



# IEEE Region 10 Technical Activities

the First Distinguished Seminar on  
“Human Support Technologies from IEEE”



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**13:15-18:00, Feb. 27, 2009**

Sponsored by  
IEEE Region 10 & IEEE Vietnam Section

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# WELCOME MESSAGE

IEEE Region 10 (R10) welcomes all of you to attend this Distinguished Seminar jointly organized by IEEE R10 Technical Activities and IEEE Vietnam Section. The Region 10 is growing area in IEEE and consist of more than 18% of the member of IEEE. Thus R10 will be major core of IEEE activities in the future.

The theme of the Seminar “Human Support Technologies from IEEE” is selected by the IEEE Technical Activities to show how IEEE has developed those technologies and will foster the Research & Development in this field, so that it will be very beneficial for all members to know the state of art of technology and the IEEE enrolment. Further it is very important how important role the IEEE play on these Human Support Technology.

We hope that all participants will enjoy this seminar and exchange ideas through discussions for the beautiful life.

Sincerely Yours



IEEE R10 Technical Activities  
Coordinator  
Prof. Toshio Fukuda  
Nagoya University, Japan



IEEE Vietnam Section  
Chair  
Dr. Ta Cao Minh  
Hanoi University of Technology, Vietnam

## IEEE REGION 10 - 2009 EXECUTIVE COMMITTEE

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13:30-14:00

## “Leadership Skills in the IEEE”

**Joseph V. Lillie**

**Vice President, IEEE Member and Geographic Activities, AT&T, USA**

### **Abstract**

Leadership Skills in the IEEE: This talk will identify skills that can be developed via involvement in the IEEE and link these skills with the professional development of the volunteer. These skills will be an asset to individuals who work in technical fields.

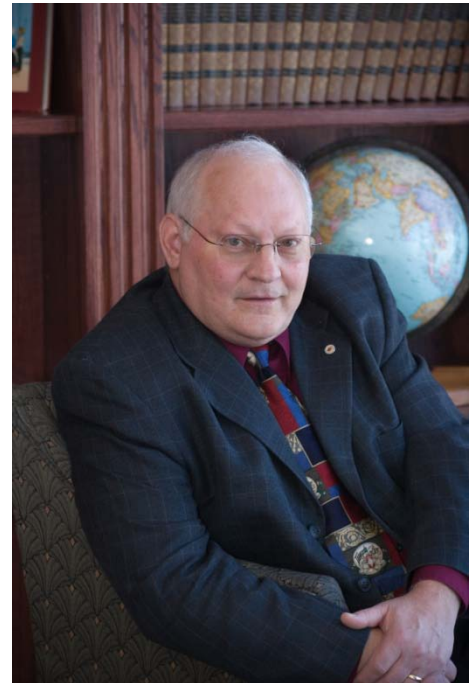
### **Bio**

Joe Lillie received the B.S. in Electrical Engineering (1974) and the M.S. in Telecommunications (1997) from the University of Southwestern Louisiana. He has 35 years experience in telecommunications engineering and management. Joe was employed by BellSouth Telecommunications from 1973 to 2002. During these years, Joe held positions of Design Engineer, Planner, District Support Manager, Engineering Manager and Planning Manager. When Joe retired he was on the Louisiana BellSouth State Staff providing engineering and construction support. In 2003 Joe joined NorthStar Communications Group where he served as the Director of Corporate Quality. In September 2005 Joe returned to BellSouth (now AT&T) working on Hurricane Katrina restoration.

During his professional career Joe has attended numerous training sessions on telephony, management, leadership contract administration, and quality management. Joe has been married to Debbie for 37 years. They have two children, both Electrical Engineering graduates of the University of Louisiana - Lafayette, two grandsons and two granddaughters.

Joe is serving his second year as the IEEE Vice President for Member and Geographic Activities and is serving his sixth year on the IEEE Board of Directors. In addition he is the Chair of the Member and Geographic Activities Board and Treasurer of the IEEE Foundation Board of Directors. Joe is a past IEEE Treasurer and served seven years on the IEEE Finance committee. Joe also serves on several other IEEE committees.

Past IEEE board and committee assignments include the Regional Activities Board, IEEE-USA Board, Investment Committee, Insurance Committee, Individual Benefits and Services Committee, Employee Benefits Committee Compensation Committee and Region 5 Committee. Joe is a past Region 5 Director and a Past IEEE-USA Vice President Professional Activities. In 2004 Joe was the Chairman for National Engineers Week in the United States.



14:00-14:30

**“e-Science and Research & Education Networks Development”**

**Yong-Jin Park**

**Director IEEE R10, Hanyang University, Korea**

**Abstract**

Some typical e-Science projects are introduced. In order to fulfill their requirements, what Research & Education networks are doing is explained. Afterwards, the hottest topic in R&E community, Future Internet project, is introduced along with its Asian activities.

**Bio**

Yong-Jin Park received his B.E., M.E. and Ph.D. degrees, all in Electronic Engineering from Waseda University in 1969, 1971 and 1978, respectively. In 1978, he joined Hanyang University, Seoul, where he is presently a Professor in the Department of Electronics and Computer Engineering. He visited the Department of Computer Science, University of Illinois, Urbana-Champaign, as a visiting Associate Professor from 1983 to 1984. He also visited Computing Laboratory, University of Kent, Canterbury, England from 1990 to 1991 as a research fellow. He was the President of Open Systems Interconnection Association, from 1991 to 1992, the Chairman of IEEE Seoul Section from 1999 to 2000, the Director of Secretariat of APAN (Asia Pacific Advanced Network) during 1999 - 2003, and President of KIISE (Korea Institute of Information Scientists and Engineers) in 2003. In addition, he was an invited Professor at Chuo University, Tokyo, in 1998 and has been a Visiting Professor at Waseda University, Tokyo, since 1999. Currently he is the Director of IEEE Region 10 and Fellow of IEICE.

His main research interests are computer networking and mobile/ubiquitous computing



14:30-15:00

**“Measurements of Complex Permittivity and Surface Resistance of Novel Low Loss Materials for Future Technologies”**

**Janina Mazierska**

**R10 Past Director, Massey University, New Zealand**

**Abstract**

Measurements of complex permittivity of low loss dielectric materials (especially anisotropic) in a wide range of temperatures still represent a challenging issue. For bulk samples Whispering Gallery Modes can be used, but planar dielectrics can only be measured using  $TE_{011}$  and  $TE_{01\delta}$  resonators, which can also be used for precise characterisation of low loss conductors and superconductors. Accuracy of loss measurements is also determined by accuracy in determination of unloaded  $Q_0$ -factor of test fixtures.



In this presentation a review of test resonators and a precise technique to measure the  $Q_0$ -factor will be given. Also measurement results of complex permittivity of several low loss dielectrics and High Temperature superconducting materials will be shown.



**Bio**

Janina Mazierska obtained MEng and PhD from Warsaw University of Technology, Poland. Currently she is a Professor and International Advisor at Massey University, SEAT, in New Zealand. From 1987 to 2003 she had been working at James Cook University in Australia in various positions including Deputy and Acting Dean of Faculty of Engineering. Before that she had been with Warsaw University of Technology she graduated from. She was also a Visiting Scholar at Stanford University in 1991 and 1996.

Her research interests are microwave characterisation of low loss materials, (High Temperature Superconductors and dielectric materials especially) and their applications to wireless communications, with over 125 journal and conference proceedings papers published. She is an IEEE Fellow and she served as an IEEE Region 10 Director in 2007-08.

15:30-16:00

## “Women in Engineering and Technology for Human Welfare”

**Marimuthu Ramalatha**

**R10 Women In Engineering Representative, Anna University, India**

### **Abstract**

Early developmental disorders and disabilities like dyslexia and autism are difficult to detect in early stages in children. Women in Engineering Team, Madras Section has developed a screener software for detection of disabilities and disorders and it has been donated to the Govt of Tamil Nadu in late 2008. Now it has been installed in 22 districts and about 30 million people will be benefited because of that. Also the team is working on two remedial measures - music therapy and Vedic Mathematics, which can help the children with dyslexia. This has been tested in children with dyslexia and have been found successful.



### **Bio**

Mrs. Ramalatha Marimuthu working as Asst Professor in Dept of ECE, Easwari Engg College, graduated in Electronics and Communication Engineering from Anna University in the year 1986. She has been teaching in polytechnics and engineering colleges chalking up a total experience of 22 years. She headed the department of ECE in AMA College of Engineering for 5 years and organized several conferences, project competitions and training programs for students as well as faculty. She has published seven technical books and more than fifteen research papers in international conferences and journals. Her research area is “High speed Processor Architectures using Vedic Mathematics”.

She revived the IEEE Student Branch of Easwari Engineering College in 2002 where she is the Branch Counselor till now. This branch has an exclusive member library and was the first one to start the WIE Affinity Group under Madras Section. It won **the Honourable Mention for the Student Branch AG of the year Award for 2006 and the Student Branch Affinity Group of the year 2007**. After becoming the Executive Committee Member in Madras section in 2004, she started the Section WIE Affinity Group in 2007. Under her guidance the AG organized the First R10 WIE Congress in 2008 (which was a grand success) and has won the **Honourable Mention for the Affinity Group of the Year Award for 2007**. She is R10 WIE Coordinator for 2008, 2009-2010 and has launched an exclusive project called “Sangamam” for the transfer of technology to rural areas. Under this project, many specific training programs have been organized for the youth and women of selected villages. Based on her work to improve the quality of life for the rural society, she has been awarded the **MGA Achievement Award** for the year 2008. She was also an invited speaker for session on “Humanitarian Technology” in the Sections Congress 2008 at Quebec, Canada.

16:00-16:30

## “Artificial Intelligence and Its Applications in Industry”

**Marzuki Khalid**

**R10 Conference Coordinator, Technical University of Malaysia, Malaysia**

### **Abstract**

Today in order to stay competitive, industries around the world demand higher productivity. This can be realized in one of the following two ways, one is to reduce its operating cost while it maintains its present output and the other is to increase its output while maintaining its current cost of production. Industries also need to improve its product's performance and reliability and at the same time it needs to reduce cycle time due to the more unreliable market demands in recent years. It can be observed that the industries that have such capabilities can withstand better during economic downturns. It is a fact that the use of new and better technologies provides such industries to improve its productivity, enhance products performance and reduces cycle time. One such technology is artificial intelligence where tools such as expert systems, neural networks, fuzzy logic, etc. have such capability to provide better solutions to many demanding and complex problems. This lecture discusses several popular techniques of artificial intelligence and how they have been used in overcoming difficult engineering and industrial problems where conventional techniques are inadequate.



### **Bio**

Prof. Marzuki is the Director of the Malaysia-Japan University Center and also the Director of the Center for Artificial Intelligence and Robotics of Universiti Teknologi Malaysia. In 1993 he was awarded the "Excellence Service Award" from his employer. He was also awarded the "Institution of Engineers Malaysia Young Engineer Award for 1994" for outstanding research and consultancy achievements. He has published over 200 papers in international journals and conferences. He was the General Chairman for the IFAC Symposium on "AI in Real-Time Control" in 1997, the IEEE TENCON 2000 Conference, the IEEE "Ethics Education in Engineering" in 2004 and the "International Conference on Mechatronics" in 2005. He has also been appointed to sit in the Technical Advisory Committees of more than 40 international conferences around the world. He is also the co-author of the book entitled *Neuro-Control and its Applications* published by Springer-Verlag, United Kingdom. He was the Chairman of the IEEE Malaysia Section. He was the first President of the Instrumentation & Control Society of Malaysia and the Vice-President and Fellow of the Artificial Intelligence Society of Malaysia. He is a Founding Member of the Asian Control Professors Association. He has been appointed to the Editorial Advisory Board of the *International Journal of Engineering Applications of Artificial Intelligence* published by Elsevier Science, United Kingdom and an Associate Editor of the Journal of Systems and Control Engineering from the Institution of Mechanical Engineers, UK. He is currently an Executive Committee member of the IEEE Region 10 (Asia-Pacific).

16:30-17:00

**“Industrial automation: actual status and future trends”**

**Ta Cao Minh**

**Chair, IEEE Vietnam Section, Hanoi University of Technology, Vietnam**

**Abstract**

Industrial automation is an inter-disciplinary field that involves many areas: electrical drives, power electronics, control technology, micro-processor based control, process control, measurement and industrial informatics, etc. Thanks to the development of these technologies in the last decades, the processes in industry have got higher and higher performance, consume less energy and became more automated in larger scale.

The recent achievements in Industrial Automation will be summarized. Next, the development in the near future can be predicted as: more integration between Automation and Information Technology, more important role of roboticization and smart and intelligence control.



**Bio**

**Minh C. Ta** received the B.S. degree (with honors) from the Institute of Technology (now the University of West Bohemia), Plzen, Czech Republic, and the Ph.D. degree from Laval University, Quebec, QC, Canada, in 1986 and 1998, respectively, both in Electrical Engineering. In 1987, he joined the Department of Industrial Automation, Hanoi University of Technology, Vietnam, as a Lecturer, and Senior Lecturer since 2004. During 1998–2001, he spent one year at Kyushu University, Fukuoka, Japan, as a Visiting Researcher, and then two years at The University of Tokyo, Tokyo, Japan, as a Post-Doctoral Fellow of the Japan Society for the Promotion of Sciences (JSPS). He was with NSK Steering Systems Company, Ltd., Maebashi, Japan during 2001-2004 as a R&D engineer. His research interests include modeling and control of electrical drives, control system applications, electric vehicles, and electric power steering (EPS) systems. He is authors of more than 10 patents and 25 journal and international conference papers.

Dr. Ta is a member of the Vietnam Association of Automation and Senior Member of IEEE. Currently he is the Chair of IEEE Vietnam Section.

17:00-17:30

## “Recent Hot Topics Technology in Communication Systems”

**Seiichi Takeuchi**  
**IEEE Fellow, Region 10 Director 2005-2006**

### Abstract

Recent hot topics in communication system technology are related to the accelerated progress in technology as seen in technology short cycle, paradigm shift and subsequently expected new market. U-Japan Strategy is briefly explained from the view point of realization time frame, economic impact and so on. A possible “Next and New Generation Network (NGN)” is explained. NGN directs to provide open service platform based on manageable IP network. Directions to network evolution are carefully examined from the view point of a network that understands situation and controls itself autonomously according to changes in situation to guarantee quality of communication. Real-time field management by SDP (service delivery platform) is examined from visualization of all related operations and optimization of the business by supporting services collaboration and information acquisition/sharing. Three usage patterns of context information are examined. Situation-aware monitoring is looked into for a normal state and an accidental condition. Recipient-aware service optimization is also examined.



### Bio

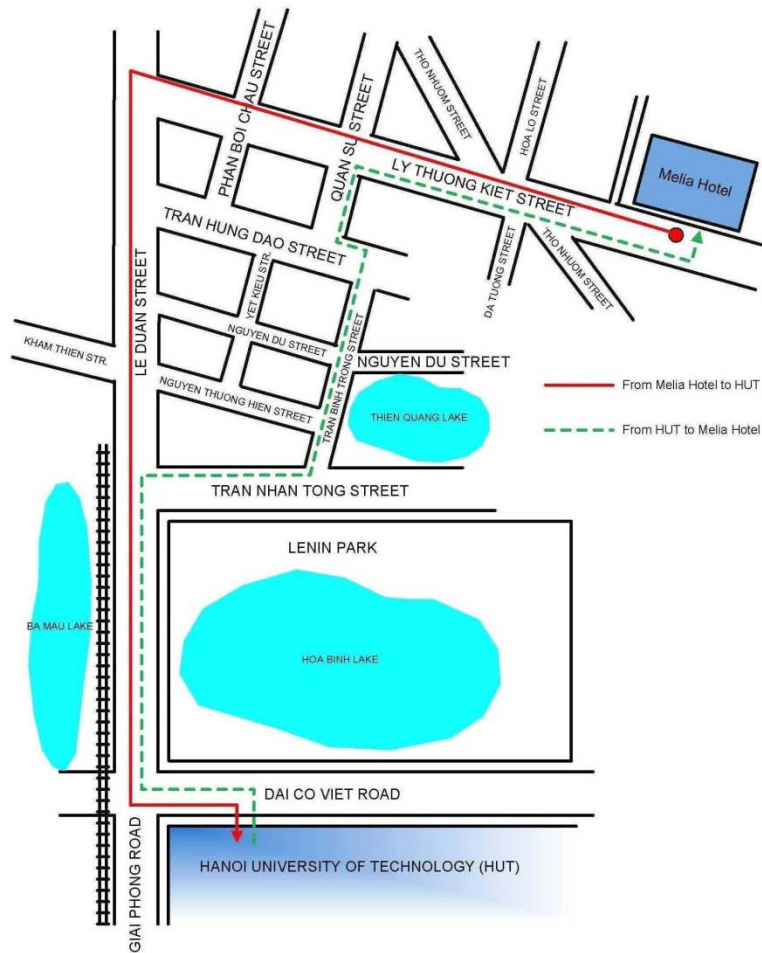
Dr. Seiichi Takeuchi, IEEE Activities: S \* 72-M \* 74-SM \* 91-F \* 97, Region 10 Director 2005-2006, IEEE Board of Directors 2005-2006, Region 10 Secretary, Tokyo Section Secretary/Treasurer, 1989-91, Tokyo Sec. Exec. Com, 1991- , Japan Council Exec. Comm, 2001-02, Regional Activities Board Sec. Chap. Supp. Comm., 2008: MGAB (Member Geographic Activities Board) Supp. Comm.

Industrial Experiences: General Manager, Optoelectronic Laboratories; Senior General Manager, Corporate R&D Group; Corporate Senior General Manager at Sumitomo Electric Industries..

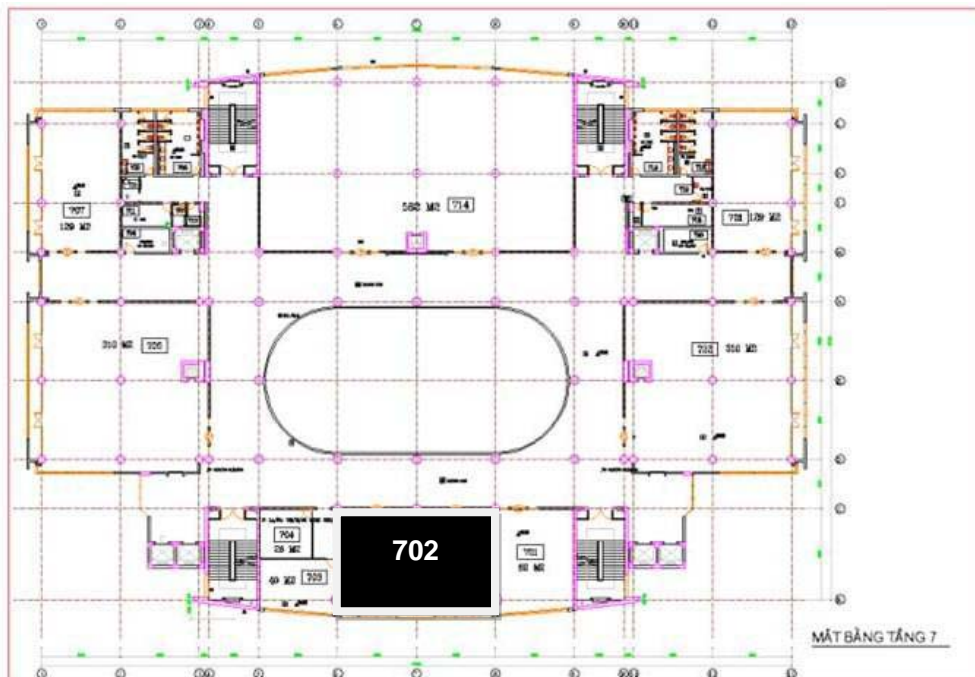
Academic Experiences: 1997-2002, Professor & Dean, Centre for Research Collaboration, Tokyo Denki University, 1972-74: Research Scientist, MIR (Microwave Research Institute) Polytechnic University, NY, USA.

Public Activities: OITDA (Optical Industries Technologies Development Association) Committee Members, Board Member, IBIS(Consortium of Basic Technologies Development Association of MITI and industries). MITI, MOES&C Comm. { for Gov./Industries/Academia, IEEE Fellow, Polytechnic University (formerly known as Brooklyn Poly) Fellow.

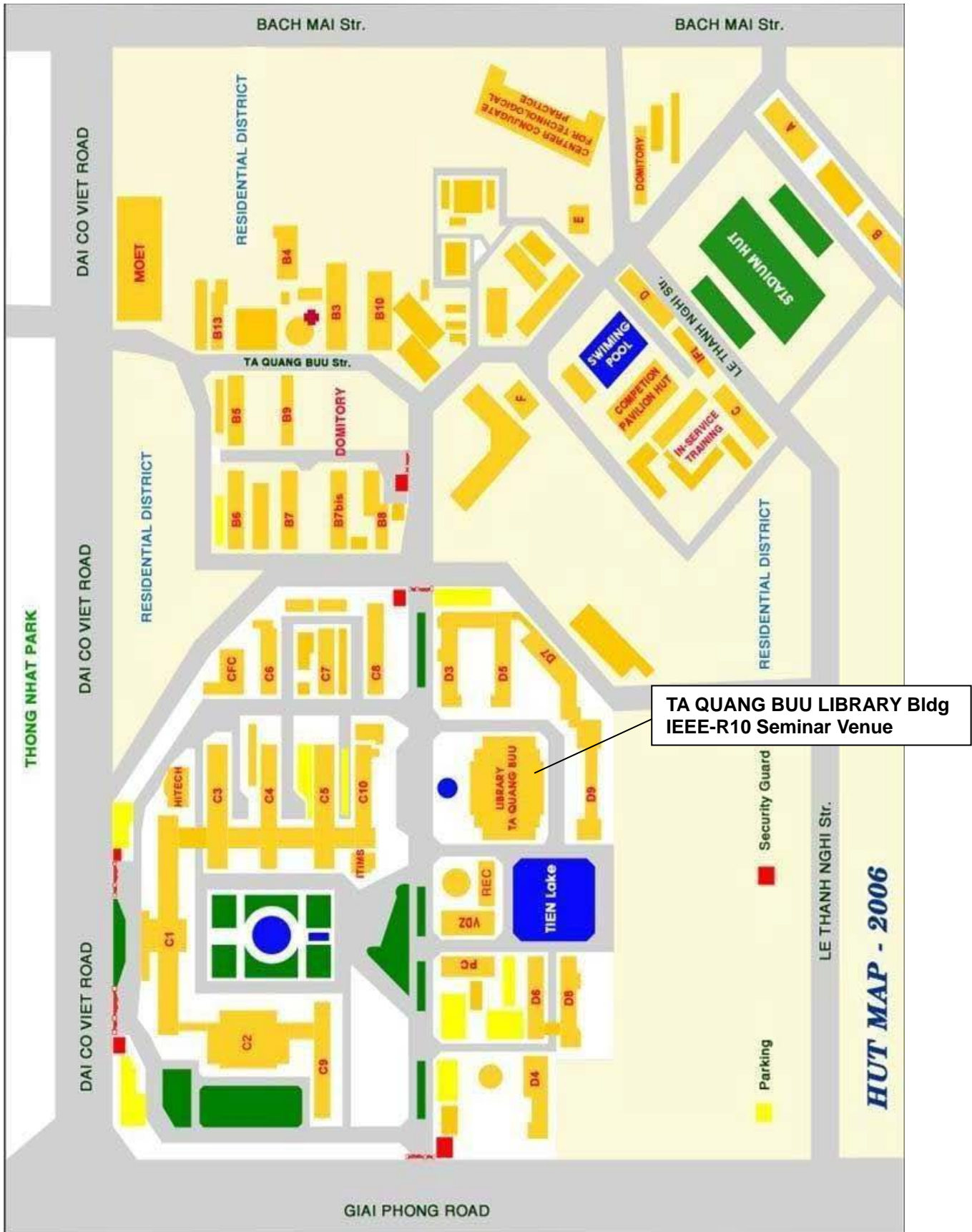
# From Melia Hotel to HUT



# Floor Map



# HUT CAMPUS MAP



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IEEE-R10 Seminar Venue