A Memorandum of Understanding (MOU) was signed on 19 October, 1996 between the CE Dept and the Yongnam Engineering and Construction Pte Ltd. The signatories were A/Prof K Y Yong, Head of CE Dept and Mr S Y Seow, Chief Executive of the Yongnam Engineering. This MOU will initiate a programme for the two organisations to collaborate on industrial research activities related to the application of structural steel and steel-concrete composite technology for building construction. The agreement also provides for promoting jointly the use of structural steel and steel-concrete composite construction in building industry by organising seminars, conferences, short courses and other technical activities to disseminate research findings. Yongnam, in accordance with the understanding, will provide the Structural Steel Research Group (SSRG) in the Dept a total funding of $50,000 as seed money to initiate the programme and structural steel test specimens, worth $20,000 per year, for a period of five years. NUS will provide the additional funding for the research programme. The project will be coordinated by A/Prof N E Shanmugam.

The SSRG is actively involved in a number of teaching, research and development projects related to the use of structural steel in on-shore and off-shore constructions. The research projects that are currently in progress include computer-aided second-order inelastic analysis for frame design, stability design of semi-rigid steel frames, analysis and design of steel-concrete composite construction, connections and long-span structures, design automation for marine/offshore lift installation of structures, analysis and design of beams curved in plan, fire resistance of steel structures, thin-plated structures etc. The Yongnam Group is a multi-disciplinary engineering and construction company specialised in the design, fabrication, supply and erection of structural steelwork. Yongnam’s activities include structural steelwork, specialist civil engineering, turnkey industrial structures and buildings, mechanical engineering/installation and plant maintenance. The construction activities of the company is expected to use steel-concrete composite construction extensivley in the future and the research and development work of the Group related to connections and long-span structures will add to the knowledge and application of the technique.

**Seminar On Construction Materials & Technology**

The Centre for Construction Materials and Technology (CCMT) organised a half-day seminar on Construction Materials and Technology on 30 November 1996. The seminar was attended by more than 200 participants from government bodies, statutory boards, and the construction industry. The seminar brought together academics at NUS and practitioners at HDB with six papers focussing on various aspects of structural concrete emphasising the need for better integration of structural and durability design and also highlighted new and innovative design and construction methods.

Assoc Prof Yong and Mr S Y Seow exchanging the document of MOU.
Visit to CENTENNIAL TOWER

As part of the requirements of CE 4101: Design Project, a group of 20 final year students who were engaged on the “Design of a Tall Residential Building” visited the construction site of the Centennial Tower in the Pontiac Marina Project (Package 11) on 30 September 1996. They were accompanied by their lecturers, A/Prof M A Mansur and Dr Koh Chan Gee.

On their arrival, Mr F Haese, Administrative/Finance Manager of Dragages et Travaux Publics (S) Pte Ltd briefed the students of uniqueness of the project including the method of construction and the construction strategies employed. They were then taken to the site of this 34-storey building. The visit was led by the site engineer, Mr J Samanos, who patiently appraised the students of the various aspects of the project.

Seminar On Construction Materials & Technology
(Cont’d from pg 1)

The seminar began with welcome messages by A/Prof K Y Yong, Head of CE Dept and Prof P Paramasivam, Director of CCMT. Two papers from the HDB’s Prefabrication Technology Centre, presented by Mr Oh Lock Soon and Mr Andrew Yoong reviewed trends, experiences and achievements in meeting the demands of public housing for an increasingly affluent Singapore society. Speakers from the Dept included Drs C T Tam and KH Tan and A/Profs M A Mansur and K C G Ong. They highlighted the research and development activities being carried out in the Department on cracking in concrete, external prestressing, high-strength concrete, and repair methods and strategies.

The seminar provided a useful forum for concrete researchers and practitioners to meet and share their views and experiences during the refreshment break, which was sponsored by the Materials Technology Enterprise, and during the discussion session at the close of the seminar.

Half -Day Seminar On
RECENT DEVELOPMENTS IN STRUCTURAL STEEL DESIGN

STRUCTURAL STEEL RESEARCH GROUP (SSRG) of the CE Dept organised a half-day seminar on Recent Developments in Structural Steel Design on Saturday 19 October, 1996. Supported by the local steel fabricating company YONGNAM Engineering & Construction (Pte) Ltd, the seminar was attended by more than 300 participants, mostly from the industry.

There were a total of six presentations. The first presentation on “Recent Developments in Structural Steel Design Codes” by A/Prof N E Shanmugam gave a brief account of the development of design codes and highlighted some differences and similarities between BS 5950:Part 1 and EC3. In her paper entitled “Design of Semi-Rigid Steel Frames”, Dr C H Yu summarised the methods of design using EC3. The last presentation for the first session by Mr John A C Moody of YONGNAM Engineering & Construction (Pte) Ltd on “Steelwork Production and Construction” dealt with various factors that influence the local and regional steel construction industry.

After a break for refreshments, Dr J Y Richard Liew presented design procedure and construction aspects that are specific to the steel-concrete composite construction in high-rise buildings. Dr Y S Choo in his paper on “Design for Lift Installation of Offshore Structures” gave a briefing on the research work in progress to propose design guidelines and knowledge-based engineering system for lift installations of offshore structures. Fire resistance requirements for steel structures and the provisions in the new codes were explained by Neil Tilley of British Steel Tubes & Pipes in his paper on “Steel Structures - Engineering for Fire. A collection of all the six papers presented at the seminar was distributed to the participants.
Visit to Art Museum

On October 22, 1996 (Tuesday), 15 staff members of the CE Dept visited the Lee Kong Chien Art Museum located in the Faculty of Arts and Social Sciences during lunch hour. Upon arrival, the members of the group were greeted by Ms Angela Sim, the Museum Manager, who first gave them a challenging problem of identifying the genders of musicians in the Tang dynasty stone carvings. The group was then guided through various galleries where Chinese paintings, calligraphy, jade, ceramics and bronze artifacts dated as far back as 5000 B.C. were on display. Since this was a special visit, the visitors were fortunate enough to have the museum staff explain the history of many of the items and various ways of appreciating them. This visit was an eye-opening experience for the visitors to the "hidden treasure" on NUS campus. Besides art appreciation, the group also learned ancient civil engineering works, such as bridges, building structures and urban planning from the paintings.

Visit to Art Museum

SSANGYONG YOUNG CONCRETE Research Award

Dr Chin Mee Shian, formerly a Research Assistant of the Department, has been honoured with the inaugural Ssangyong Young Concrete Researcher Award for his paper entitled 'Research on High-Strength Concrete at the National University of Singapore' presented at the 21st Conference on Our World in Concrete and Structures held in Singapore from 26 to 28 August 1996. Co-authored by A/Prof M A Mansur and Dr T H Wee, the paper summarizes the findings of his PhD project conducted in the Department under a NUS Research Grant.

Dr Chin is also a co-recipient of the Best Structural Engineering Paper Award (in 1991 and 1992) given jointly by the Institution of Engineers, Singapore and Institute of Structural Engineers, UK and Ken Francis Award for outstanding and original paper in concrete technology given by CI-Premier in 1994. Both the papers were based on research conducted in the Department.

Dr Chin graduated from the University of Malaya with a first class honours in 1989, and obtained his MEng and PhD degrees from NUS in 1991 and 1996, respectively. He is a corporate member of the Institution of Engineers, Singapore and Institution of Engineers, Malaysia, and is currently an Executive Director of Titan Repair Services Pte Ltd, Malaysia.

STUDENT MATTERS AND SOCIAL EVENTS

Visiting Student from INSTITUT TEKNOLOGI BANDUNG (ITB), INDONESIA

Miss Indira Miranti, a final year undergraduate student from the Department of Environmental Engineering of ITB had been attached to the Department from 19 Aug. to 7 Sept. 1996 under the supervision of A/Prof M.A. Aziz and A/Prof W.J. Ng.

During her attachment, she was given exposure to the research facilities and various R & D activities on Environmental Biotechnology of Wastewater Treatment. She was also given training to determine toxicity of some persistent organic pollutants present in industrial wastewaters.

In addition, she attended some courses to enrich her knowledge in the diverse field of Environmental Engineering. She prepared a short report on her experience during her attachment and submitted to the Environmental Engineering Laboratory.

DESIGN COMPETITION

A mini-design project is part of the requirements for the Structural Analysis course for Stage 2 students. This is to expose students to general engineering problems associated with the design and construction of metal structures and to provide the students a hands-on experience on structural design.

This year, each group of two students has been required to build a warehouse structure with a minimum clear space of 38 cm width, and 23 cm height. Each group was given a maximum of 10 aluminium strips of 120 cm in length and 90 rivets to construct the structure. Many interesting and innovative designs have been proposed and put to the test. Subject to the fulfilment of the design restrictions, the winners have been decided on the basis of load per unit weight of the structure.

The winners are Rao Ker Ee & Tan Boon Tiong, Vincent, Ng Kian Heong & Ng Piak Hoon (Miss) and Yap Peng Ann & Yap Tian Wee. They will be given BHP Steel Awards with book vouchers at the next CE Day.

Testing of warehouse structure.
The concept of virtual classroom teaching using the internet has been encouraged by the University for quite some time. Dr Ang Kok Keng took the challenge by introducing a virtual computing class for the subject EG1101 Computing. "It is to make the learning of the subject more interesting, and it is like having your own private tutor at your fingertips anytime of the day," said Dr Ang. Students who need additional lessons on the subject may surf the Computing web page anytime of the day, read off from the screen teaching materials or download the material for a hard copy. Materials put up contain colourful graphics which can enhance the understanding of difficult Computing topics not grasped initially at the lecture theatre. Fortran source codes can also be downloaded by the students who can then evaluate the efficiency and robustness of their own programs against these given codes when both are run on the computer. Students may also e-mail to the lecturer at the virtual class page their queries or comments and get almost instant replies.

Since the ‘opening’ of the virtual computing class on 21 August 1996, there have been 2,559 visits to this page (or about 3 to 4 visits per student) and one enquiry from Tel Aviv, Israel. Many e-mails from students, mostly queries or feedbacks, have also been received by Dr Ang with many of them acknowledging the usefulness of the virtual classroom. A particular student wrote (edited to improve the English): “These GIFs look really great. I have gone through all of them already and actually wanted to print them. But I do not have a colour printer and hence the effect is lost. But, then I guess it is the contents that matter. I like the way it has been presented and am looking forward to more of your productions... they are really quite useful.” Another wrote: “I found that this site is very useful...” Dr Ang reported that he received many e-mails that were sent in the early hours of the morning; an indication that the facility was well utilized throughout the day. One feedback highlighted this point: "Obviously, I am another one of those ‘last-minute people’ panicking for the exam. I am hastily referring to your solutions and notes posted on the web. As such, I really appreciate the easy availability of the virtual computing class to all those at home through the net." The same student also lamented that as he was using only a 2400 bps modem from home, response time was too slow. He added “However, in view of the perpetual high systems load on NUS servers, I hope that you will reduce the use of decorative graphics.” Disagreeing, Dr Ang pointed out that rather than reducing decorative graphics as requested by that student, it is the vivid graphics that makes the subject more interesting and transforms learning into an exciting adventure. The web is becoming more and more attractive and popular because of the impact of colourful graphics and animation that can be presented. With the wide availability of affordable high-speed modems today, Dr Ang believed that the problem of slow response will be easily addressed.

For those who wish to experience first hand virtual classroom teaching, you may surf the web and visit the virtual computing class website at http://www.eng.nus.sg/civil/Class/EG1101 or e-mail Dr Ang for more information at cveangkk@nus.sg.

LIST OF RESEARCH PROJECTS RECENTLY APPROVED

<table>
<thead>
<tr>
<th>NO.</th>
<th>PROJECT NO.</th>
<th>PRINCIPAL INVESTIGATOR</th>
<th>TITLE</th>
<th>APPROVED BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RP960700</td>
<td>A/Prof T Balendra (Tel. 772 2159 e-mail <a href="mailto:cvebalen@nus.sg">cvebalen@nus.sg</a>)</td>
<td>Effects of Earthquake &amp; Wind Loads on Buildings in Singapore</td>
<td>$132,100</td>
</tr>
<tr>
<td>2</td>
<td>RP960701</td>
<td>Dr FH Lee (Tel. 772 2274 e-mail cvelee <a href="mailto:fh@nus.sg">fh@nus.sg</a>)</td>
<td>Centrifuge Modelling of Sand Compaction Piles</td>
<td>$ 80,850</td>
</tr>
<tr>
<td>3</td>
<td>RP960702</td>
<td>A/Prof CF Leung (Tel. 772 2281 e-mail <a href="mailto:cvcelf@nus.sg">cvcelf@nus.sg</a>)</td>
<td>Behaviour of Piles Subject to Vertical Load &amp; Downdrag</td>
<td>$ 91,600</td>
</tr>
<tr>
<td>4</td>
<td>RP960703</td>
<td>A/Prof NE Shanmugam (Tel. 772 2288 e-mail <a href="mailto:cveshanm@nus.sg">cveshanm@nus.sg</a>)</td>
<td>Stiffened Plates in Ocean &amp; Offshore Structures</td>
<td>$ 64,487</td>
</tr>
<tr>
<td>5**</td>
<td>RP960704</td>
<td>Dr TH Wee (Tel. 772 2551 e-mail <a href="mailto:cveweeth@nus.sg">cveweeth@nus.sg</a>)</td>
<td>Chloride &amp; Water Ingress into Concrete with and without Admixtures</td>
<td>$245,990</td>
</tr>
<tr>
<td>6**</td>
<td>RP960705</td>
<td>A/Prof TF Fwa (Tel. 772 2276 e-mail <a href="mailto:cvefwaft@nus.sg">cvefwaft@nus.sg</a>)</td>
<td>NUS-ENV Use of Recycled Crumb Rubber in Asphalt Paving Mixtures</td>
<td>$119,850</td>
</tr>
<tr>
<td>7</td>
<td>RP960706</td>
<td>Dr Karina Gin (Tel. 772 6301 e-mail <a href="mailto:cveginh@nus.sg">cveginh@nus.sg</a>)</td>
<td>Solute &amp; Sediment Flux from Mature Urban Catchments in Singapore</td>
<td>$118,105</td>
</tr>
</tbody>
</table>

** RP requires Research Assistant
1 Oct 1996  Prof Tu Ho-Ze, Prof Li Da-fo, Ms Mei Shu-Qing, Mr Hu Shan-Fu and Mr Chen Hong-Jun, China University of Geosciences, China.
4 Oct 1996  Mr Maarten Ripping and Mr K P Loke, HeereMac v.o.f., The Netherlands.
12 Oct 1996  Mr Yuji Yamazaki, Suncraft Co Ltd, Japan.
16 Oct 1996  Dr Tatadhiro Takano, Engineering Faculty, National University of Laos, Laos.
31 Oct - 2 Nov 1996  Prof P Tkalic and Prof Efim Pelinovsky, Nizhny Novgorod Technical University, Russia.
1 Nov 1996  Prof Anders Sjoberg & Dr Jorgen Sjoberg, Chalmers University of Technology, Prof Lucy Smith, Ms Sigrid Holtermann, University of Oslo.
5 Nov 1996  Prof Yu Mao-hong, School of Civil Engineering and Mechanics, Xian Jiaotong University, China.
7 Nov 1996  Mr Niu Xin-Qiang, Architectural Design Institute, Wuhan, China.
15 Nov 1996  Prof Bruce HJ McKellar, Faculty of Science; Prof W W S Charters, Faculty of Engineering, The University of Melbourne, Australia.
19 Nov 1996  Prof M R Madhav, Indian Institute of Technology, India.
21 Nov 1996  Dr S R Bishop, Centre for Nonlinear Dynamics and its Applications, University College London.
28-30 Nov 1996  Ir. David B Solaaiman, Civil Engineering Department, Universitas Pelita Harapan, Tangerang, Indonesia.
6 Dec 1996  Dr Solomon C S Yim, Dept of Civil Engineering, Oregon State University, USA.
6 Dec 1996  Mr Ronald K Frobel, Advanced Terra Testing Labs, Denver, USA.
13 Dec 1996  Dr Yoshiaiki Iwasa, Institute of Earth Science and Technology; Mr Minoru Aoi, Kobe Steel Ltd; Dr Toshio Iizuka, Penta-Ocean Construction Co, Ltd; Mr Fumihiko Ogihara, Kobelco Construction Machinery Co, Ltd; Mr Shuichi Kuroda, NEWJEC Inc; Mr Tadashi Takahashi, Nikken Sekkei Ltd; Dr Yoshiaiki Tsunematsu, International Engineering Consultant Co, Ltd; Mr Hiroshi Ogata, Kobelco Construction Machinery Co, Ltd; Mr Fumio Hata, Chuo Industries Co Ltd; Mr Mitsuji Horikawa, Tokyo Construction Consultant Co, Ltd; Mr Masao Matsuyama, Kajima Corporation; Mr Keiji Yoshikura, Toa Corporation; Mr Junko Hosoi, Institute of Earth Science and Technology; Mr Tornoki Kurata, Kansai District, Japan.
16 Dec 1996  Prof Ahsan Kareem, University of Notre Dame, USA.
17 Dec 1996  Prof J Melcher, Dept of Metal and Timber Structures, Technical University of Brno, Czech Republic.
30-31 Dec 1996  Prof T S Nagaraj, Indian Institute of Science, Bangalore, India.

**Another Bumper Crop in Overseas Industrial Training**

The 1996/1997 academic year witnesses another bumper crop in overseas industrial training placements. There are 13 placements spread over 8 countries. This represents nearly a fifth of our current 3rd-year student population. We intend to give more students an exposure to the global community in the future.

A/Prof Liong Shie-Yui  Chairman  Industrial Training Committee

<table>
<thead>
<tr>
<th>STUDENT</th>
<th>COMPANY</th>
<th>COUNTRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr Mark Lim Chee Kang</td>
<td>CH2M HILL</td>
<td>Australia</td>
</tr>
<tr>
<td>Mr Christopher Ang E Tze</td>
<td>DUMEZ GTM</td>
<td>France</td>
</tr>
<tr>
<td>Mr Chan Wai Hoe</td>
<td>HEEREMAC</td>
<td>Holland</td>
</tr>
<tr>
<td>Ms Janice Lim Ching Yee</td>
<td>Binnie Consultants Ltd</td>
<td>Hong Kong</td>
</tr>
<tr>
<td>Mr Yuen Sin Wai</td>
<td>Dragages et Travaux Publics</td>
<td>Hong Kong</td>
</tr>
<tr>
<td>Mr Choy Kin Yee</td>
<td>P.T. Dragages Indonesia</td>
<td>Indonesia</td>
</tr>
<tr>
<td>Mr Chew Chin Boon</td>
<td>Obayashi</td>
<td>Japan</td>
</tr>
<tr>
<td>Mr Lim Wei Beng</td>
<td>China Engineering</td>
<td>Taiwan</td>
</tr>
<tr>
<td>Ms Chong Pui Chih</td>
<td>Sinotech Engineering</td>
<td>Taiwan</td>
</tr>
<tr>
<td>Mr Vincent Guwe</td>
<td>Sinotech Engineering</td>
<td>Taiwan</td>
</tr>
<tr>
<td>Ms Lee Lai Hong</td>
<td>T.Y. LIN Consulting Engineers</td>
<td>Taiwan</td>
</tr>
<tr>
<td>Ms Wong Swee Fong</td>
<td>T.Y. LIN Consulting Engineers</td>
<td>Taiwan</td>
</tr>
<tr>
<td>Mr Eric Lim Lip Hong</td>
<td>CH2M HILL</td>
<td>USA</td>
</tr>
</tbody>
</table>

**Recipients of 1996 Construction Industry Degree Scholarships**

In 1996, four CIDB Degree Scholarships were awarded to students pursuing Bachelor of Civil Engineering degree at the two universities in Singapore. Three of these scholarships came to our students. The names of these students are listed below together with the name of the scholarship and the respective sponsor:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of Scholar</th>
<th>Scholarship Awarded</th>
<th>Sponsor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Patrick Chia An Ching</td>
<td>CIDB-Obayashi Scholarship</td>
<td>Obayashi Corp.</td>
</tr>
<tr>
<td>2.</td>
<td>Alex Lee Mon Hon</td>
<td>CIDB-SCAL Scholarship</td>
<td>Singapore Contractors Association Ltd</td>
</tr>
<tr>
<td>3.</td>
<td>Tan Chee Kiat</td>
<td>CIDB Scholarship</td>
<td>CIDB</td>
</tr>
</tbody>
</table>
PUBLICATIONS


RECENT SHORT COURSES

The following in-house Computer Training Courses for geotechnical analysis of slope stability and finite element analysis of stresses and deformations in geotechnical structures have been conducted by Dr Tan Siew Ann and Dr Chew Soon Hoe for HDB civil engineers:

1. Short course on SLOPE/W, 13-14 Nov. 1996
2. Short course on SIGMA/W, 19-21 Nov. 1996
Forthcoming Seminars and Short Courses

26 February 1997
1-day seminar on
“Fiber Reinforced Cement Composites: Overview, Status, and Prospects,
INTRODUCTION (Professor A E Naaman, University of Michigan, USA)
1. FERROCEMENT: OVERVIEW (Professor P Paramasivam, NUS)
2. FERROCEMENT: TENSION AND BENDING (A/Prof M A Mansur, NUS)
3. FIBER REINFORCED CONCRETE: OVERVIEW (Professor Banthia, U. of British Columbia, Canada)
4. HIGH PERFORMANCE FIBER REINFORCED CEMENT COMPOSITES (Professor A E Naaman, University of Michigan, USA)
5. FIBER REINFORCED PLASTIC REINFORCEMENTS (Dr K H Tan, NUS)
6. CONCLUSIONS

April 1997
Short Course on
“Partially Prestressed Concrete: Analysis and Design”
by Prof A E Naaman and Dr Tan Kiang Hwee
Course Outline:
1. Partially Prestressed Concrete Beams
2. Beams Prestressed with Unbonded Tendons
3. External Prestressing
4. Fiber Reinforced Plastic Reinforcement in Prestressed Concrete
5. Design Guidelines by the new AASHTO LRFD Specifications

Half-day seminar on
“Advances in Structural Concrete Design”
Details to be announced later.

For further details, please contact
Dr Tan Kiang Hwee
(Tel: 7722260; Fax 7791635; Email: cvetankh@nus.sg)

SEMINARS held — OCTOBER – DECEMBER 1996

19 Oct 1996 Recent developments in structural steel design, A/Prof N E Shannugam, Dr C H Yu, Dr J Y Richard Liew, Dr Y S Choo, NUS, Mr John Moody, Yongnang Engineering & Construction (Pte) Ltd and Mr Neil Tilley, British Steel Tubes & Pipes.
26 Oct 1996 Model studies of lumpy fill, Mr Wong Joon Chew Jason, NUS and Centrifuge modelling of deep excavation, Mr Wie Jie, NUS.
1 Nov 1996 Runup of sea waves on beaches in basins of complex topography, Prof Efim Pelinovsky, Nizhny Novgorod Technical University, Russia.
7 Nov 1996 Design and construction aspects of the Yangtze three-gorges project, Mr Niu Xin-Qiang, Architectural Design Institute, Wuhan, P R China.
19 Nov 1996 Some studies on vertical drain treated ground, Prof M R Madhav, Indian Institute of Technology, India.
21 Nov 1996 Flexible control of the parametrically excited pendulum, Dr S R Bishop, University College London, UK.
30 Nov 1996 Construction Materials & Technology, Prof P Paramasivam, A/Prof M A Mansur, A/Prof K C G Ong, Dr C T Tam, Dr K H Tan, Dr T H Wee, NUS, Mr Oh Lock Soon & Mr Yoong Yaw Yuan, Andrew, HDB.
6 Dec 1996 Geosynthetics testing methodology in relation to practical design and construction, Mr Ronald K Frobel, Advanced Terra Testing Labs, USA.
6 Dec 1996 Probabilistic analysis of complex nonlinear motions under combined periodic and random excitations, Dr Solomon C S Yim, Oregon State University, USA.
16 Dec 1996 Assessment of wind loads: current status and future direction, Prof Ahsan Kareem, University of Notre Dame, USA, A/Prof T Balendra, A/Prof S Swaddiwudhipong & Dr K H Tan, NUS.
17 Dec 1996 Actual design of steel structures, examples and experience, Prof Jindrich Melcher, Technical University of Brno, Czech Republic.
30 Dec 1996 Naturally and induced cemented soft clay behaviour, Prof T S Nagaraj, Indian Institute of Science, Bangalore, India.
Awards/Honours

1. A/Prof T Balendra led a Singapore delegation to a seminar and workshop held in Melbourne on Harmonisation of Structural Loading Standards for Building Design and Construction in APEC countries, and presented the country paper on “Current Status and Future Direction of Loading Standards in Singapore”. He was accompanied by Dr K H Tan, Dr C G Koh, Mr S H Ong (PWD) and Mr K K Lim (T Y Lin South East Asia Pte Ltd). Both Dr K H Tan and Dr C G Koh were invited to participate in the workshops on wind loads and earthquake loads respectively.

2. Prof S L Lee and Dr David Chua Kim Huat were invited to deliver a keynote lecture and a paper respectively at the Tripartite Conference '96 on Infrastructure Development and Management, 28-30 Nov. 1996, Singapore. The conference was organised by IES, Singapore.

3. Dr Koh Chan Ghee, Dr See Lin Ming (Steen Consultants) and A/Prof T Balendra received the IES Prestigious Publication Award (Theory, 1995/96) for their paper “Global Assessment of Multi-Storey Buildings by System Identification”.

4. A/Prof N E Shanmugam was invited to deliver a lecture on “Openings in Thin-walled Steel Structures” at the Bicentenary Specialty Conference on Thin-walled Structures, University of Strathclyde, UK, 2-4 Dec. 1996.

5. A/Prof N Jothi Shankar was invited to deliver a key-note lecture on “Mathematical Modelling of Tidal Motion in Regional Waters of Singapore” at the International Conference on Differential Equations: theory, numerics and applications (ICDE ’96) held in Bandung, Indonesia during 29 Sept. - 2 Oct. 1996. The paper was co-authored by Prof Cheong Hin Fatt and Mr Chan Chun Tat.

6. Dr Wang Chien Ming has been invited to be a member of the International Programme Committee of the 4th International Conference on Optimization Techniques and Applications to be held in Perth, Western Australia from 29 June to 3 July 1998. The conference is organized by Professors L. Cacetta and K.L. Teo of Curtin University of Technology, Perth.

7. A/Prof T F Fwa attended the 1st Asia Pacific Conference on Transportation and the Environment, organised by the Centre for Transportation Research, sponsored by United Nations’ Economic and Social Commission for Asia and the Pacific (ESCAP).

New Appointments

Administrative Officer
Miss Loh Sing, Sharon

Research Assistant
Mr Leong Kam Weng

Research Scholar
Ms Liu Yun
Mr Tang-Lin Kan
Mr Wang Zhongren
Ms Cong Qing
Mr Zhou Xuefeng
Mr Ahmad Muntazir
Mr Li Guozhong
Mr Li Dazhong

Promotions

Dr Leung Chun Fai,
Associate Professor, 1 January 1997

Mr Sit Beng Chiat
Senior Laboratory Technologist, 1 January 1997

Miss Liu Ding Mei
Senior Clerical Officer, 1 January 1997

The Editor
and Members
of the Editorial Team
wish all readers a
Happy New Year