 1998.

Phase 2 of the Netherlands Human Resources and Institutional Development Program ended in June 1998. Since some of the Phase 2 activities are on-going, a budget extension was granted for the period July 1998 to June 2001. Negotiations for Phase 3, expected to start by mid-1999, will be conducted pending the completion of an evaluation mission to be fielded in the early part of the year.

Faculty and Staff Scoldments FY 1997-98 (Man-months)

Governments	
Australia	39.50
Belgium	47.00
Canada	29.50
CEC	2.00
Chinese Taipei	11.00
Denmark	60.00
Finland	93.50
France	111.50
Germany	68.00
India	20.00
Italy	0.50
Japan	162.00
Korea	24.00
Norway	12.00
Switzerland	70.50
United Kingdom	69.00
International Organizations	
ESA	12.00
IUCN	23.50
UNEP-EAP/AP	12.00
WWF	38.00
Business and Industry	
NFPA Int'l.	7.00
Others (Business & Industry)	14.00
Total	926.50

CENTRAL ADMINISTRATION FUNCTIONS

Under the Interim Presidency, the central administration functions of the Institute have been distributed among three Vice Presidents namely, Prof. Karl E. Weber (Management), Prof. Mario T. Tabucanon (Academic), and Prof. Pisdhi Karasudhi (Development and Promotion).

Prof. Charas Suwanwela, an AIT Trustee from 1989 to 1995 and an educator of international stature, assumed office as President for the interim period on 17 August 1998, following the resignation of Dr. Roger G. H. Downer in May.

The new post of Vice President (Management) covers coordinating and overseeing units concerned with budgeting, human resource management and development, physical plant operations, medical and health care, purchasing and inventory, security and safety, AIT Center operations, sports facility management, faculty

and staff housing, and the playschool/child center operations. The goal is to foster mutual recognition of work in administration, support and auxiliary services, and academe, and to instill appreciation of particular achievements by the entire AIT community. Emphasis is laid on consultation within and beyond the responsibility area.



Prof. Charas



Prof. Weber



Prof. Tabucanon



Prof. Pisdhi

Budget for FY 1997-98*

REVENUE (In Millions of Baht)		EXPENDITURES (In Millions of Baht)	
Tuition and Fees	296.00	Schools/ Programs	195.49
Center Contributions		Academic Centers	47.44
CEC	4.50	Capital Purchases	11.80
ADPC	1.50	Academic Support	7.75
RCC	10.60	Student Activities	1.89
AIT Center Vietnam	.75	Administrative Departments	61.55
Auxiliary Operations	23.00	Campus Services	59.39
<i>Sub-Total</i>	40.35	Campus-wide Support	12.94
Contract Research Revenue	17.10	Budget Contingency and Reserves	24.72
Government Grants	12.35		
Other Sources			
Investment Revenue	17.00		
Other Revenue	40.20		
<i>Sub-Total</i>	47.20		
Grand Total	423.00	Grand Total	423.00

% increase over the last year 24.04%

*The FY 1997-98 budget of Baht 423 million increased by 24.04 per cent over that of FY 1996-97. Tuition and fees accounted for the largest increases in income. Decreases were noted in government grants and investment revenue.

RESOURCES AND ADMINISTRATION

SUMMARY OF CONTRIBUTIONS (CASH AND KIND)

■ GOVERNMENTS

Australia	0.42
Bhutan	0.06
Brunei	0.07
Canada	0.30
People's Republic of China	0.59
Chinese Taipei	1.05
European Community	
Austria	1.69
Belgium	1.65
CEC	3.47
Denmark	4.21
Finland	1.74
France	3.65
Germany	2.74
Italy	0.01
Netherlands	1.69
Spain	0.36
Sweden	7.57
UK	3.21
India	0.26
Japan	9.61
Korea	0.23
New Zealand	0.36
Norway	1.75
Pakistan	0.15
Philippines	0.22
Switzerland	3.58
Thailand	9.02
Tuvalu	0.06
USA	4.34
Sub-total	64.06

■ INTERNATIONAL ORGANIZATIONS

ADB	1.78
CIP	0.01
Commonwealth Secretariat	0.14
ESA	0.18
ESCAP	0.08
FAO	0.28
ICIMOD	0.04
ILO	0.12
IUCN	0.42
Mekong River Commission	0.12
SEAMEO	0.02
UN-Habitat	0.36
UN Office	0.02
UN University	0.21
UNCDF	0.25
UNCTAD	0.03
UNDCP	0.03
UNDP	0.78
UNEP	2.18
UNESCO	0.01
UNFPA	0.05
UNHCR	0.10
UNICEF	0.06
UNIDO	0.17
UNOCHA	0.04
UNOPS	0.37
WHO	0.37
World Bank	0.19
WWF	0.74
Sub-total	9.17

■ NATIONAL GOVERNMENT AGENCIES

Australia Community Aid Abroad	0.03
Austria Int'l Atomic Energy Agency	0.02
<i>Bangladesh</i>	
Acad. for Planning and Development	0.02
Bangladesh Agri. Research Council	0.15
Bangladesh Water Development Board	0.57
Flood Forecasting and Warning Service	0.05
Forum for Drinking Water	
Supply and Sanitation	0.01
Integrated Food Assistance Devt. Proj.	0.06
Int'l. Fertilizer Development Center	0.04
Local Govt. Engineering Dept.	0.01
Royal Development Project	0.01
Rajuk	0.01
Surface Water Modeling Center	0.04
<i>Bhutan</i>	
Bhutan Trust Fund for Environmental	
Conservation	0.03
Dzongkhag Administration	0.02
Ministry of Agriculture	0.04
National Budget and Aid Coordination	0.10
Royal Audit Authority	0.02
Royal Civil Service Commission	0.17
SNV-Bhutan	0.04
<i>Brunei</i>	
Ministry of Industry and Natural Resources	0.01
<i>Cambodia</i>	
Cambodia Devt. Resources Institute	0.02
<i>Canada</i>	
CIDA/Dhaka	0.01
University of Calgary	0.26
University of Manitoba	0.01
<i>China, PRC</i>	
China Meteorological Admin.	
Development	0.06
CICETE	0.03
Office of State Flood and	
Drought Prevention	0.01
<i>Finland</i>	
HUKS	0.21
<i>France</i>	
French Association for Standardization	0.02
<i>Germany</i>	
Gesellschaft Fur Aftraprojekte EBH	0.02
KAAD	0.09
<i>Ghana</i>	
Social Security and Nat'l. Institute Trust	0.02
<i>Hong Kong</i>	
Auxiliary Medical Services	0.01
Civil Aid Service	0.01
<i>India</i>	
Bank of India	0.01
Banker's Inst. of Rural Development	0.02
<i>Indonesia</i>	
Agricultural Research Management Proj.	0.08
Higher Education Project (ADB)	0.43
STMIX Budi Luhur	0.17
3rd Comm. Health and Nutrition Program	0.04
University ATMA Jaya Yogyakarta	0.06
University of Jember	0.09
<i>Iran</i>	
Agricultural Research Center for	
Gorgan and Gorbud	0.18
<i>Japan</i>	
Japan Society of Photogrammetry	
and Remote Sensing	0.04
JIRCAS	0.01
KEIO University	0.04

Ministry of Construction	0.01
NASDA	0.28
Nat'l. Institute of Environmental Studies	0.01
Remote Sensing Technology Center of Japan	0.28
Tokyo University	0.20
<i>Korea</i>	
Ministry of Govt. Administration	0.04
<i>Kuwait</i>	
Kuwait Fund for Arab Economic Development	0.01
<i>Malaysia</i>	
Dept. of Civil Defense	0.02
Institute of Nuclear Research Technology	0.02
Institut Amiriuddin Baki	0.04
Jabatan Pertanian Sarawak	0.01
Jahor Bahru City Council	0.02
Ministry of Education	0.30
Ministry of Health	0.18
<i>Mozambique</i>	
Secretariat for Eastern African	
Coastal Area Management	0.02
<i>Laos</i>	
Dept. of Forestry	0.03
EPL	0.01
<i>Nepal</i>	
Institute of Engineering	0.13
Ministry of Education	0.16
<i>Netherlands</i>	
Renewable Energy Development VOF	0.01
<i>New Zealand</i>	
Training and Technology Transfer	0.18
<i>Pakistan</i>	
Aga Khan Rural Support Program	0.05
Planning Development Dept.	0.02
Project for Horticultural Promotion	0.03
Punjab College of Business Administration	0.07
<i>Philippines</i>	
Dept. of Science and Technology	0.05
Fund for Assistance to Private Education	0.06
Dept. of Finance	0.03
Mindanao Polytechnic State College	0.02
National Irrigation Administration	0.03
University of the Philippines	0.01
<i>Sri Lanka</i>	
Board of Investment	0.01
Central Bank of Sri Lanka	0.40
Ministry of Education and Higher Education	0.08
National Development Bank	0.07
Urban Development Authority	0.26
<i>Sweden</i>	
Stockholm Environment Institute	0.21
SWEDMAR	0.02
<i>Switzerland</i>	
EAWAG/SANDEC	0.14
EPPL-IGE/GS Ecotoxicologie	0.08
Swiss Agency for Development and Cooperation	0.02
<i>Tanzania</i>	
Ministry of Finance	0.04
<i>Thailand</i>	
BMA	0.31
Bank of Thailand	0.09
Burapha University	0.02
Chulalongkorn University	0.15
CAT	0.24
Dept. of Fine Arts	0.05
DTEC	0.28
EGAT	0.72
ETA	0.15
Government Housing Bank	0.13
KMIT	0.02

FY 1997-98

1998 AIT Annual Report

Kasetsart University	0.02	Bumaja-India	0.01	Seagate Technology of Thailand Ltd.	0.01
IEAT	0.05	Carl Bro International A/S	0.07	Siam Agro Ind. Pineapple & Others Co.,Ltd.	0.01
Metropolitan Waterworks Authority	0.04	Chaimeng Co., Ltd.	0.02	Siam Cement Co., Ltd.	0.18
Ministry of Industry	0.04	Charoen Pokphand Feedmill Co., Ltd.	0.02	Siam Commercial Bank	0.03
Ministry of Interior	0.12	Chikami Meltec - Japan	0.02	Siam DHV Ltd.	0.04
Ministry of University Affairs	0.82	Chuo Mapping Co., Ltd.	0.02	Siam Gypsum Industry Co., Ltd.	0.01
Ministry of Science, Technology and Environment	0.02	CIRAD - France	0.03	Siam Nawaloha Foundry Co., Ltd.	0.01
Naresuan University	0.05	Coffey MPW Pty. Ltd.	0.01	Siam Yamato Steel Co., Ltd.	0.03
NEC	0.02	Computer Assisted Devt. Inc.	0.12	Sri Lanka Energy Managers Association	0.01
NEPO	0.04	Corporate Finance Group	0.01	SL Devt. Consultant Co., Ltd.	0.03
NSTDA	0.07	CP Aquaculture Business Group	0.01	Siemens AG - Germany	0.53
NECTEC	0.02	Dasco - Bangladesh	0.01	Siemens Ltd.	0.02
NIDA	0.03	Druk Air Corporation Ltd.	0.02	Steel Authority of India Ltd.	0.02
OCMRT	0.01	Ecumenical Scholarship Program	0.08	Stichting - Hivos	0.07
Office of Atomic Energy for Peace	0.01	Electric Power Development Co., Ltd.	0.07	Stikom - Surabaya	0.01
PTT	0.09	Environment - Canada	0.04	Stonehenge Design and Consultants Co., Ltd.	0.04
Public Works Dept.	1.36	Environment Software Service GMBH	0.05	Strongpack Plc. Co., Ltd.	0.01
Rajamangala Institute of Technology	0.34	Eraba Corporation, Japan	0.08	S.V. Acer Co., Ltd.	0.01
Revenue Department	0.09	Ericsson (Thailand) Co., Ltd.	0.01	Tanakom Products Co., Ltd.	0.01
Royal Thai Air Force	0.06	Fujitsu (Thailand) Co., Ltd.	0.01	Telecomasia Corporation Plc.	0.04
Securities and Exchange Commission	0.06	Geoasia Co., Ltd.	0.01	Thai Konoike Construction Co., Ltd.	0.04
TOT	1.11	Geotechnics Holland B.V.	0.08	Thai Telephone and Telecommunications Plc. Co., Ltd.	0.01
Thammasat University	0.01	Ghamot Co., Ltd. - Ghana	0.05	Thainox Steel Ltd.	0.05
<i>Tuvalu</i>		Gitec Consult GMBH	0.03	Thyssen Industrie AG - Germany	0.09
Tuvalu Cooperation Society	0.01	Golden Food International Co., Ltd.	0.01	Union Shoes Co., Ltd.	0.02
<i>United Kingdom</i>		Grand Engineering Consultants Co., Ltd.	0.01	Uniscience Ltd. - Finland	0.92
Dept. of International Development	0.10	Hitachi Ltd.	0.03	United Communication Ind. Co., Ltd.	0.03
UCLES	0.41	GSS Array Technology Plc. Co., Ltd.	0.01	Unocal Thailand Ltd.	0.01
University of Stirling	0.23	Hitachi Plant Engineering and Construction Co., Ltd.	0.06	WSP International - Bangladesh	0.03
University of Wales	0.07	Honda Motors Co., Ltd. - Japan	0.03	AIT Foundation, Inc.	0.09
<i>United States</i>		Innovation Nakomluang Footware Co., Ltd.	0.01	A. Soriano Foundation, Philippines	0.02
Academy for Educational Development	0.02	International Blaster Co., Ltd.	0.02	C & C Education Foundation	0.03
NOAA	0.26	International Data Corp. Thailand	0.01	John F. Kennedy Foundation of Thailand	0.42
University of Michigan	0.27	International Engineering Plc. Co., Ltd.	0.03	Keidanren	0.45
<i>Vietnam</i>		IT Supplier and Consulting Co., Ltd.	0.01	Lee Foundation	0.11
Department of Forestry	0.04	Jasmine Telecom Systems Co., Ltd.	0.17	American Red Cross	0.01
Hue University	0.03	Kuka Roboter GMBH	0.02	Assumption University	0.07
National Center for Science and Technology Information and Documentation	0.02	Loxley Information Service Co., Ltd.	0.01	Bangkok University	0.03
Petrovietnam Ltd.	0.04	Lucent Technologies Thailand, Inc.	0.03	Care - Bangladesh	0.44
Steering Committee for IT of Central Bodies	0.03	L.V.D. Company	0.02	Care - India	0.02
University of Technology	0.01	McCallum Agencies Pty. Ltd.	0.02	Catholic Relief Services - Cambodia	0.01
Vietnam Oil and Gas Corp.	0.25	Miller Freeman (Thailand) Co., Ltd.	0.01	Church Auxiliary for Social Action	0.01
Sub-total	15.49	Multimedia and Service Co., Ltd.	0.01	Commonwealth Fund for Technical Cooperation	0.02
BUSINESS, FOUNDATIONS, PRIVATE INDIVIDUALS AND OTHERS		National Aluminium Co., Ltd.	0.01	German Red Cross	0.02
A.A. Pulp Mill Co., Ltd.	0.02	Narai Technology Co., Ltd.	0.02	Helvetas, Bhutan	0.03
Able Sanoh Industries (1996) Co., Ltd.	0.01	NFPA International	0.04	India-Canada Environmental Facility	0.11
Adidas Co., Ltd.	0.02	Nippon Koei Co., Ltd.	0.06	International Federation of Red Cross and Red Crescent Society	0.04
Advanced Agro Plc. Co., Ltd.	3.50	NMC Dialysis Center (Thailand) Ltd.	0.01	International Federation of Library Associations and Institutes	0.10
Advanced Info. Service Plc. Co., Ltd.	0.06	Nokia Telecommunications (Thailand) NTU (Thailand) Ltd.	0.19	ISO Swedforest Consulting -Vietnam	0.01
AEDC Vietnam Ltd.	0.03	Nyex (Malaysia) Bhd.	0.02	Mahanakorn University of Technology	0.01
AFNOR-Paris	0.01	Okuminisches Studienwerk	0.01	Open Society Institute	0.06
Ahlstrom Ltd. - Finland	0.09	Overseas Construction Association of Japan, Inc.	0.09	Prasac-3 EC - Cambodia	0.01
Alcatel (Thailand) Co., Ltd.	0.04	Oxfam - Hong Kong	0.01	Save the Children Fund (UK)	0.03
Arcadis Euroconsult - Netherlands	0.04	Paris Chamber of Commerce and Industry	0.24	Sripatham University	0.05
Asia Pacific Telecommunity	0.29	Pearson Professional (Singapore) Pte Ltd.	0.02	Thai Tapioca Development Institute	0.08
Aspac Consultants Co., Ltd.	0.03	Petroleum Economics Ltd.- London	0.01	World Vision - Laos, PDR	0.03
B.B. Trading Sdn. Bhd. - Malaysia	0.05	Phoenix Pulp and Paper Plc. Co., Ltd.	0.03	Others	0.17
Bangkok Engineering Services and Technology Co., Ltd.	0.01	Private Sector Infrastructure Devt. Co., Ltd.	0.01	Sub-total	11.30
Bangkok Rubber Plc. Co., Ltd.	0.02	Read-Rite (Thailand) Co., Ltd.	0.02	TOTAL	100.00
Bank of Baroda, India	0.01	Sanwa-Bank Ltd. - Bangladesh	0.01		
Basic Co., Ltd.	0.02	SBC Warburg Premier Securities Co., Ltd.	0.01		
BNP Plastic Industry Co., Ltd.	0.01				

RESOURCES AND ADMINISTRATION

CAMPUS DEVELOPMENT

Geoinformatics Center

The Geoinformatics Center is located next to the Advance Agro Pulp and Paper Technology Building. Its construction cost of Baht 14 million was supported by the Chair Prof. Shunji Murai Personal Fund (Baht 6 million), ACRORS and GAC (Baht 5 million), and AIT (Baht 3 million).

New student dormitory complex

The new dormitory complex, valued at Baht 90.9 million, provides accommodation for some 200 students. The Royal Thai Government contributed Baht 19.9 million to the construction cost, while AIT's Regional Computer Center provided Baht 6 million.

School of Management Building

Construction of the School of Management Building was completed in January 1999. The building is in the vicinity of the ST3 dorm and the Chalerm Prakiat Building.

Sports facilities

Additional sports facilities constructed in 1998 include two tennis courts, one basketball court and one volleyball court. Verdant sceneries surround these new facilities.

EXPANSION OF COMMUNICATIONS SERVICES AND UTILITIES

Improvements in communication services include the expansion of the PABX capacity from 1,300 to 3,300 lines, providing telephone connections to all student dormitories, the ST6 and ST7 staff housing units, and the new dormitories T, U, V and W.

Electrical power supply systems were installed for new buildings, including the Advance Agro Pulp and Paper Technology Building, the SOM and Geoinformatics Buildings, and the Student Union office complex.

To further ensure safety, a new protective switch gear for electrical substation no.1 near the gate house was installed and electrical substation no. 6 was restructured by installing a larger transformer and circuit breaker. A new main distribution board was installed in the Administration Building,



To cope with the increasing demand for water, particularly during the dry season, a new water tower tank was constructed and a pipe laid to ensure water supply from the Provincial Waterworks Authority to AIT.

For energy conservation purposes, a 500-ton chiller, including pumps and a cooling tower, was installed to support a more efficient air conditioning system. The air conditioning system of the Medical Clinic was retrofitted. The water soft-



ener and two cooling towers of the chiller plant were repaired.

Towards the end of 1998, the laying of sewage and water supply pipes, and telephone lines to the SOM and Geoinformatics Buildings, and landscaping of the surrounding areas were completed.

INSTITUTE ADMINISTRATION

SENIOR ADMINISTRATIVE OFFICERS

President
 Vice President (Management)
 Vice President (Development and Promotion)
 Vice President (Academic)
 Institute Secretary
 Treasurer

Prof. Charas Suwanwela
 Prof. Karl E. Weber
 Prof. Pisidhi Karasudhi
 Prof. Mario T. Tabucanon
 Dr. Roger Hawkey
 Mr. Avinash Patel

DEANS OF SCHOOLS

Advanced Technologies
 Civil Engineering
 Environment, Resources and Development
 Management

Prof. H. N. Phien (Acting)
 Prof. Worsak Kanok-Nukulchai
 Prof. Chongrak Polprasert
 Prof. Jyoti P. Gupta

CENTER DIRECTORS

Asian Disaster Preparedness Center
 Center for Language and Educational Technology
 Center for Library and Information Resources
 Continuing Education Center
 Regional Computer Center
 AIT Center Vietnam
 Swiss-AIT-Vietnam Management
 Development Program

Mr. David Hollister and Mr. Aloysius Rego (Joint)
 Dr. Nicholas Dimmit (Chair)
 Dr. Francis Devadason
 Dr. Nicanor C. Austriaco
 Dr. Charoon Chirapaisarnkul
 Dr. Jari Leo Henrik Backman
 Dr. Hans Stoessel

STUDENT AFFAIRS

Dean of Student and Community Affairs
 Student Union President

Dr. Anila Sadananda
 Mr. Sorasak Intarapanich (August 97-April 98)
 Mr. Ramesh Kumar Hamal (May 98-January 99)

ABBREVIATIONS

SCHOOLS

SAT School of Advanced Technologies
 SCE School of Civil Engineering
 SERD School of Environment, Resources
 and Development
 SOM School of Management

CENTERS

ADPC Asian Disaster Preparedness Center
 AITCV AIT Center Vietnam
 CEC Continuing Education Center
 CLAIR Center for Library and Information
 Resources
 CLET Center for Language and Educational
 Technology
 RCC Regional Computer Center
 SAV Swiss-AIT-Vietnam Management
 Development Program

PROGRAMS

AFE Agricultural and Food Engineering
 ACRD Agriculture, Conservation and Rural Development
 AARM Aquaculture and Aquatic Resources Management
 BPT Bioprocess Technology
 CSIM Computer Science and Information Management
 Energy Program
 EE Environmental Engineering
 EMBA Executive Master of Business Administration
 Gendev Gender and Development Studies
 GTE Geotechnical and Transportation Engineering
 HSD Human Settlements Development
 IB International Business
 ISE Industrial Systems Engineering
 MT Management of Technology
 PPT Pulp and Paper Technology
 SEC Structural Engineering and Construction
 STAR Space Technology Applications and Research
 UEM Urban Environmental Management
 WEM Water Engineering and Management Program

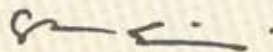
To The Board of Trustees of the Asian Institute of Technology

We have examined the balance sheets of the Asian Institute of Technology as at June 30, 1998 and 1997, the statements of revenues and expenditures of unrestricted current fund and restricted general fund and the related statements of changes in fund balance for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

Without qualifying our opinion, we draw attention to Note 1 to the financial statements. The operations of the Asian Institute of Technology as from the year ended June 30, 1998 have been affected and will continue to be affected for the foreseeable future by the economic conditions in Thailand and the Asia-Pacific Region in general. The ultimate effect that these uncertainties will have on stated values or classifications of assets and liabilities in the balance sheet statement cannot presently be determined and accordingly no provisions have been made.

In addition, we draw attention to Note 15 to the financial statements. The effect of the Year 2000 Issue arises because many computerized systems use two digits rather than four to identify a year. The effects of the Year 2000 Issue may be experienced before, on, or after January 1, 2000, and, if not addressed, the impact on operations and financial reporting may range from minor errors to significant systems failure which could affect an entity's ability to conduct normal business operations. It is not possible to be certain that all aspects of the Year 2000 Issue affecting the entity, including those related to the efforts of suppliers, or other third parties, will be fully resolved.

In our opinion, the financial statements referred to above present fairly the financial position of the Asian Institute of Technology as at June 30, 1998 and 1997, the revenues and expenditures of unrestricted current fund and restricted general fund and the changes in fund balance for the years then ended, in conformity with generally accepted accounting principles appropriate for non-profit organization as set out in Note 2 to the financial statements, applied on a consistent basis.



Somboon Supasiripinyo
Certified Public Accountant
Peat Marwick Suthee Limited
Bangkok, October 20, 1998

ASIAN INSTITUTE OF TECHNOLOGY NOTES TO FINANCIAL STATEMENTS JUNE 30, 1998 AND 1997

NOTE 1 - ECONOMIC ENVIRONMENT AND BASIS OF PRESENTATION

In 1997, certain Asia-Pacific countries, including Thailand, experienced economic difficulties relating to currency devaluation and slow down in growth. Accordingly, the Thai Government sought assistance from the International Monetary Fund to alleviate the economic crisis and to improve the economy over time. The financial statements for the year ended June 30, 1998 have been presented on a going concern basis and in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year and reflecting the management's current assessment of the possible impact of this economic situation on the financial position of the Asian Institute of Technology. Actual results could differ from the management's current assessments and such differences could be material. In addition, the effect on the entity's financial position of future developments and access to further financial information concerning the Institute's customers, suppliers, financiers and others and their ability to continue to transact with the Institute cannot presently be determined. The financial statements for the year ended June 30, 1998 therefore may not include all adjustments that might ultimately result from these economic conditions.

NOTE 2 - BASIS OF PRESENTATION OF FINANCIAL STATEMENTS

■ Fund Accounting

In order to ensure observance of limitations and restrictions placed on the use of resources available to the Institute, the books of account of the Institute are maintained in accordance with the principles of "fund accounting". 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. As for unrestricted fund, the governing board retains full control of use to achieve any of its institutional purposes.

Investment incomes are recognized as incomes in the unrestricted current fund except for endowments, general reserve and capital funds which are accounted for in the fund to which they are restricted.

Other unrestricted revenues are recognized as income in the unrestricted current fund.

Restricted contributions, grants, appropriations and other restricted resources are accounted for in the appropriate restricted funds.

NOTE 3 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**■ Accrual Basis**

The financial statements have been prepared on an accrual basis except for depreciation of fixed assets and contributions.

Depreciation of fixed assets is not recorded in accordance with the fund accounting concept.

Contributions are recognized on a cash basis due to the uncertainty in receiving contributions which are at the discretion of the donors.

The statement of revenues and expenditures of unrestricted current fund and restricted general fund is a statement of financial activities of current fund related to the current reporting period. It does not purport to present the results of operations for the period as would an earnings statement.

■ Contributions in kind

Contributions in kind are reflected in the financial statements on a fair value basis at the time of receipt.

■ Inventories

Inventories are valued at the lower of cost (first-in, first-out basis) and net realizable value.

■ Investments

Investment in debentures and warrants are stated at total lower of cost or market value.

■ Fixed Assets

Fixed assets are stated at cost at the time of acquisition or fair value at the time of donation in the case of contributions in kind.

■ Foreign Currencies

Exchange rates adopted:

Foreign currency transactions during the year

- at the commercial bank rates ruling on transaction dates.

Foreign currency transactions during the year recorded from AITCV's statements

- at the commercial bank average rate ruling on AIT's recorded month.

Assets and liabilities in foreign currency outstanding on the balance sheet date

- at the commercial bank rates ruling on the balance sheet date.

Exchange gains and losses are included in determining income.

NOTE 4 - RECLASSIFICATION

In the period June 30, 1998 the Institute had reclassified the group of expenditure of unrestricted current fund as part of the devolution of responsibilities for appropriate presentation. The comparative amounts for June 30, 1997 were not adjusted and therefore cannot be compared with the amounts of June 30, 1998.

NOTE 5 - INVESTMENTS

Investments as at June 30, consisted of :-

	1998 <u>Baht</u>	1997 <u>Baht</u>
Time deposits with banks	504,840,795	237,580,039
Deposits with finance companies	1,769,684	233,518,293
Debenture	8,117,136	12,500,000
Warrant	29,250	331,500
Total	<u>514,756,865</u>	<u>483,929,832</u>

The investments of each fund as at June 30, are as follows:-

	1998 <u>Baht</u>	1997 <u>Baht</u>
Unrestricted current fund	23,755,575	16,068,694
Restricted fund		
General	184,448,559	113,816,275
Endowment	94,787,458	82,059,396
General reserve	110,214,302	155,770,682
	<u>389,450,319</u>	<u>351,646,353</u>
Sponsored program fund		49,156,364
Capital fund		
Liquid assets	42,276,055	3,068,500
Repairs and Maintenance reserve	2,119,523	2,119,523
	<u>44,395,578</u>	<u>5,188,023</u>
Agency fund	57,155,393	61,870,398
Total	<u>514,756,865</u>	<u>483,929,832</u>

Time deposits with banks amounting to Baht 16.72 million (1997: Baht 34.45 million) of the restricted fund has been pledged with a bank as a collateral against outstanding letter of guarantee issued by the bank (see Note 14).

NOTE 6 - ADVANCE DUTIES AND TAXES

These represent advance duties and tax payments to the Government of Thailand which will be subsequently refunded to the Institute in accordance with the letter of the Office of the Secretary-General to the Cabinet dated July 16, 1985. The refund of the advance is for non-Thai faculty and staff and is subject to the annual government budget of the Government of Thailand.

The details of advance duties and taxes as at June 30, are as follows :

	1998 <u>Baht</u>	1997 <u>Baht</u>
Employees personal income tax	10,412,858	3,246,846
Import and tax duty		
- Automobile	-	368,734
- Wine and spirits	-	101,837
	<u>10,412,858</u>	<u>3,717,417</u>

APPENDIX

NOTE 7 - FIXED ASSETS

Fixed assets as at June 30, are as follows :-

	1998 <u>Baht</u>	1997 <u>Baht</u>
Campus development	34,920,340	34,115,706
Buildings	846,204,437	753,173,368
Furniture and equipment	748,626,285	707,122,791
Library acquisitions	132,139,222	116,040,194
Construction in progress	54,170,467	51,796,472
	<u>1,816,060,751</u>	<u>1,662,248,531</u>

The Institute made the agreement to lease land with the Ministry of Finance for 30 years from January 19, 1971 to January 18, 2001 and when this lease agreement is over, the Institute can continue leasing.

Depreciation for the year amounting to Baht 89,087,116 (1997 : Baht 82,542,713) has not been recorded in accordance with the fund accounting concept.

As at June 30, 1998, the Institute received a building in the approximate amount Baht 35 million as a donation. The value of building was estimated by construction work referred to the memorandum No. PPTP98:117M, dated July 16, 1998.

NOTE 8 - CONTRIBUTIONS IN KIND

This represents services donated to the Institute in the form of seconded faculty or staff of which the value is estimated on a basis in accordance with the approved Institute professional salary scale. The amounts are recognized as revenues and expenditures in the restricted general fund.

NOTE 9 - FUND BALANCES

Fund balances as at June 30, are as follows :-

	1998 <u>Baht</u>	1997 <u>Baht</u>
Restricted fund		
General	147,694,118	116,483,040
Endowment	95,258,513	82,102,946
General reserve	244,205,586	245,596,162
	<u>487,158,217</u>	<u>444,182,148</u>
Capital fund		
Fixed assets	1,816,060,751	1,662,248,531
Liquid assets -		
Unallocated	8,952,770	4,891,213
Liquid assets -		
Allocated	38,584,081	(41,559,206)
Repairs and maintenance reserve	2,119,523	2,119,523
	<u>1,865,717,125</u>	<u>1,627,700,061</u>

NOTE 10 - INCOME AND EXPENDITURE

Incomes and expenditure of restricted fund operated at the Asian Institute of Technology Center in Vietnam were recorded based on detailed statement received, whereas those corresponding documents were normally retained in

the Asian Institute of Technology Center in Vietnam, in the amount of Baht 15.72 million and Baht 28.59 million, respectively (1997: Baht 10.75 million and Baht 20.48 million).

NOTE 11 - TUITION AND FEE EXCHANGE RATE DIFFERENTIAL

This presented the excess of tuition fee and academic service fee income over the budget based on a fixed rate of Baht 26.5 per USD.

NOTE 12 - SALARIES AND ASSOCIATED COSTS

In the period June 30, 1998 salaries and associated costs of restricted current fund - general included supplementary salaries in the amount of Baht 34.20 million which was from the tuition and fees exchange rate differential account (CFA) by the Executive Committee's approval.

NOTE 13 - AIT INSURED SAVINGS FUND

The Institute and its staff have jointly set up an insured savings fund scheme. The fund is contributed by staff and the Institute at the rate of 5% and 10% of basic salary, respectively. This fund is managed by Aon Consulting (Thailand) Ltd. Withdrawal and refund of the contributions and the related earnings by staff have to comply with the rules of the Insured Savings Fund.

NOTE 14 - COMMITMENTS

- The commitments as at June 30, 1998 are as follows:-
- Capital commitments in respect of building construction amounting to approximately Baht 66.22 million (1997: Baht 1.44 million).
 - Bank guarantees of approximately Baht 16.72 million (1997: Baht 34.45 million) issued by a bank on behalf of the Institute in respect of certain performance bonds as required in the normal course of activities of the Institute.
 - Letter of credit in respect of equipment purchased amounting to approximately Baht 8.48 million.

NOTE 15 - SUBSEQUENT EVENTS

The Institute has demolished the south wing of the Administration building as at July 3, 1998 and the value of the demolished building cannot be estimated.

NOTE 16 - UNCERTAINTY DUE TO THE YEAR 2000 ISSUE

The Year 2000 Issue arises because many computerized systems use two digits rather than four to identify a year. Date-sensitive systems may recognize the year 2000 as 1900 or some other date, resulting in errors when information using year 2000 dates is processed. In addition, similar problems may arise in some systems which use certain dates in 1999 to represent something other than a date. The effects of the Year 2000 Issue may be experienced before, on, or after January 1, 2000, and, if not addressed, the impact on operations and financial reporting may range from minor errors to significant systems failure which could affect an entity's ability to conduct normal business operations. It is not possible to be certain of all aspects of the Year 2000 Issue affecting the entity.

ASIAN INSTITUTE OF TECHNOLOGY
BALANCE SHEETS
AS AT JUNE 30, 1998 AND 1997

	Unrestricted Current Fund		Restricted Fund		Sponsored Program Fund		Capital Fund		Agency Fund		Total	
	1998 BAHT	1997 BAHT	1998 BAHT	1997 BAHT	1998 BAHT	1997 BAHT	1998 BAHT	1997 BAHT	1998 BAHT	1997 BAHT	1998 BAHT	1997 BAHT
ASSETS												
Cash at banks	7,289,960	20,960,283	96,416,002	96,846,386	72,358,849	27,291,105	18,877,749	(38,223,954)	50,352,732	110,739,686	245,295,292	217,613,506
Investments (Note 5)	23,755,575	16,068,694	389,450,319	351,646,353	-	49,156,364	44,395,578	5,188,023	57,155,393	61,870,398	514,756,865	483,929,832
Advance duties and taxes (Note 6)	10,412,858	3,717,417	-	-	-	-	-	-	-	-	10,412,858	3,717,417
Accounts receivable and accrued income	1,688,131	3,122,229	9,889,065	6,141,134	13,889,059	10,062,535	1,644,733	83,953	595,158	226,949	27,706,146	19,636,800
Deposits	1,060,122	1,042,472	63,861	63,861	-	-	-	-	-	-	1,123,983	1,106,333
Inventories	-	-	349,778	528,995	-	-	-	-	-	-	349,778	528,995
Due from other funds	-	-	131,326,307	98,000,000	-	-	-	-	-	-	131,326,307	98,000,000
Fixed assets (Note 7)	-	-	-	-	-	-	1,816,060,751	1,662,248,531	-	-	1,816,060,751	1,662,248,531
Total Assets	44,206,646	44,911,095	627,495,332	553,226,729	86,247,908	86,510,004	1,880,978,811	1,629,296,553	108,103,283	172,837,033	2,747,031,980	2,486,781,414
LIABILITIES AND FUND BALANCES												
LIABILITIES												
Accounts payable and accrued expenses	3,505,881	5,101,080	6,443,445	8,755,860	779,228	572,752	15,261,686	1,596,492	1,053,885	1,026,215	27,044,125	17,052,399
Deposits	2,186,050	1,295,300	2,567,363	2,288,721	-	-	-	-	-	-	4,753,413	3,584,021
Due to other funds	-	-	131,326,307	98,000,000	-	-	-	-	-	-	131,326,307	98,000,000
Total Liabilities	5,691,931	6,396,380	140,337,115	109,044,581	779,228	572,752	15,261,686	1,596,492	1,053,885	1,026,215	163,123,845	118,636,420
FUND BALANCES (Note 9)	38,514,715	38,514,715	487,158,217	444,182,148	85,468,680	85,937,252	1,865,717,125	1,627,700,061	107,049,398	171,810,818	2,583,908,135	2,368,144,994
Total Liabilities and Fund Balances	44,206,646	44,911,095	627,495,332	553,226,729	86,247,908	86,510,004	1,880,978,811	1,629,296,553	108,103,283	172,837,033	2,747,031,980	2,486,781,414

The accompanying notes are an integral part of the financial statements.



PRESIDENT

ASIAN INSTITUTE OF TECHNOLOGY
STATEMENTS OF REVENUES AND EXPENDITURES – UNRESTRICTED CURRENT FUND AND RESTRICTED FUND – GENERAL
FOR THE YEARS ENDED JUNE 30, 1998 AND 1997

	Unrestricted Current Fund		Restricted Fund – General		Total	
	1998 BAHT	1997 BAHT	1998 BAHT	1997 BAHT	1998 BAHT	1997 BAHT
REVENUES:						
Tuition and fees:						
Academic unit	288,814,631	251,429,770	13,670,883	-	302,485,514	251,429,770
Computer center	3,243,600	7,834,356	-	-	3,243,600	7,834,356
	292,058,231	259,264,126	13,670,883	-	305,729,114	259,264,126
	-	-	152,960,020	-	152,960,020	-
Tuition & fee exchange rate differential (Note 11)						
Gifts and contributions:						
Cash	11,032,121	33,748,582	121,822,278	124,944,439	132,854,399	158,693,021
In-kind (Note 8)	-	-	145,193,053	112,880,679	145,193,053	112,880,679
	11,032,121	33,748,582	267,015,331	237,825,118	278,047,452	271,573,700
Grants and contracts	31,213,005	21,675,326	22,293,292	13,924,167	53,506,297	35,599,493
Sales and services:						
Educational activities	46,007	36,394	89,871,094	59,691,682	89,871,094	59,691,682
Others	46,007	36,394	1,504,703	1,858,659	1,550,710	1,895,053
	92,014	72,788	91,375,797	61,550,341	91,421,804	61,586,735
Income from investments	28,370,427	24,773,372	-	-	28,370,427	24,773,372
Auxiliary services	-	-	135,714,030	131,098,905	135,714,030	131,098,905
Recovery of indirect costs	31,371,247	30,303,614	-	-	31,371,247	30,303,614
AIT sponsored programs	-	-	10,867,716	13,579,223	10,867,716	13,579,223
Physical plant support	-	-	18,269,786	25,321,070	18,269,786	25,321,070
Exchange stabilization	-	-	143,629,441	3,207,790	143,629,441	3,207,790
Miscellaneous	-	-	81,176,422	34,486,399	81,176,422	34,486,399
Total Revenues	394,091,038	369,801,414	956,972,718	520,993,013	1,331,063,756	890,794,427
EXPENDITURES:						
Salaries and associated costs:						
Cash (Note 12)	18,684,847	255,919,498	37,865,943	7,781,993	56,547,790	263,701,491
In-kind (Note 8)	-	-	145,193,053	112,880,679	145,193,053	112,880,679
	18,684,847	255,919,498	183,055,996	120,662,672	201,740,843	376,582,170
Academic units operating costs	208,883,117	32,695,171	178,667,298	119,188,438	387,550,415	151,883,609
Student related costs	1,987,630	1,865,621	11,472,126	6,501,596	13,459,756	8,367,217
Administrative support costs	62,787,340	6,043,816	40,111	6,096	62,827,451	6,049,912
Capital purchases	13,217,336	14,572,486	180,987	(202,519)	13,398,323	14,369,967
Campus wide services	87,358,276	57,924,476	-	-	87,358,276	57,924,476
Physical plant support costs	-	-	34,785,941	37,421,840	34,785,941	37,421,840
AIT sponsored programs	-	-	17,407,336	16,937,506	17,407,336	16,937,506
Auxiliary services costs	-	-	91,082,282	88,183,118	91,082,282	88,183,118
Exchange stabilization	-	-	97,807,398	3,186,095	97,807,398	3,186,095
Other costs	-	-	78,232,912	69,121,510	78,232,912	69,121,510
Total Expenditures	392,918,546	369,021,068	692,732,387	461,006,352	1,085,650,933	830,027,420
Excess of Revenues Over Expenditures	1,172,492	780,346	244,240,331	59,986,661	245,412,823	60,767,007

The accompanying notes are an integral part of the financial statements.

ASIAN INSTITUTE OF TECHNOLOGY
STATEMENT OF CHANGES IN FUND BALANCES
FOR THE YEAR ENDED JUNE 30, 1998 (WITH COMPARATIVE TOTALS FOR 1997)

	RESTRICTED FUND				CAPITAL FUND								Total				
	Unrestricted Current fund		General Reserve		Sponsored Program Fund		Fixed Assets		Liquid Assets Unallocated		Liquid Assets Allocated		Repairs and Maintenance Reserve				
	BAHT	1997	BAHT	1998	BAHT	1997	BAHT	1998	BAHT	1997	BAHT	1998	BAHT	1997	BAHT	1998	
Balances July 1, 1997 (Note 9)	38,514,715	116,483,040	82,102,946	245,996,162	85,937,252	1,662,248,531	4,891,213	(41,559,206)	171,810,818	2,368,144,994	2,276,796,997	(10,077,218)	(100,893,289)	(8,393,614)	(3,708,500)		
Adjustments:																	
Disposal of assets	-	-	-	(8,393,614)	-	(10,077,218)	-	-	-	-	-	-	-	-	-	-	-
Devaluation of Debenture & Warrant	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Additions:																	
Excess of revenues over expenditures (expenditures over revenues)	1,172,492	244,240,331	-	3,237,567	(468,572)	-	6,921,320	-	(70,690,347)	177,491,471	128,027,276	25,243,716	18,976,918	43,295,208	36,156,964		
Investment income	-	-	1,681,800	16,640,596	-	-	-	-	-	-	-	-	-	-	-	-	-
Government grants and appropriations	-	-	218,725	-	-	-	-	43,076,483	-	-	-	-	-	-	-	-	-
Gain on rate of exchange	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous income and contributions	-	-	8,255,042	-	-	-	-	21,072,690	-	-	29,327,732	24,345,496	-	-	-	-	-
Contributions - in kind	-	-	-	-	-	-	-	37,401,431	-	-	37,401,431	12,043,087	-	-	-	-	-
Due from other fund	-	-	-	33,326,037	-	-	-	-	-	-	33,326,037	-	-	-	-	-	-
Total	39,687,207	360,723,371	92,258,513	290,406,748	85,468,680	1,652,171,313	11,812,533	59,991,398	101,120,471	2,695,759,757	2,391,744,949	1,172,492	780,346	50,000	(3,000,000)	12,875,125	(390,173)
Deductions:																	
Inter-fund transfer from (to)																	
- Unrestricted Current Fund	-	(60,058,290)	3,000,000	-	-	-	-	149,920,963	50,000	92,912,673	-	-	-	-	-	-	-
- Restricted Current Fund	(1,172,492)	(3,000,000)	-	-	-	-	-	-	-	(3,000,000)	-	-	-	-	-	-	-
- General	-	-	-	-	-	-	-	8,168,690	5,878,927	12,875,125	(390,173)	-	-	-	-	-	-
- Endowment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- General Reserve	-	-	-	(8,168,690)	-	-	-	-	-	(158,089,653)	-	-	-	-	-	-	-
- Liquid Assets Capital Fund	-	(149,920,963)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- Allocated	-	(50,000)	-	(5,878,927)	-	-	-	-	-	(5,928,927)	-	-	-	-	-	-	-
- Repairs and Maintenance Reserve	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- Agency Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Expenditures for plant facilities																	
- Cash	-	-	-	-	-	126,488,007	-	(32,695,684)	-	93,792,323	60,329,645	-	-	-	-	-	-
- Kind	-	-	-	-	-	37,401,431	-	(37,401,431)	-	-	(12,043,087)	-	-	-	-	-	-
Other cost																	
- General	-	-	-	(33,326,037)	-	-	(2,859,763)	(109,399,855)	-	(112,259,618)	(71,886,513)	-	-	-	-	-	-
- Due to other fund	-	-	-	-	-	-	-	-	-	(33,326,037)	-	-	-	-	-	-	-
Total	(1,172,492)	(213,029,253)	3,000,000	(46,201,162)	-	163,889,438	(2,859,763)	(21,407,317)	5,928,927	(111,851,622)	(23,599,955)	-	-	-	-	-	-
Balances June 30, 1998 (Note 9)	38,514,715	147,694,118	95,258,513	244,205,586	85,468,680	1,816,060,751	8,952,770	38,584,081	107,049,398	2,583,908,135	2,368,144,994	1,172,492	780,346	50,000	(3,000,000)	12,875,125	(390,173)

The accompanying notes are an integral part of the financial statements.

- EC Ambassador Reynaldo Arcilla
BFC Former Ambassador of the
Republic of the Philippines to
Thailand
Manila, Philippines
- EC Prof. Jean-Louis Armand
BFC President-Designate
HDC Asian Institute of Technology
NC Pathumthani, Thailand
PPC
- SRC Mr. Robert C. Bodden
President
AIT Foundation, Inc.
USA
- H.E. Mr. Michel Caillouët
Ambassador
European Commission to
Thailand
Bangkok, Thailand
- EC Prof. Primitivo Cal
FRC Professor
School of Urban and Regional
Planning
University of the Philippines
Quezon City, Philippines
- BFC Dr. Olarn Chaipravat
President and CEO
Siam Commercial Bank Public
Co., Ltd.
Bangkok, Thailand
- Mr. Arthur Y. Chen
Former Chairman of the Public
Construction Commission of
the Executive Yuan
Chinese Taipei
- EC Dr. Saisuree Chutikul
FRC Advisor on Women, Children,
Youth, Education and Social
Development
Office of the Permanent Secretary
Office of the Prime Minister
Royal Thai Government
Bangkok, Thailand
- PPC H.E. Mr. Gérard Coste
Ambassador Extraordinary and
Plenipotentiary
The Embassy of France
Bangkok, Thailand
- Ambassador John Gunther Dean
Former Ambassador of the
United States to Thailand
Paris, France
- EC H.E. Mr. Niels Kaas Dyrland
Ambassador Extraordinary and
Plenipotentiary
The Royal Danish Embassy
Bangkok, Thailand
- H.E. Mr. Hermann Erath
Ambassador Extraordinary and
Plenipotentiary
The Embassy of the Federal
Republic of Germany
Bangkok, Thailand
- BFC H.E. Mrs. Inga Eriksson Fogh
Ambassador Extraordinary and
Plenipotentiary
The Embassy of Sweden
Bangkok, Thailand
- EC H.E. Mr. Bernard Freymond
HDC Ambassador Extraordinary and
Plenipotentiary
The Embassy of Switzerland
Bangkok, Thailand
- EC Prof. Hans van Ginkel (2001)
PPC *Vice Chair*
Rector
United Nations University
Tokyo, Japan
- EC Dr. Rainer Goerdeler
SRC Director for Asia, Middle and
Eastern Europe
Federal Ministry for Economic
Cooperation and Development
(BMZ)
Bonn, Germany
- H.E. Sir James William Hodge
Ambassador Extraordinary and
Plenipotentiary
The British Embassy
Bangkok, Thailand
- EC H.E. Mr. Tauno Kääriä
BFC Ambassador Extraordinary and
PPC Plenipotentiary
The Embassy of Finland
Bangkok, Thailand
- EC Prof. Pisidhi Karasudhi
BFC (Ex-Officio)
NC Vice President (Development
and Promotion)
PPC Asian Institute of Technology
Pathumthani, Thailand
- EC H.E. Mom Luang Birabhongse
BFC Kasemsri
HDC *Chair*
NC His Majesty's Principal Private
PPC Secretary
The Grand Palace
Bangkok, Thailand
- Mr. Malik Muhammad Saeed
Khan
Member, Planning Commission
Government of Pakistan
Islamabad, Pakistan
- FRC Prof. S. K. Khanna
Chairman
All India Council for Technical
Education
New Delhi, India
- Dr. Thanat Khoman
Chair Emeritus
Former Deputy Prime Minister
Royal Thai Government
Bangkok, Thailand
- EC Ambassador Kiyooki Kikuchi
PPC Former Ambassador of Japan
to the United Nations
Tokyo, Japan
- Prof. Thienchay Kiranandana
President
Chulalongkorn University
Bangkok, Thailand
- NC Mr. Haymo Krusch
President
Siemens (Thailand) Limited
Bangkok, Thailand
- Dr. Nguyen Huu Le
Director, Global R&D Planning
Nortel Technology
Ontario, Canada
- Dr. Somsak Leeswadtrakul
President and CEO
SSP Group
Bangkok, Thailand
- EC Dr. Sukum Navapan
BFC Chairman, Navatane Group of
NC Companies
Bangkok, Thailand
- H.E. Mr. Hiroshi Ota
Ambassador Extraordinary and
Plenipotentiary
The Embassy of Japan
Bangkok, Thailand

EC Mr. Anand Panyarachun
Former Prime Minister
Royal Thai Government
Bangkok, Thailand

H.E. Mr. Rajendra Kumar Rai
Ambassador Extraordinary and
Plenipotentiary
The Embassy of India
Bangkok, Thailand

Mr. Gilbert Rutman
Honorary President
Elf Aquitaine Production
Paris, France

EC Prof. Ramakoti Sadananda
FRC (Ex-Officio)
HDC Faculty Representative
PPC Asian Institute of Technology
Pathumthani, Thailand

EC Mr. Surendra Shrestha
NC (Ex-Officio)
PPC AITAA President
SRC UNEP-EAP/AP
Pathumthani, Thailand

Dr. Vanchai Sirichana
Permanent Secretary
Office of the Permanent
Secretary
Ministry of University Affairs
Royal Thai Government
Bangkok, Thailand

EC Prof. Charas Suwanwela
BFC (Ex-Officio)
HDC President
NC Asian Institute of Technology
PPC Pathumthani, Thailand

EC Prof. Mario T. Tabucanon
BFC (Ex-Officio)
PPC Vice President (Academic)
Asian Institute of Technology
Pathumthani, Thailand

Mr. Yoshiro Takasaki
Chairman
Toyo Seikan Kaisha Ltd.
Tokyo, Japan

EC Dr. Somchet Thinaphong
BFC Governor
Industrial Estate Authority of
Thailand
Royal Thai Government
Bangkok, Thailand

Dr. Ho Sy Thoang
Chairman
Petro Vietnam
Hanoi, Vietnam

EC Dr. H. L. Tien
PPC (Ex-Officio)
International Staff Representative
Asian Institute of Technology
Pathumthani, Thailand

PPC Mr. Yen Yi Tseng
President
Ret-Ser Engineering Agency
Taiwan, Chinese Taipei

EC Dr. Phaichitr Uathavikul
Chairman
Executive Board of Directors
Thailand Environment Institute
Bangkok, Thailand

EC Prof. Karl E. Weber
BFC (Ex-Officio)
HDC Vice President (Management)
PPC Asian Institute of Technology
SRC Pathumthani, Thailand

H.E. Mr. Lars A. Wensell
Ambassador Extraordinary and
Plenipotentiary
The Royal Norwegian Embassy
Bangkok, Thailand

Mr. Xuezhong Zhang
Deputy Director General
Department of International
Cooperation
State Education Commission of
the People's Republic of China
Beijing, PRC

Note :

The list* provides information on the Trustees' positions and membership in Standing Committees as follows:

BFC	Board Finance Committee
EC	Executive Committee
FRC	Faculty Relations Committee
HDC	Honorary Degrees Committee
NC	Nominating Committee
PPC	Policy and Planning Committee
SRC	Student Relations Committee

Secretary:

Dr. Roger A. Hawkey
AIT

**List updated in January 1999*

Obituary

Dr. Oscar B. Mapua, Life Trustee since 1968 and former Chair of the Board (February 1974 to January 1975), passed away on 17 March 1998 in Manila, Philippines.

Dr. Mapua served as President of the Mapua Institute of Technology in Manila, the alma mater of many Filipino students who later joined AIT for their further studies.



Dr. Mapua

FULL-TIME FACULTY

(Full-time faculty members are listed alphabetically. The italicized entries are abbreviations of their respective Schools or Academic Centers.)

Nitin V. Atzulpurkar
B.Eng., Poona; Ph.D., Canterbury.
Associate Professor (*SAT*)

Kazi Mohiuddin Ahmed
M.Sc., Leningrad; Ph.D., Univ. of Newcastle.
Associate Professor (*SAT*)

A.T.M. Nurul Amin
B.A. (Hons.), M.A., Dhaka;
M.A., Ph.D., Manitoba.
Professor (*SERD*)

Ajit P. Annachhatre
B.Tech., IIT Kanpur; Ph.D., IIT. Bombay
Associate Professor (*SERD*)

Ray W. Archer
B.A. (Hons.), Sydney; M.R.A.P.I.
Professor (*SERD*)

A.S. Balasubramaniam
B.Sc., Ceylon; Ph.D., Cambridge.
Chair Professor (*SCE*)

Amrit Bart
B.A., Earlham College;
M.A., M.S., Ph.D., Auburn.
Assistant Professor (*SERD*)

Dentcho N. Batanov
B.Sc., M.Sc., Ph.D., Technical Univ., Sofia.
Associate Professor (*SAT*)

Clemens Bechter
B.S., Univ. of Cologne;
M.B.A., Ph.D., Univ. of St. Gall.
Assistant Professor (*SOM*)

Dennes T. Bergado
B.S.C.E., Mindanao State; M. Eng., AIT;
Ph.D., Utah State.
Professor (*SCE*)

S.C. Bhattacharya
B.E. (Mech.), M.E., Roorkee;
Ph.D., Cambridge.
Professor (*SERD*)

Erik Bohez
B.Eng., High Tech. Inst. St. Antonius, Ghent;
M.Eng., State Univ. of Ghent.
Associate Professor (*SAT*)

Bettina Büchel
M.Sc., Rutgers Univ.;
M.P.A., Univ. of Constance;
Ph.D., Univ. of Geneva.
Assistant Professor (*SOM*)

Ginette Chamart
Maitrise, DEA INALCO, Paris.
Instructor (*CLET*)

Marie-France Champagne
Maitrise, DEA Sorbonne.
Assistant Professor (*CLET*)

Chotchai Charoenngam
B.Eng. (Hons.), KMITT; M.Sc., Kansas;
Ph.D., Texas (Austin).
Associate Professor (*SCE*)

Surapong Chirarattananon
B.Eng., UNSW; M.Eng.Sc., Monash;
Ph.D., Newcastle.
Associate Professor (*SERD*)

Terry Clayton
B.A., Acadia; B.Ed., Mount Saint Vincent;
M.Sc., Rutgers.
Associate Professor (*CLET*)

Reldar Dale
M.Phil., D.Phil., Oslo.
Associate Professor (*SERD*)

Glap Van Dang
Dipl., INSTN, Saclay;
Ph.D., Panthéon-Sorbonne, Paris 1.
Associate Research Professor (*SERD*)

Jean-Pierre Delsol
B.Sc., C.E.S.S., D.E.A.,
Ph.D., Paris VIII Univ.
Associate Professor (*SERD*)

Harvey Demaine
B.A. (Hons.), Oxford;
M.Sc., Ph.D., London.
Associate Research Professor (*SERD*)

Nicholas Dimmitt
B.A., M.A., San Francisco State;
Ph.D., Southern California.
Assistant Professor (*CLET*)

Roger G. H. Downer
B.Sc., M.Sc., D.Sc., Queens Univ. Belfast;
Ph.D., Univ. of Western Ontario.
Chair Professor in Applied Science (*SERD*)

Phan Minh Dung
M.Sc., Ph.D., Univ. of Tech., Dresden.
Associate Professor (*SAT*)

Barbara Earth
B.A., M.S., Ph.D., Ohio.
Assistant Professor (*SERD*)

Heinz Eckhardt
Dipl. Ing., Technical Univ., Darmstadt;
Dr.-Ing., Ruhr Univ., Bochum.
Associate Professor (*SCE, SERD*)

HONORARY FACULTY

Her Royal Highness Princess Maha Chakri Sirindhorn is an Honorary Faculty Member of the Institute associated with the Space Technology Applications and Research Program.

Peter Edwards
B.Sc., Liverpool;
Ph.D., Univ. of Texas (Austin).
Research Professor (*SERD*)

Apsit Eumnoh
B.Sc., Kasetsart; M.Sc., Sheffield;
Ph.D., North Carolina State.
Associate Professor (*SERD*)

Taplo Erke
M.Tech., Helsinki Univ. of Tech.
Associate Professor (*SAT*)

Vatcharaporn Eschchalkul
B. Acc. (Hons.), Chulalongkorn;
M.B.A., Oklahoma State; Ph.D., Kent State.
Assistant Professor (*SAT*)

Okitsugu Fujiwara
B.S., M.S., Osaka; M.S., Stanford;
M.A., M.Phil., Ph.D., Yale.
Professor (*SCE, SERD*)

David Gee-Clough
B.Sc., M.E., Wales; M.S., Cal. Technology;
Ph.D., California (Davis).
Professor (*SERD*)

Lin Der Guey
B.E., M.E., National Cheng Kung Univ.;
D. Eng., AIT.
Assistant Professor (*SCE*)

Ashim Das Gupta
B.E., Gauhati, India; M.Eng., D.Eng., AIT.
Professor (*SCE*)

Jyoti P. Gupta
B.Sc., Lucknow; B.Tech. (Hons.),
IIT Kharagpur; Ph.D., Manchester.
Professor (*SOM*)

Sung-Ryong Ha
B.S., M.S., Inha; D.Eng., Osaka.
Associate Professor (*SERD*)

John B. Hambrey
B.A., Cantab; D.Tech.Econ., Ph.D., Stirling.
Assistant Professor (*SERD*)

Gunner Kjer Hansen
M.Sc., Ph.D., Dr. Science, Royal Veterinary
& Agriculture Univ., Denmark.
Associate Professor (*SERD*)

Kiyoshi Honda
B.Ag., D.Eng., Tokyo.
Associate Professor (*SERD*)

FULL-TIME FACULTY

(Full-time faculty members are listed alphabetically. The italicized entries are abbreviations of their respective Schools or Academic Centers.)

Nitin V. Afzulpurkar
B.Eng., Poona; Ph.D., Canterbury.
Associate Professor (*SAT*)

Kazi Mohiuddin Ahmed
M.Sc., Leningrad; Ph.D., Univ. of Newcastle.
Associate Professor (*SAT*)

A.T.M. Nurul Amin
B.A. (Hons.), M.A., Dhaka;
M.A., Ph.D., Manitoba.
Professor (*SERD*)

Ajit P. Annachhatre
B.Tech., IIT Kanpur; Ph.D., IIT. Bombay
Associate Professor (*SERD*)

Ray W. Archer
B.A. (Hons.), Sydney; M.R.A.P.I.
Professor (*SERD*)

A.S. Balasubramaniam
B.Sc., Ceylon; Ph.D., Cambridge.
Chair Professor (*SCE*)

Amrit Bart
B.A., Earlham College;
M.A., M.S., Ph.D., Auburn.
Assistant Professor (*SERD*)

Dentcho N. Batanov
B.Sc., M.Sc., Ph.D., Technical Univ., Sofia.
Associate Professor (*SAT*)

Clemens Bechter
B.S., Univ. of Cologne;
M.B.A., Ph.D., Univ. of St. Gall.
Assistant Professor (*SOM*)

Dennes T. Bergado
B.S.C.E., Mindanao State; M. Eng., AIT;
Ph.D., Utah State.
Professor (*SCE*)

S.C. Bhattacharya
B.E. (Mech.), M.E., Roorkee;
Ph.D., Cambridge.
Professor (*SERD*)

Erik Bohez
B.Eng., High Tech. Inst. St. Antonius, Ghent;
M.Eng., State Univ. of Ghent.
Associate Professor (*SAT*)

Bettina Büchel
M.Sc., Rutgers Univ.;
M.P.A., Univ. of Constance;
Ph.D., Univ. of Geneva.
Assistant Professor (*SOM*)

Ginette Chamart
Maitrise, DEA INALCO, Paris.
Instructor (*CLET*)

Marie-France Champagne
Maitrise, DEA Sorbonne.
Assistant Professor (*CLET*)

Chotchai Charoenngam
B.Eng. (Hons.), KMITT; M.Sc., Kansas;
Ph.D., Texas (Austin).
Associate Professor (*SCE*)

Surapong Chirarattananon
B.Eng., UNSW; M.Eng.Sc., Monash;
Ph.D., Newcastle.
Associate Professor (*SERD*)

Terry Clayton
B.A., Acadia; B.Ed., Mount Saint Vincent;
M.Sc., Rutgers.
Associate Professor (*CLET*)

Reidar Dale
M.Phil., D.Phil., Oslo.
Associate Professor (*SERD*)

Giap Van Dang
Dipl., INSTN, Saclay;
Ph.D., Panthéon-Sorbonne, Paris 1.
Associate Research Professor (*SERD*)

Jean-Pierre Delso
B.Sc., C.E.S.S., D.E.A.,
Ph.D., Paris VIII Univ.
Associate Professor (*SERD*)

Harvey Demalne
B.A. (Hons.), Oxford;
M.Sc., Ph.D., London.
Associate Research Professor (*SERD*)

Nicholas Dimmitt
B.A., M.A., San Francisco State;
Ph.D., Southern California.
Assistant Professor (*CLET*)

Roger G. H. Downer
B.Sc., M.Sc., D.Sc., Queens Univ. Belfast;
Ph.D., Univ. of Western Ontario.
Chair Professor in Applied Science (*SERD*)

Phan Minh Dung
M.Sc., Ph.D., Univ. of Tech., Dresden.
Associate Professor (*SAT*)

Barbara Earth
B.A., M.S., Ph.D., Ohio.
Assistant Professor (*SERD*)

Heinz Eckhardt
Dipl. Ing., Technical Univ., Darmstadt;
Dr.-Ing., Ruhr Univ., Bochum.
Associate Professor (*SCE, SERD*)

HONORARY FACULTY

Her Royal Highness Princess Maha Chakri Sirindhorn is an Honorary Faculty Member of the Institute associated with the Space Technology Applications and Research Program.

Peter Edwards
B.Sc., Liverpool;
Ph.D., Univ. of Texas (Austin).
Research Professor (*SERD*)

Aplisit Elumnoh
B.Sc., Kasetsart; M.Sc., Sheffield;
Ph.D., North Carolina State.
Associate Professor (*SERD*)

Taplo Erke
M.Tech., Helsinki Univ. of Tech.
Associate Professor (*SAT*)

Vatcharaporn Eschalkul
B. Acc. (Hons.), Chulalongkorn;
M.B.A., Oklahoma State; Ph.D., Kent State.
Assistant Professor (*SAT*)

Okitsugu Fujiwara
B.S., M.S., Osaka; M.S., Stanford;
M.A., M.Phil., Ph.D., Yale.
Professor (*SCE, SERD*)

David Gee-Clough
B.Sc., M.E., Wales; M.S., Cal. Technology;
Ph.D., California (Davis).
Professor (*SERD*)

Lin Der Guey
B.E., M.E., National Cheng Kung Univ.;
D. Eng., AIT.
Assistant Professor (*SCE*)

Ashim Das Gupta
B.E., Gauhati, India; M.Eng., D.Eng., AIT.
Professor (*SCE*)

Jyoti P. Gupta
B.Sc., Lucknow; B.Tech. (Hons.),
IIT Kharagpur; Ph.D., Manchester.
Professor (*SOM*)

Sung-Ryong Ha
B.S., M.S., Inha; D.Eng., Osaka.
Associate Professor (*SERD*)

John B. Hambrey
B.A., Cantab; D.Tech.Econ., Ph.D., Stirling.
Assistant Professor (*SERD*)

Gunner Kjer Hansen
M.Sc., Ph.D., Dr. Science, Royal Veterinary
& Agriculture Univ., Denmark.
Associate Professor (*SERD*)

Kiyoshi Honda
B.Ag., D.Eng., Tokyo.
Associate Professor (*SERD*)

APPENDIX

H. Ozaki

B.Eng., M.Eng., D.Eng., Kyoto.
Associate Professor (*SERD*)

Romeo Pacudan

M.Eng., AIT; Ph.D., UPMF Grenoble.
Assistant Professor (*SERD*)

P.C. Pandey

B.Sc. Eng., Banaras;
P.G. Dipl., King's College;
Ph.D., Nottingham.
Professor (*SAT*)

Preeda Parkplan

B.Sc. (Hons.), Kasetsart; M.Sc., Mississippi
State Univ.; Ph.D., Texas A&M.
Associate Professor (*SERD*)

Manukid Parnichkun

B.Eng., Chulalongkorn;
M.Eng., Ph.D., Tokyo.
Assistant Professor (*SAT*)

Himangshu Paul

B.E., Univ. of Gauhati; M.Eng., Ph.D., AIT.
Professor (*SOM*)

Huynh Ngoc Phlen

B.Sc., B.A., Hue; M.Sc., D.Tech.Sc., AIT.
Professor (*SAT*)

Noppadol Phien-wej

B.Eng. (Hons.), Chulalongkorn;
M.S., Ph.D., Illinois, Urbana-Champaign.
Associate Professor (*SCE*)

Anulark Pinnol

B.Eng., Kasetsart; M.B.A., Eastern
Michigan; Ph.D., Texas A&M.
Associate Professor (*SAT*)

Chongrak Polprasert

B.Eng., Chulalongkorn; M.Eng., AIT;
Ph.D., Washington.
Professor (*SERD*)

Soparth Pongquan

B.Sc. (Hons.), Chiangmai; M.Sc., AIT;
Doctorandus, Leiden; Dr., Wageningen.
Assistant Professor (*SERD*)

R.M.A.P. Rajatheva

B.Sc., Moratuwa; M.Sc., Ph.D., Manitoba.
Assistant Professor (*SAT*)

Sudip K. Rakshit

B.Sc. (Hons.), Madras;
B.Tech., Jadabpur; M.Tech., Ph.D., IIT Delhi.
Associate Professor (*SERD*)

Steffen P. Raub

Diplom-Kaufmann, Mannheim;
Diplome-ESSEC, France;
Ph.D., Univ. of Geneva.
Assistant Professor (*SOM*)

Amador A. Remiglo, Jr.

B.Sc., M.Sc., Univ. of Phil.;
M.Sc., Ph.D., Univ. of London.
Assistant Professor (*SERD*)

J.K. Routray

B.Sc. (Hons.), M.Sc., Ph.D., Utkal;
M.R.P., IIT, Kharagpur.
Associate Professor (*SERD*)

Ramakoti Sadananda

B.E., Mysore; M.E., Roorkee;
Ph.D., IIT Kanpur.
Professor (*SAT*)

Vilas M. Salokhe

B.Tech., Rahuri; M.Eng., Udaipur;
D.Eng., AIT.
Professor (*SERD*)

Teerapat Sanguankotchakorn

B.Eng., Chulalongkorn;
M.Eng., D.Eng., Tokyo Inst. of Tech.
Assistant Professor (*SAT*)

William Savage, Jr.

B.S.Eng., Texas A&M; M.A., Hawaii.
Associate Professor (*CLET*)

Nawaz Sharif

B.Sc., BUET; M.Eng. Adm.,
George Washington; Ph.D., Texas A&M.
Chair Professor (*SOM*)

A.B. Sharma

B.Sc. (Hons.), Newcastle-upon-Tyne, UK;
Lic.Tech. (Ph.D.), D.Tech.,
Helsinki Univ. of Tech.
Professor (*SAT*)

Jonathan Shaw

LLB., London; Dip. Ed., Manchester.
Associate Professor (*CLET*)

R.M. Shrestha

B.E., M.S.U., Baroda; B.L., Tribhuvan;
M.Eng., D.Eng., AIT.
Associate Professor (*SERD*)

Gajendra Singh

B.Sc.A.E., Pantnagar; M.S., Rutgers;
Ph.D., California (Davis).
Professor (*SERD*)

Mark Speece

B.A. Univ. of Nebraska;
M.A., Ph.D., Arizona;
Ph.D., Univ. of Washington.
Associate Professor (*SOM*)

S.C. Srivastava

B.Tech., Ph.D., IIT.
Associate Professor (*SERD*)

Willem F. Stevens

B.Sc., M.Sc., Ph.D., State Univ., Leyden,
the Netherlands.
Professor, (*SERD*)

Richmond Stroupe

B.A., Wake Forest; M.S., Florida State.
Ph.D., Southern California.
Assistant Professor (*CLET*)

Charas Suwanwela

M.D. Chulalongkorn Hospital Univ. of
Medical Sciences; M.S., Univ. of Chicago;
Cert., American Board of Neurological
Surgery
Chair Professor

Fredric W. Swierczek

B.A., Temple; M.A., Ph.D., Pittsburgh.
Associate Professor (*SOM*)

Mario T. Tabucanon

B.S.E.E., B.S.M.E., Cebu Inst. of Tech.;
M.Eng., D.Eng., AIT.
Professor (*SAT*)

Satoshi Takizawa

B.Eng., M.Eng., D.Eng., Tokyo.
Associate Professor (*SERD*)

Yordphol Tanaboriboon

B.S., M.S., Oklahoma State; Ph.D., Virginia
Polytechnic Inst. & State Univ.
Associate Professor (*SCE*)

John C.S. Tang

B.Sc., M.Sc., Ph.D., Univ. of Florida.
Professor (*SOM*)

Darunee Tantwiranond

B.Sc., Chulalongkorn; M.Sc., Georgia;
Ph.D., Michigan State.
Associate Professor (*SERD*)

Gopal B. Thapa

B.A., M.A., Tribhuvan Univ.;
M.Sc., D.Tech.Sc., AIT.
Associate Professor (*SERD*)

Myint Myint Thein

B.A., Yangon; M.A., Warwick, UK.
Assistant Professor (*CLET*)

Tawatchai Tingsanchai

B.Eng. (Hons.), Chulalongkorn;
M.Eng., D.Eng., AIT.
Professor (*SCE*)

C. Visvanathan

B.Tech., IIT Madras; M.Eng., AIT;
Ph.D., National Polytech, Toulouse.
Associate Professor (*SERD*)

Suphat Vongvisessomjai

B.Eng., Chulalongkorn;
M.Eng., D.Eng., AIT.
Professor (*SCE*)

Pierre Walter

B.S., M.A., Ph.D., Wisconsin.
Assistant Professor (*CLET*)

Pennung Warnitchai

B.Eng. (Hons.), Chulalongkorn;
M.Eng., D.Eng., Univ. of Tokyo.
Associate Professor (*SCE*)

Edward L. Webb

B.A., Occidental College; Ph.D., Miami.
Assistant Professor (*SERD*)

Karl E. Weber

M.A., Dr.Phil., Heidelberg.
Professor (*SERD*)

Sutat Weesakul

B.Eng., Chulalongkorn;
M.Eng., D.Eng., AIT.
Assistant Professor (*SCE*)

B.W.E. Wickramanayake

B.A., Ceylon; M.A., Dhaka; Dip.Econ., East Anglia; Dr.Econ., EUR, Rotterdam. Associate Professor (SERD)

Anil C. Wijeyewickrema

B.Sc., Univ. of Moratuwa; M.Eng., AIT; Ph.D., Northwestern. Associate Professor (SCE)

Vilas Wuwongse

B.Eng., M.Eng., D.Eng., Tokyo Inst. of Tech. Professor (SAT)

A. Yakupitiyage

B.Sc., Sri Lanka; M.Sc., AIT; Ph.D., Stirling. Associate Professor (SERD)

Jian-Guo Zhang

B.Sc., Shenyang Inst. of Aeronautical Technology; M.Sc., Beijing Univ. of Aeronautics & Astronautics; Ph.D., Parma, Italy. Associate Professor (SAT)

Willi Zimmermann

Ph.D., Munich. Associate Professor (SERD)

ASSOCIATED FACULTY

SCHOOL OF ADVANCED TECHNOLOGIES

Anuchit Anuchitanukul

B.Eng., Chulalongkorn; M.Sc., Ph.D., Stanford.

Nipon Charoenkitkarn

B.Eng., KMIT Ladkrabang; M.Sc., California State; Ph.D., Toronto.

Chidchanok Lursinsap

B.Eng., Chulalongkorn; M.S., Ph.D., Univ. of Illinois, Urbana-Champaign.

Stanislav Makhano

Ph.D., Russian Academy Science.

Ouen Pin-Ngern

B.Ed. (Hons.), M.Ed., Srinakharinwirot Univ.; M.S., Chulalongkorn; M.S., Oregon State; Ph.D., Univ. of Nebraska.

Chindakorn Tuchinda

B.Eng., Chulalongkorn; M.S., Ph.D., Oklahoma State.

Pisal Yenradee

B.Eng., KMIT North Bangkok; M.Eng., D.Eng., AIT.

SCHOOL OF CIVIL ENGINEERING

Prapansak Buranapraps

B.Eng., Chulalongkorn; M.Eng., SEATO; Ph.D., Oklahoma.

Taweep Chalsomphob

B.Eng., Chulalongkorn; M.Eng., D.Eng., Univ. of Tokyo.

Songklat Matupayont

B.Eng., Chulalongkorn; M.Eng., AIT; Ph.D., Saitama.

Pruettha Nanakorn

B.Eng., Chulalongkorn; M.Eng., AIT, D.Eng., Univ. of Tokyo.

Peangta Satarugsa

B.Sc., Khon Kaen Univ.; M.Sc., AIT; Ph.D., Univ. of Arizona, Tucson, USA.

Tian Ho Seah

B.Sc. (Hons.), London; D.Sc., MIT.

Viroat Srisurapanon

B.Eng., King Mongkut's Inst. of Tech.; M.Eng., AIT; Ph.D., Tohoku.

Somnuk Tangtermelrikul

B.Eng., Chulalongkorn; M.Eng., D.Eng., Univ. of Tokyo.

Wanchal Teparakasa

B.Eng. (Hons.), Kasetsart; M.Eng., AIT; D.Eng., Tokyo Univ.

Nattawuth Udayasen

B. Eng., Khon Kaen Univ.; M.Eng., AIT; Ph.D., Waterloo.

SCHOOL OF ENVIRONMENT, RESOURCES AND DEVELOPMENT

Vivote Boonamnuyvitaya

B.Eng., M.Eng., Tokyo Institute of Technology; D.Eng., Tokyo

Suwalee Chandkrachang

B.Sc., Chulalongkorn; M.Sc., Columbia.

Supranee Chlnabut

B.S. Kasetsart; M.Sc., Auburn; Ph.D., Stirling.

Udomchai Chlnadit

B.Sc., Chulalongkorn; M.Sc., Mahidol; Docteur de Troisieme Cycle, INSA, Toulouse.

Duong Duc Tien

B.Sc., M.Sc., Hanoi Univ.; D.Sc., Univ. of Moscow.

R. H. B. Exell

B.A. (Hons.), M.A., D.Phil., Oxford.

Chandra Prasad Giri

B.Sc., Tribhuvan; M.Sc., D.Tech.Sc., AIT.

Masahiko Honzawa

B.Sc., D.Sc., Tokyo Univ. of Fisheries.

Mohammed Zakir Hussain

B.Sc., Dhaka; B.Sc., Peshawar; M.F., M.Phil., Ph.D., Yale.

Chandhana Indhapanya

B.A., M.Com., Chulalongkorn; M.Stat., North Carolina State; Ph.D., AIT.

Kitti Intaranont

B.Eng., Chulalongkorn; M.Sc., Houston; Ph.D., Texas Tech.

Thanwa Jitsanguan

B.Sc., Kasetsart; M.A., Thammasat; Ph.D., Univ. of Hawaii.

Kungwan Juntarashote

B.Sc., Kasetsart; M.S., NIDA; Ph.D., Texas Tech.

Eugene Khor

B.Sc., Lakehead; Ph.D., Virginia Tech.

Attaya Kungsuwan

B.Sc., Chulalongkorn; M.Sc., Ph.D., Tokyo.

Bernard G. Lefebvre

B.Sc. Arch., B.Arch., M.Arch., McGill; M.Sc., Quebec.

Bundit Limmeechokchal

B.Eng., KMIT North Bangkok; M.Eng., D.Eng., AIT.

Banpot Na Pompeth

B.Sc.Agr., Punjab Agricultural Univ.; M.S., Ph.D., Hawaii.

Nakao Nomura

B.S., M.S., Ph.D., Tsukuba.

Christopher G. Oates

B.Sc., Manchester Polytechnic; Ph.D., Nottingham.

Weerakorn Ongsakul

B.Eng., Chulalongkorn; M.S., Ph.D., Texas A&M.

Watanalal Panbangred

B.Sc., M.Sc., Mahidol; D.Eng., Osaka.

Kam Suan Pheng

B.Sc.(Hons.), Univ.Sains Malaysia; M.Sc., Ph.D., Cornell.

Sumalee Pichyangkura

B.Sc., Chulalongkorn; M.S., Ph.D., Michigan State.

Satit Puttipipatkachorn

B. Pharm, Chiang Mai; M.Sc., Mahidol; Ph.D., Chiba.

Chavalit Ratanatamskul

B.Eng., Chulalongkorn; M.Eng., D.Eng., Tokyo.

Khalid Saeed

B.Sc., Lahore; M.Eng., AIT; Ph.D., MIT.

Korbtham Sathirakul

B.Sc., Chulalongkorn; M.B.A., Sasin; M.S., Ph.D., Tokyo.

Sununthar Setboonsarng

B.Sc., Chulalongkorn; M.S., Hawaii; M.A., Yale; Ph.D., Hawaii-Manoa.

Kianarong Sriroth

B.Sc., Kasetsart; M.Sc., Univ. of Phil., Los Banos; M.Eng., D.Eng., Technical Univ., Berlin.

APPENDIX

Orasa Suksawang

B.A., Chulalongkorn; M.Sc., AIT;
Ph.D., Tokyo.

Manee Tantrungki

B.Sc., M.S., Kasetsart; D.Eng., Osaka.

Nguyen Cong Thanh

B.Sc., D.Sc., Laval.

Duong Duc Tien

B.Sc., M.Sc., Hanoi Univ.;
D.Sc., Univ. of Moscow.

Boonjit Titapwatanakun

B.Econ., M.Econ., Thammasat;
M.B.A., Ph.D., Minnesota.

Kittichai Triratanasirichai

B.Eng., Khon Kaen; M.Eng., AIT;
Ph.D., Niigata.

Sornthep Tumwasorn

B.S., M.S., Kasetsart; Ph.D., Florida.

Nuntavarn Vichit-Vadakan

B.Sc., California (Los Angeles);
M.Sc., California State;
M.P.H., D.P.H., California (Los Angeles).

Gadsaraporn Wannitkul

B.S., Kasetsart; M.S., NIDA;
M.A., Ph.D., Wisconsin.

Cun Yi Yu

B.Eng., M.Eng., Xian Jiaotong Univ.;
Ph.D., Royal Inst. of Tech., Stockholm.

SCHOOL OF MANAGEMENT

Atipol Bhanich-Supapol

B.A., Carleton Univ., Canada;
M.A., Northeastern Univ., Canada;
Ph.D., Carleton Univ., USA.

Adith Cheosakul

B.S., M.Eng., Cornell; MBA, New York
Univ.; Ph.D., City Univ. of New York.

Pornchal Chunhachinda

B.S., Chulalongkorn; M.B.A.,
Thammasat;
M.S., Ph.D., Florida International Univ.

Seksak Jumreornvong

M. Accountancy, Chulalongkorn;
Ph.D., Georgia State.

Bunlue Khongchantra

M.Sc. Law, Juris Doctor, Univ. of Tulane.

Kopr Kritayakirana

B.Sc., Chulalongkorn; Ph.D., Harvard.

Kitti Limskul

Ph.D., Nagoya Univ.

Md. Abdul Quader Miah

B.Sc., East Pakistan Univ. of Eng.
&Tech.; M.Eng., D.Eng., AIT.

Pornsiri Poonakasem

B.Sc., Chulalongkorn;
M.Sc., Univ. of Illinois, Urbana-Champaign;
Ph.D., Univ. of Florida.

Sununtha Slengthal

B.A., Chulalongkorn;
M.A., Ph.D., Univ. of Illinois.

Saowanee Sitthawat

B.Acc., Chulalongkorn; M.A.S., Univ.
of Illinois, Urbana-Champaign;
D.B.A., Univ. of Kentucky.

Suvit Yodmani

Ph.D., Boston Univ., MIT.

AFFILIATED FACULTY

SCHOOL OF ADVANCED TECHNOLOGIES

Sushil K. Acharya

B.Eng., Motilal Nehru; M.Eng., D.Eng., AIT.

Charoon Chirapalsarnkul

B.Sc., B.Eng., Ph.D., New South Wales.

Md. Ahsan Akhtar Hasin

B.Sc., BUET; M.Eng., D.Eng., AIT.

Bikash C. Ghosh

B.Sc.Eng., BUET; M.Eng., D.Eng., AIT.

Aekavute Sujarae

B.Eng., Florida Inst. of Tech.;
M.Eng., D.Eng., AIT.

Hoang Le Tien

B.Eng., Polytech, Prague, Czech;
M.Eng., D.Eng., AIT.

SCHOOL OF ENVIRONMENT, RESOURCES AND DEVELOPMENT

Nicanor C. Austrifaco

B.Sc., National Univ., Manila;
M.Eng., D.Eng., AIT.

Wiboon Boonyatharokul

B.S. (Hons.), Kasetsart; M.S., California (Davis);
Ph.D., Colorado State.

Rajan K. Gengaje

B.A. (Hons.), LL.B., M.P.M., Poona;
M.Sc., Ph.D., AIT.

Pham Hoang-Luong

B.Eng., Hanoi Univ. of Tech.;
M.Eng., AIT; Ph.D., INP-Toulouse.

Chalyaphol Kaewprakalsangkul

B.Eng., Kasetsart; M.Eng., D.Eng., AIT.

Helkki Kolehmainen

M.Sc., Ph.D., Helsinki Univ. of Tech.

Surat Lertlum

B.Sc., Norwich; M.Sc., George Washington;
D.Tech.Sc., AIT.

Graham Charles Mair

B.Sc., Liverpool; Ph.D., Wales.

Robert J. Mather

B.Sc. (Hons.), Univ. of London;
Ph.D., Univ. of Cambridge.

Krishna Jee Paharl

B.Sc., Panjab; M.Eng., D.Eng., AIT.

Lokendra P. Poudyal

B.Com., M.A., B.L., Tribhuvan Univ., Nepal;
M.Sc., D.Tech.Sc., AIT.

Lal Samarakoon

B.Sc. (Hons.), Kelaniya; M.Sc., Saga;
Ph.D., Ehime.

Daniel V. Savin

B.Sc., M.Sc., D.E.S., D.E.S.S. Paris I;
M.B.A., Ph.D. (Hons.), Northwestern.

Robert L.G. Schumann

B.Sc., Polytechnic of Central London.

Sejal Worah

B.Sc., St. Xavier's College, India;
M.S., State Univ. of New York;
Ph.D., Univ. of Poona.

VISITING FACULTY

SCHOOL OF ADVANCED TECHNOLOGIES

Thomas H. Baker

B.A., Amherst; M.A., Ph.D., Stanford.

Andrew Davison

B.Sc., UMIST, UK; M.Sc., Lehigh Univ.,
USA; Ph.D., Imperial College, UK.

Francis J. Devadason

B.Sc., B.Lib.Sc., Madras; Associateship in
Documentation (DRTC) ISI, Calcutta;
Ph.D., Karnatak Univ., Dharwad.

Kripa Shanker

B.Sc., Banaras; M.Tech., IIT Kanpur;
M.S. Eng., Ph.D., Cornell.

Qi Yulu

B.Sc., M.Sc., Ph.D. (Equiv.),
Univ. of Science & Tech. of China.

SCHOOL OF CIVIL ENGINEERING

Charles L. Abernethy

B.Sc., Edinburgh Univ.

Mukand Singh Babel

B.Eng., Rajasthan Agricultural Univ., Udaipur,
India; M.Eng., D.Eng., AIT.

Nguyen Luong Bach
B.Math., Hanoi Polytechnic Univ.;
M.Sc., D.Tech.Sc., AIT.

Pannapa Herabat
B.S., M.S. Ph.D., Carnegie Mellon.

S. P. Gupta
B.Sc., Birla Inst. of Tech;
M.C.E., Ph.D., Brigham Young.

**SCHOOL OF ENVIRONMENT,
RESOURCES AND
DEVELOPMENT**

R. A. Attalage
B.Sc., Eng. (Hons.), Moratuwa; M.Eng., AIT;
D.E.A., Ph.D., Ecole Des Mines de Paris.

Nguyen Luong Bach
B.Math., Hanoi Polytechnic Univ.;
M.Sc., D.Tech.Sc., AIT.

Yves Chelet
Dipl., Ecole Supérieure d'Electricite;
Dipl., Inst. of Nuclear Science & Eng.,
Illinois.

Karl Iver Dahl-Madsen
M.Sc., Danish Technical Univ.

Claude H.S. Dupuy
Doctorat es Sciences Physiques,
Strasbourg.

Richard J. Frankel
B.S., Drexel;
M.S., Ph.D., California (Berkeley).

Kapil Gupta
B.Tech., IIT Delhi; M.Tech., IIT Madras;
Ph.D., Sheffield.

Torbjorn Helle
M.Sc., Ph.D. (Hons.), Trondheim.

Steffen Johnsen
M.S., Univ. of Copenhagen;
Ph.D., California (Berkeley).

Erkki Johannes Kilskila
M.Sc., Ph.D., Helsinki Univ. of Tech.

David C. Little
B.Sc., Liverpool; M.Sc., Ph.D., Stirling.

Alastair R. Lucas
B.A., LL.B., Alberta;
LL.M. (Hons.), British Columbia.

Virginia White Maclaren
B.A., Bishop's; M.Pl., Ottawa;
M.S., Ph.D., Cornell.

Peter J. Marriott
B.A., Canterbury; M.A., Alberta.

Christopher A. McLeod
B.Sc. (Hons.), B.A., M.A., Toronto;
M.Sc., Ph.D., Hokkaido.

B. Mohanty
B.Sc., SAICE; M.Sc., AIT;
Ph.D., INP Toulouse.

Gilbert Naudet
Dipl., Ecole Centrale de Paris.

Francis P. D. Navin
B.Eng., McMaster; M.Sc., Missouri;
Ph.D., Minnesota.

Marl Osawa
B.A., M.A., D.Econ., Univ. of Tokyo.

Antti Palokangas
M.Sc., Helsinki Univ. of Tech.

V. Setty Pendakur
B.Eng., Mysore; M.Sc., British Columbia;
M.S., Ph.D., Washington.

Jean-Christophe Poudou
M.S., Ph.D., Montpellier.

Richard A. Rohan
B.A. (Chem.), Nebraska-Lincoln;
(Civil Eng.), Nebraska-Omaha.

William A. Ross
B.Sc. (Hons.), Manitoba; Ph.D., Stanford.

Rakesh Sagar
B.Tech., M.Tech., Ph.D., IIT Delhi.

Ganesh P. Shrivakoti
B.S., M.S., Udaipur; Ph.D., Michigan State.

S.C. Srivastava
B.Tech., Ph.D., IIT.

D. Thukaram
B.E., Osmania; M.Tech., Nagpur;
Ph.D., IIS, Bangalore.

Richard L. Tinsley
B.A., Lafayette College; M.S., Maryland;
Ph.D., Florida.

Jean-Claude Vincent
B.Sc., M.Sc., Ing. (AI Gx-Belgium).

Jy S. Wu
B.S.Ch.E., Nat'l Taiwan; M.Eng., AIT;
Ph.D., Rutgers.

Chen Xiaoyong
B.S., M.S., Ph.D., Wuhan Technical
Univ. of Survey and Mapping.

SCHOOL OF MANAGEMENT

Nazrul Islam
B.Sc.Eng., Bangladesh Univ. of Eng. & Tech.;
M.Eng., D.Eng., AIT.

Jung-won Lee
B.A., Seoul National Univ.;
M.S., Ph.D., KAIST.

Truong Quang
MPA, Inst. of Social Studies, The Hague;
Ph.D., Free Univ., Amsterdam.

Leelakantan Ramachandran
M.Com., Univ. of Kerala.

Andreas Sturm
Ph.D., Basel Univ.

ADJUNCT FACULTY

**SCHOOL OF ADVANCED
TECHNOLOGIES**

Patrick Brezillon
M.Sc., Ph.D., Univ. Paris 6.

Klaus Rall
Ph.D., Hannover.

**SCHOOL OF ENVIRONMENT,
RESOURCES AND
DEVELOPMENT**

Shigeru Fukushima
B.A., M.A., Nagaoka Univ. of Tech.;
Ph.D., Tokyo.

SCHOOL OF MANAGEMENT

Zong-Tae Bae
B.Sc., Seoul National Univ.;
M.Sc. & Ph.D., KAIST

Sang-Hoon Kim
M.Sc., Ph.D., KAIST.

I.M. Pandey
M.Com., Ph.D., Univ. of Delhi.

K. Ramanathan
B.Sc. (Hons), Univ. of Ceylon;
Post Grad. Dip. Appl. Stat., Univ. of
Colombo; M.Eng. & D.Eng., AIT.

APPENDIX

SCHOOL OF ADVANCED TECHNOLOGIES

Distance Education

Investigator: H.N. Phien; *Sponsor:* NORTEL

Telemedicine; Investigator:

R. Sadananda; *Sponsor:* Siemens AG

Curricula Development and Implementation for Education and Training of Software Developers; *Investigator:* D. N. Batanov
Sponsor: IBM

GAIA

Investigator: R. Sadananda; *Sponsor:* EU

Web-Based Collaboration for Team Research; *Investigator:* T. Baker; *Sponsor:* AIT Curriculum Innovation Award

Integrated Toolbox on Web-Based Courses Development; *Investigator:* K. Kanchanasut
Sponsor: AIT Curriculum Innovation Award

Behavior-Based Robotics and Animation Programming; *Investigator:* P. M. Dung
Sponsor: AIT Research Initiation Grant

Multi-Agency Distributed Systems
Investigator: P. M. Dung; *Sponsor:* AIT Curriculum Innovation Award

Foundations of Deductive Object-Oriented Databases; *Investigator:* V. Wuwongse
Sponsor: Thailand Research Fund

Object-Oriented Software Engineering Training; *Investigator:* V. Wuwongse
Sponsor: Revenue Dept., Thailand

NC-PC Machine: an Open Architecture CNC Machine; *Investigators:* E.L.J. Bohez, N. Afzulpurkar, M. Pamichkun
Sponsor: Belgian Govt.

Re-design for Manufacturing and Assembly of DaySafe Security Drawer; *Investigators:* E.L.J. Bohez, J.R. Duffou, N. Rumana, S. Taopanich; *Sponsor:* DaySafe Co.

Development of a PLC-Based Ball Catching Machine; *Investigator:* N. Afzulpurkar
Sponsor: Siemens (Thailand) Ltd.

Waterjet Cutting of Huge Stainless Steel Gaskets for Petrochemical Plant
Investigator: E.L.J. Bohez
Sponsor: Gold Crest Supreme Co., Ltd.

Medical Technology R&D; *Investigators:* ISE/AIT, J. Vander Sloten, KUL-Belgium
Sponsor: Flemish Inter-University Council

ON-GOING GRANT AND SPONSORED RESEARCH (1998)

Interference Potential between Non-Geostationary Mobile Satellite Services and Terrestrial Radio Relay Links

Investigator: K. M. Ahmed
Sponsor: AIT Research Initiation Grant

Hybrid Fiber/Coax Communication Networks: Performance Analysis and Hardware Design; *Investigator:* J. Zhang
Sponsor: AIT Research Initiation Grant

SCHOOL OF CIVIL ENGINEERING

Full Scale Test Embankment Using Hexagonal Wire Mesh Reinforcement
Investigator: D.T. Bergado; *Sponsor:* B.B. Trading Sdn. Bhd., Malaysia

Evaluation of New Profiles of Hitek Vertical Drain; *Investigator:* D.T. Bergado
Sponsor: Nylex Malaysia Berhad

Lime/Cement Columns of Soft Bangkok Clay
Investigator: D.T. Bergado; *Sponsor:* Billfinger and Berger (Thal) Co., Ltd.

Effects of Electro-Osmotic Consolidation on Soft Bangkok Clay Improved with Mebra Prefabricated Vertical Drain (PVD)
Investigator: D.T. Bergado
Sponsor: Geotechnics (Holland) BV

Monitoring and Evaluation of Vacuum Consolidation with PVD for the 2nd Bangkok Intl. Airport; *Investigator:* D.T. Bergado
Sponsor: Geotechnics (Thailand) Co. Ltd.

Geotechnical Services for Engineering Construction Supervision of Underground Powerhouse Caverns and Associated Tunnels and Shafts, Lam Ta Khong Pumped Storage Project, Nakorn Ratchasima, Thailand
Investigator: N. Phien-wej
Sponsor: EPDC/EGAT

Collapse of Pumping Station in Wastewater Treatment Plant; *Investigators:* W. Kanok-Nukulchal, N. Phien-wej, N. Anwar
Sponsor: Cunningham Intl. (Thailand) Ltd.

Integrity and Stability for Renovation of Ancient Structures in Ayutthaya, Thailand
Investigators: W. Kanok-Nukulchal, N. Phien-wej; *Sponsor:* Dept. of Fine Arts

Investigation and Design for Renovation of Don Chedi Pagoda, Suphanburi, Thailand
Investigators: W. Kanok-Nukulchal, N. Phien-wej; *Sponsor:* Dept. of Fine Arts

Traffic-Induced Vibration and Fatigue in 13 Steel Overpass Bridges in Bangkok (with Sirindhorn Intl. Inst. of Technology and Arun Chaiseri Consulting Engineers Co., Ltd.)
Investigator: P. Warnitchai; *Sponsor:* BMA

Durability and Mechanical Performance of RC Structures

Investigator: T. Kishi; *Sponsor:* JICA

Finite Element Analysis of Rubber-like Material; *Investigators:* A. Wijeyewickrema, L. Tao; *Sponsor:* Regional Education and Development Program B - Japanese Govt.

Construction Management in Asia
Investigator: T. Minato; *Sponsor:* JICA

CM Bhutan II Project; *Investigator:* S. Ogunlana
Sponsor: Royal Govt. of Bhutan

Computer-Assisted Design of Steel Houses and Low-Rise Buildings; *Investigators:* W. Kanok-Nukulchal, N. Anwar
Sponsor: Siam Yamato Steel Co., Ltd.

Development and Promotion of Software for Structural Engineering Applications (Rolling Project); *Investigators:* W. Kanok-Nukulchal, N. Anwar; *Sponsor:* ACECOMS and associates

Hydraulic Model Study of Water Pumping from Pumdung River for Irrigation
Investigator: T. Tingsanchall; *Sponsors:* Aspac Consultant Co., Ltd., and Bangkok Engineering Services & Tech. Co., Ltd.

Investigation and Design for Improvement of Flood Protection System, Thammasat University, Rangsit; *Investigators:* T. Tingsanchall, N. Phien-wej
Sponsor: Ministry of Finance

Study and Detailed Design of a Navigation Channel for the Krabi Thermal Power Plant
Investigators: S. Vongvisessomjai, N. Phien-wej, S. Weesakul, C. Charoenngam; *Sponsor:* EGAT

SCHOOL OF ENVIRONMENT, RESOURCES AND DEVELOPMENT

Asian Energy News; *Investigators:* T. Lefèvre, R. Pacudan, M. Cabrera
Sponsors: ADEME, French Govt. subscription fees

Energy Planning and Environmental Database; *Investigators:* T. Lefèvre, G. R. Timilsina, S.K. Acharya; *Sponsors:* French Govt.-MAEF, UNDP, ESCAP

Sectoral Energy Demand Forecast Model: Energy Saving and Fuel Switching Potential Study; *Investigators:* T. Lefèvre, X. Chen, N.H. Dung, N.D. Dam
Sponsors: French Govt.-MAEF, ADEME, AIT

Energy-Environment Modelling
Investigators: T. Lefèvre, S. K. Acharya
Sponsors: UNDP, ESCAP, French Govt.-MAEF

1998 AIT Annual Report

Asian Cooperation on Energy and the Environment (Energy Environmental Planning Project); *Investigators:* T. Lefèvre, R. Pacudan, S. K. Acharya; *Sponsors:* UNDP, French Govt.-MAEF

Interfuel Substitution Analysis and Modelling In Asian Developing Countries; *Investigators:* T. Lefèvre, X. Chen, B. Baeurle, N.D. Dam; *Sponsors:* French Govt.-MAEF, AIT

Macro-Economic and Financial Database; *Investigators:* T. Lefèvre, L. Schwab; *Sponsors:* MAE, CFVG, EPCCT

Energy Saving Analysis and Modelling In Asian Developing Countries; *Investigators:* T. Lefèvre, X. Chen, B. Baeurle, N.D. Dam; *Sponsors:* French Govt.-MAEF, AIT

Market and Technical Study on Solar Water Heaters In Thailand; *Investigators:* T. Lefèvre, N. T. Kim; *Sponsors:* Thalnox Steel Ltd. (Thailand), EEECo. Ltd.

Least Cost Greenhouse Gas Abatement Strategy for Asia; *Investigators:* T. Lefèvre, R. Pacudan, S. K. Acharya; *Sponsors:* GEF/UNDP/ADB/ESCAP

Energy-Environmental Economics Research Study; *Investigators:* R. Pacudan, T. Lefèvre; *Sponsor:* French Govt.-MAEF/CFVG

Power In Vietnam: Market Prospects and Investment Opportunities; *Investigators:* T. Lefèvre, J. Todoc, B.D. Thanh; *Sponsor:* MAEF, CEERD

Community Climate Change Socio-Economic, Energy and Technology, and Scientific Research; *Investigators:* T. Lefèvre, G. Timilsina; *Sponsors:* COHERENCE (Belgium), EC

Valuation of Externalities In Developing Countries; *Investigators:* T. Lefèvre, B. D. Thanh; *Sponsors:* MAEF, CEERD

Impact of the Financial Crisis on the Energy Sector; *Investigators:* T. Lefèvre, J. Todoc, P. Cazelles; *Sponsors:* ESCAP, KEEI

Coal and Natural Gas Competition In APEC Economies; *Investigators:* T. Lefèvre, R. Pacudan; *Sponsors:* APEC Secretariat, APEC Expert Group on Clean Fossil Energy

Thailand National Renewable Energy Potential and Development Study; *Investigators:* T. Lefèvre, M. Cabrera; *Sponsors:* WB, EGAT, AEA Technology

Review of ADB's Energy Sector Policy; *Investigators:* T. Lefèvre, G. Timilsina; *Sponsor:* ADB

Asian Regional Research Program In Energy, Environment and Climate; *Investigator:* S. C. Bhattacharya; *Sponsor:* Sida

Renewable Energy Technologies In Asia: A Regional Research Dissemination Program, Phase I; *Investigators:* S.C. Bhattacharya, S. Kumar; *Sponsor:* Sarec/Sida

Biomass as Energy Source and Technical Option for Greenhouse Gas Emission Reduction; *Investigators:* S.C. Bhattacharya, R.M. Shrestha, S. Kumar, P. Santibuppakul; *Sponsor:* Sida

Thailand Energy Strategy and Policy Study; *Investigators:* ERI/Chulalongkorn Univ., ESES (USA), T. Lefèvre, R. Pacudan; *Sponsor:* NEPO

Electric Power Systems Management Phase II; *Investigators:* S. Chirarattananon, C. Yu, D. Thukaram; *Sponsor:* Sida

Methodology for Retrofitting Library Building for Energy Conservation; *Investigator:* S. Chirarattananon; *Sponsor:* NEPCF

Development of Methodology for Monitoring Energy Performance of Building: AIT Library as Case Study; *Investigators:* S. Chirarattananon, N. Muangkroot, S. Sirlin; *Sponsor:* ECPF

Daylighting: Sky Luminance, Application and Lighting Integration; *Investigators:* S. Chirarattananon, Silpakorn Univ.; *Sponsor:* ECPF

Development of Concept and Method for Energy Service Operation; *Investigator:* S. Chirarattananon; *Sponsor:* DSM Office (EGAT)

Feasibility of the Establishment of Energy Conservation Service Industry In Thailand; *Investigator:* S. Chirarattananon; *Sponsor:* DSM Office (EGAT, MEA, PEA)

Preparation for the Conduct of a Conference on Regional Energy Development and Policy Implications; *Investigator:* S. Chirarattananon; *Sponsor:* Banpu PCL

Development of Education Aids to Promote Effective Teaching of Energy Management for Buildings; *Investigator:* S. Chirarattananon; *Sponsor:* NEPO

Assistance to Danida-Supported Water Projects In SEA Region; *Investigator:* K. I. Dahl-Madsen; *Sponsor:* Danida

Modelling of Nutrient and Oxygen Dynamics of Coastal Systems; *Investigator:* K. I. Dahl-Madsen; *Sponsor:* Danida

Wastewater Nitrogen Removal; *Investigators:* A. P. Annachhatre, C. Polprasert; *Sponsor:* Danida

Asian Regional Workshop on Environmental Technology (To be held on 27-29 January 1999); *Investigator:* A. P. Annachhatre; *Sponsor:* Sida-SAREC

Advancement of Activated Sludge Process; *Investigator:* H. Eckhardt; *Sponsor:* IEAT

Integrated Approach to Industrial Estate Wastewater Treatment and Management; *Investigator:* H. Eckhardt; *Sponsor:* GTZ

Development of Water Renovation Technology Using Bio-Eco Engineering System; *Investigators:* S. Takizawa, C. Polprasert, Y. Inamori; *Sponsor:* Top Ecology Co., Ltd.

Septage Treatment in Constructed Wetlands and In Attached-Growth Waste Stabilization Ponds; *Investigators:* C. Polprasert, N. T. Kim Oanh; *Sponsor:* Swiss Federal Inst. for Environmental Science and Technology

Cryopreservation of Zebrafish Embryo; *Investigators:* A. Bart; *Sponsor:* AIT Research Initiation Grant

Improvement and Regional Evaluation of YY Male Technology; *Investigator:* G.C. Mair; *Sponsor:* DFID - Fish Genetics Program

Rural Development through Aquaculture In Indochina; *Investigators:* H. Demaine, R. Gregory, N. Innes-Taylor, P. Edwards, D. Little, Le Thanh Luu, Le Thanh Hung, Nguyen Van Tu; *Sponsor:* Sida

Genetic Improvement of Indian and Common Carp for Aquaculture (Phase II); *Investigators:* G.C. Mair, D.J. Penman, Y. Basavaraju; *Sponsor:* DFID - Fish Genetics Program

Support to AIT Aquaculture Outreach Program In Indochina and Northeast Thailand; *Investigators:* H. Demaine, M. Korn, H.B. Nielsen, P. Edwards; *Sponsor:* Danida

Support to Regional Aquaculture Development; *Investigators:* P. Edwards, H. Demaine, J.B. Hambrey, D. Little; *Sponsor:* DFID, UK

Genetic Diversity of the Silver Barb In Southeast Asia; *Investigators:* G.C. Mair, D.O.F. Skibinski; *Sponsor:* DFID - Holdback Program

Mangrove Web Page; *Investigator:* J. Hambrey; *Sponsor:* CP Aquaculture

APPENDIX

- Socio-economic Analysis of the Dissemination and Impact of Genetically Male Tilapia In the Philippines;** *Investigators:* G. C. Malr, G. R. Clarke; *Sponsor:* DFID - Fish Genetics Program
- Physiological Basis of Sex Determination in the Tilapia *Oreochromis niloticus* L.;** *Investigators:* G.C. Malr, S. Watts; *Sponsor:* US Dept. of Agriculture through Univ. of Alabama at Birmingham
- Renewable Natural Resources Research Strategy: Cages Project**
Investigator: J. Hambrey; *Sponsor:* DFID
- Pond Dynamics Collaborative Research Support Program - Phase II**
Investigators: C.K. Lin, P. Edwards
Sponsor: USAID
- Design and Development of a Tractor-Mounted Pineapple Dressing Machine**
Investigators: V.M. Salokhe, C. Kaewprakalsangkul
Sponsor: Siam Agro-Industry (Pineapple and Others) Public Co. Ltd., Thailand
- Effect of Tillage Practices on Hydraulic Conductivity, Cone Index, Infiltration and Crop Yield in Bangkok Clay Soil**
Investigators: V. M. Salokhe, G. Singh, M. H. Rahmati; *Sponsor:* ICARDA, Iran
- Design and Development of a Pineapple Transplanter;** *Investigators:* V. M. Salokhe, K. Tiratanasirichal, S. Wongplchet; *Sponsor:* MOSTE
- Decision Support System for Soil Compaction in Agricultural Soil**
Investigators: V. M. Salokhe, E. Cannilas; *Sponsors:* CEC, AIT
- Int'l. Workshop on Information Management for Agricultural Research (to be held in November 1999)**
Investigator: G. Singh
Sponsor: ISNAR, The Hague
- Quality Evaluation of Thai Rice**
Investigator: A. Noomhorm
Sponsor: Chia Meng Co., Ltd., Thailand
- Modification of Rice Flour for Rice Noodle**
Investigator: A. Noomhorm; *Sponsor:* Thailand Toray Science Foundation
- Development of a Manual for Application of GMP and HACCP to Food Industries**
Investigator: A. Noomhorm
Sponsor: Thai Industrial Standards Institute
- Standardization of Quality Evaluation Methods for Selected Fruits and Vegetables;** *Investigator:* A. Noomhorm; *Sponsor:* Ministry of Industry, Thailand
- Irradiation of Meat Products in Combination with Packaging**
Investigator: A. Noomhorm
Sponsor: IAEA, Vienna
- Experimentation of a Fluidized Bed Coffee Roaster**
Investigator: J. C. Vincent
Sponsor: CIRAD
- Evolution of Volatile Component during Roasting;** *Investigator:* J. C. Vincent
Sponsor: CIRAD
- Gender and Health in Rural and Urban Nepal;** *Investigators:* B. Earth, S. Jnawall; *Sponsor:* NORAD (seed money)
- Social Impact Assessment of Phoenix Pulp and Paper Factory, Khon Kaen Province, Thailand;** *Investigators:* B. Earth, S. Boonkong (with Khon Kaen Univ.)
Sponsor: AIT Research Initiation Grant
- Cross-Cultural Research on Women/ Gender and Development in Asia;** *Investigators:* G. Kelkar, M. Osawa
Sponsor: National Women's Education Center, Japan
- Matrilineal Societies: Gender Relations and Economic Development**
Investigators: G. Kelkar; *Sponsors:* Netherlands Govt., HIVOS, IFAD
- ILO-AIT Joint Research on Gender Impact of the Economic Crisis in Five Countries of Southeast Asia;** *Investigators:* G. Kelkar, M. Osawa; *Sponsor:* ILO
- Indigenous Asia: Resources Management, Technology and Gender Relations**
Investigator: G. Kelkar; *Sponsors:* Netherlands Govt., HIVOS and IFAD
- AIT-UNCDF Project of Cooperation**
Investigators: H. Demaine, H. D. Kammeler, S. Pongquan, R. Dale, B.W.E. Wickramanayake, S. Sirlsup
Sponsor: UNCDF
- Impact of Globalization on Urban Development in Asia**
Investigator: R. S. Mohit
Sponsor: UMC
- Urban Indicators to Establish a Quality-of-City-Life Index and Develop an Urban Infrastructure Assessment Model**
Investigators: A. Mehta, Yap Kioe Sheng
Sponsor: UMC
- Land, Housing and Urban Development in Thailand;** *Investigator:* R. W. Archer; *Sponsor:* Metropolitan Research Trust, *et al.*
- Urban Land Pooling/Readjustment Research Project: Transferring LP/R to Developing Countries of Asia;** *Investigator:* R.W. Archer; *Sponsor:* Metropolitan Research Trust, *et al.*
- Urban Land Development Finance Study: Financing the Advance Construction of Network Infrastructure for Guided Urban Development**
Investigator: R. W. Archer; *Sponsor:* Metropolitan Research Trust, *et al.*
- Small Interlocking Brick**
Investigators: B. Lefebvre, G. Sthapit, M. Ushijima
Sponsor: Habitech Center
- Compressive Strength of Concrete Bricks;** *Investigators:* B. Lefebvre, G. Sthapit, M. Ushijima
Sponsor: Habitech Center
- Earthquake Testing of Habitech Building System;** *Investigators:* B. Lefebvre, G. Sthapit, M. Ushijima
Sponsor: Habitech Center
- Schools - Bangladesh;** *Investigators:* B. Lefebvre, G. Sthapit, M. Ushijima
Sponsors: Tomen Corp., Sanpo Intl. Corp.
- Primary Schools - Laos**
Investigators: B. Lefebvre, G. Sthapit, M. Ushijima; *Sponsors:* Japanese Embassy, Laos (Grass Root Fund), Sanpo Intl. Corp.
- Malaria Centers - Laos**
Investigators: B. Lefebvre, G. Sthapit, M. Ushijima; *Sponsors:* Japanese Embassy Laos (Grass Root Fund), Sanpo Intl. Corp.
- Medical Service Centers - Laos**
Investigators: B. Lefebvre, G. Sthapit, M. Ushijima; *Sponsors:* Japanese Embassy Laos (Grass Root Fund), Sanpo Intl. Corp.
- Salt Warehousing - Nepal**
Investigators: B. Lefebvre, G. Sthapit, A. Longpre, M. Ushijima
Sponsors: ODA Japan, Salt Trading Co., Nepal, Sanpo Intl. Corp.
- Primary School - Nepal**
Investigators: B. Lefebvre, G. Sthapit, M. Ushijima, S. Sharma
Sponsors: ODA Japan, Sanpo Intl. Corp.

Training Center for Women Farmers - Nepal; *Investigators:* B. Lefebvre, G. Sthapit, M. Ushijima; *Sponsors:* Japanese Embassy Laos (Grass Root Fund), Sanpo Intl. Corp.

Primary and Secondary Schools - Vietnam; *Investigators:* B. Lefebvre, G. Sthapit, A. Longpre, M. Ushijima *Sponsors:* ODA Japan, Nissho Iwai Corp., Sanpo Intl. Corp.

Hydraulic Mast Climbing Platforms in Multi-Storey Building Construction *Investigators:* B. Lefebvre, G. Sthapit *Sponsors:* Fraco Co. Ltd., Canada, Domtec Co. Ltd., Thailand

Utilization of GIS for Planning in Developing Countries; *Investigator:* H. Morishita; *Sponsor:* JICA

Sustainable Urban Tourism Destination Management; *Investigator:* W. Jamleson; *Sponsor:* CIDA, CUC

Urban Basic Service Delivery Project, Bangkok; *Investigator:* N. Amin *Sponsor:* Unicef, Bangladesh

Impact and Sustainability of the Social Mobilization Program in Hambantota District, Sri Lanka; *Investigator:* R. Dale *Sponsor:* NORAD

Land Suitability for Cassava Plantation in Northeast Thailand *Investigator:* A. Elumneh *Sponsor:* DOA

Decision Support System for Agrotechnology Transfer *Investigator:* G. K. Hansen; *Sponsor:* Danida

Small Farmer's Rice Harvester *Investigator:* G. K. Hansen *Sponsor:* Danida

Policy Dynamics of Southeast Asian Forest Resource Conservation Strategies; *Investigator:* A. Remiglo *Sponsor:* Netherlands Govt./AIT

Enhancing Research Methods and Network for Development and Analysis of Asian Irrigation Institutions and Systems; *Investigator:* G.P. Shrivakoti *Sponsor:* AIT Research Initiation Grant

Solid Waste Management in Kathmandu; *Investigator:* G.B. Thapa *Sponsor:* Netherlands Govt.

Livestock Carrying Capacity of Land Resource in the Hills of Nepal *Investigator:* G.B. Thapa *Sponsor:* AIT Research Initiation Grant

Application of Space Shuttle Earth Observation Photos for Mangrove Classification and Monitoring in Thailand; *Investigator:* E. L. Webb *Sponsor:* AIT Research Initiation Grant

Sustainable Rural Industrial Development in China *Investigator:* B.W.E. Wickramanayake *Sponsor:* Netherlands Govt.

Soil Suitability for Paddy *Investigator:* A. Elumneh; *Sponsor:* DOA

Sewage Sludge as Fertilizer *Investigator:* G. K. Hansen *Sponsor:* Danida

Participatory Framework for Planning Rural Road Networks, Construction and Maintenance: Present Practices and Implications for Developing Countries of Asia; *Investigator:* J. K. Routray *Sponsor:* ILO

Research and Development of Chitin and Chitosan Membrane for Bio-separation *Investigators:* S. Chandkrachang, W. Stevens; *Sponsor:* MTEC

Collaboration between French and Indochina Bioprocess Industries *Investigators:* S. K. Rakshit, W. Xlodong; *Sponsor:* CIRAD

Mapping of Natural Resources and Ministry of Agriculture and Cooperatives Properties Administration; *Investigator:* K. Nualchawee; *Sponsor:* Govt. of Finland

NOAA HRPT Receiving Station *Investigators:* K. Honda, S. Lertium *Sponsor:* GAMES Project, ACRORS

Remote Sensing and GIS Analysis for Base Data Generation and Change Detection in the Study of Comprehensive Disaster Prevention around Mayon Volcano in the Philippines; *Investigators:* K. Honda, L. Samarakoon, J. Worawattanamateekul, C. X. J. Francis *Sponsors:* Nippon Koel Co., Ltd., JICA

Japanese Satellite Data Promotion Project; *Investigators:* K. Honda, C.X.J. Francis; *Sponsor:* NASDA

Updating Map Information in Bangkok/ Ayutthaya Area using Japanese Satellite (ADEOS AVNIR) Data and GIS *Investigators:* S. Mural, K. Honda, M. Hazarika, M. Lacoul; *Sponsor:* Remote Sensing Technology Center of Japan

Realtime Kinematic GPS Station *Investigators:* K. Honda, S. Ganeshkumar; *Sponsor:* Remote Sensing Technology Center of Japan

Assessment of Debris Flow Risks along Sindhul Highway in Nepal; *Investigators:* K. Honda, L. Samarakoon, M. Lacoul; *Sponsor:* Nippon Koel Co., Ltd.

Bangkok Heat Island Phenomena Study *Investigators:* K. Honda, S. Lertium; *Sponsor:* Kelo Univ.

Application of Remote Sensing for Road (Asian Highway) Planning; *Investigators:* S. Mural, L. Samarakoon, K. Honda, M. Hazarika *Sponsor:* Japan Highway Association

SCHOOL OF MANAGEMENT

AIT/SOM-EC Partnership; *Investigators:* J. P. Gupta, F. W. Swierczek, P. Gougeon; *Sponsor:* EC

Entrepreneurship in High Technology Firms in Thailand; *Investigator:* B. Igel; *Sponsor:* Self-support

Financing Technological Investment *Investigator:* J. P. Gupta *Sponsor:* French Govt.

Project Financing for the European Community; *Investigator:* J. P. Gupta *Sponsor:* EC

Feasibility Study for the Thailand Distance Training Network *Investigator:* F.W. Swierczek *Sponsor:* NSTDA

International Joint Venture: Case Analysis; *Investigator:* J. P. Gupta *Sponsor:* EC

Case Studies in Technology Parks in Asia; *Investigator:* F. W. Swierczek *Sponsor:* NSTDA

Comparative Financial Markets in Asia *Investigators:* F. W. Swierczek, J. P. Gupta; *Sponsor:* EC

Business and Innovation in Asia-Pacific Economies: An International Training Program *Investigator:* H. Paul *Sponsor:* Colombian Institute for Scientific and Technological Development

Forum for Enterprise Management *Investigators:* Lalit M. Johri, E. Herbolzemer *Sponsor:* EC

RESEARCH CONTRACTS SIGNED IN 1998

Project Title	School/Center	Sponsor	Period (months)
January			
Global environmental outlook: collaborating center participation	SERD	UNEP	18
Development of a program for comprehensive improvement of energy efficiency in industrial factories	SERD	EGAT	1.5
Trace analysis of azo dyes from rubber products	SERD	Bangkok Rubber Public Co., Ltd.	12
Study and detailed design of a navigation channel for the Krabi Thermal Power Plant	SCE	EGAT	8
Quality evaluation of Thai rice	SERD	Chaimeng Co., Ltd.	6
Investigation on integrity of Chedi Doi Suthep, Chiang Mai	SCE	Dept. of Fine Arts	8
NEC educational management information system	RCC	NEC	6
Development of water renovation technology using bio-eco engineering system in Thailand	SERD	National Institute of Environmental Studies, Japan	12
Toxic sludge management plan for Thainox	SERD	Thainox Steel Ltd., Bangkok	12
Bangkok environmental management	SERD	GTZ	6
Evaluation of engineering properties, discharge and pullout capacities of geosynthetic horizontal drain	SCE	Chikami Miltec Co., Inc.	6
May			
Modelling nutrient and oxygen dynamics of coastal systems	SERD	DANIDA	20
Urban Management Program city consultations (I)	SERD	UNCHS	12
R&D of chitin and chitosan membranes for bio-separation	SERD	MTEC (NSTDA)	12
Development of geo-referenced information system and land utilization by government institutes in four Thai provinces	RCC	NIDA	8
Hydraulic model study of water pumping from Pumduang River for irrigation engineering	SCE	Aspac Consultant Co., Ltd. and Bangkok Services & Technology Co., Ltd.	9
Preparation of technology fact sheet for the pulp and paper industries	SERD	UNEP	12
Trial mix study for deep cement mixing method for the Lad Kra Bang-Bang Plee road construction project	SCE	Thai Tenox Co., Ltd.	2
August			
Remediation of groundwater and soil contaminated by micro-pollutants in Thailand	SERD	Thai Konoike Construction Co. Ltd.	12
Gender impact of the economic crisis in Southeast Asia (Phase II)	SERD	ILO, Regional Office for Asia and the Pacific	7
Strengthening environmental competence on emerging global environmental issues and their impacts for some selected educational institutions in Mekong sub-region	CLAIR/ENSIC	Japan Foundation Asia Center	8
World Bank advisory service	RCC	World Bank, Bangkok	1
Information technology strategy for Druk Air	RCC	Druk Air, Bhutan	2

GRADUATION AWARD SPONSORS

AOYAGI PRIZE

Supported by Prof. Yukio Aoyagi, former faculty member in the School of Civil Engineering.

ROBERT B. BANKS PRIZE

Established in 1994 and supported from AIT funds generated from continuing education and consultancy activities in geotechnical engineering, in honor of former AIT President, Prof. Robert B. Banks.

CHIN FUNG KEE PRIZE

Established in 1990 and funded by the students of the late Prof. Chin Fung Kee, former Vice-Chancellor, University of Malaya, and past President, Southeast Asian Geotechnical Society.

CHINTANA BOONTHAMJINDA MEMORIAL PRIZE

Established in 1998 and supported by the AIT alumni, faculty and staff and the family of the late Mrs. Chintana, a dedicated staff member of the Agricultural and Aquatic Systems Program.

DEESWASMONGKOL PRIZE

Sponsored since 1996 by AIT alumnus, Dr. Niyom Deeswasmongkol, Project Manager of MDX Power Public Co. Ltd.

WILHELM HILL PRIZE

Established in 1996 from funds provided by AIT Trustee, Prof. Wilhelm Hill, Head of the Strategic Studies Research and Publishing Unit, University of Basel, Switzerland.

HISAMATSU PRIZE

Supported since 1982 by Prof. Yoshihiro Hisamatsu, Technology Adviser for Nisshin Steel Co., Ltd., Japan, and former Dean of the Faculty of Engineering, University of Tokyo.

HODAKA PRIZE

Jointly sponsored since 1996 by former AIT Trustee and Vice-Chair of the Board, Prof. Hiroyoshi Shi-igai, and the Water Engineering Management Program, AIT.

BARBARA AND JOHN HUGH JONES PRIZE

Sponsored since 1994 by Prof. John Hugh Jones, former AIT Vice President for Academic Affairs.

Keidanren Prizes

HIROMICHI SEYA SHOICHIRO TOYODA YOH KUROSAWA

Funded by KEIDANREN, the Japan Federation of Economic Organizations; one award is presented per term in recognition of the best academic performance by a woman student in a graduating class.

TIM KENDALL MEMORIAL PRIZE

Sponsored since 1981 by the United Kingdom-AIT Appeal in honor of Mr. R. M. (Tim) Kendall, member of the Board of Trustees from 1971 to 1981.

Y.Y. KISHIDA PRIZE

Supported since 1992 by Mr. Yoshisuke Kishida, owner of Shin Norinsha Co., Tokyo, Japan, in memory of his son, Yoshiyuke.

JAMES A. LINEN III MEMORIAL PRIZE

Presented in memory of the late Mr. James A. Linen, a charter founding member of the Board of Trustees from 1967 to 1988.

SANDEEP MOHAPATRA MEMORIAL PRIZE

Established in 1998 and supported by contributions from AIT faculty, staff and students in memory of Mr. Sandeep Mohapatra, a distinguished student in the School of Management.

SUKUM NAVAPAN PRIZE

Sponsored since 1993 by Dr. Sukum Navapan, AIT Trustee and Chairman of the Navatanee Group of Companies.

ALASTAIR M. NORTH PRIZE

Sponsored since 1996 by Prof. Alastair M. North, former AIT President.

TELECOM-FINLAND PRIZE

Funded by Telecom, Finland, since 1991.

HAIDER RAZVI PRIZE

Sponsored since 1995 by Mr. Syed Mushtaq Haider Razvi, former Chargé d' Affaires of the Embassy of the Islamic Republic of Pakistan, Bangkok, and former Permanent Representative of Pakistan to UN ESCAP.

ALBERT STEVENS PRIZE

Established in 1997 by the children of the late Dr. Albert Stevens, a pioneer of industrial microbiology in the Netherlands.

MAHESH VARMA PRIZE

Supported by Prof. Mahesh Varma, former AIT faculty member.

