TECHNICAL PROGRAM

Majestic Hotel Saigon

Ho Chi Minh City, Vietnam

20-22 October 2010

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Conference Venue Information

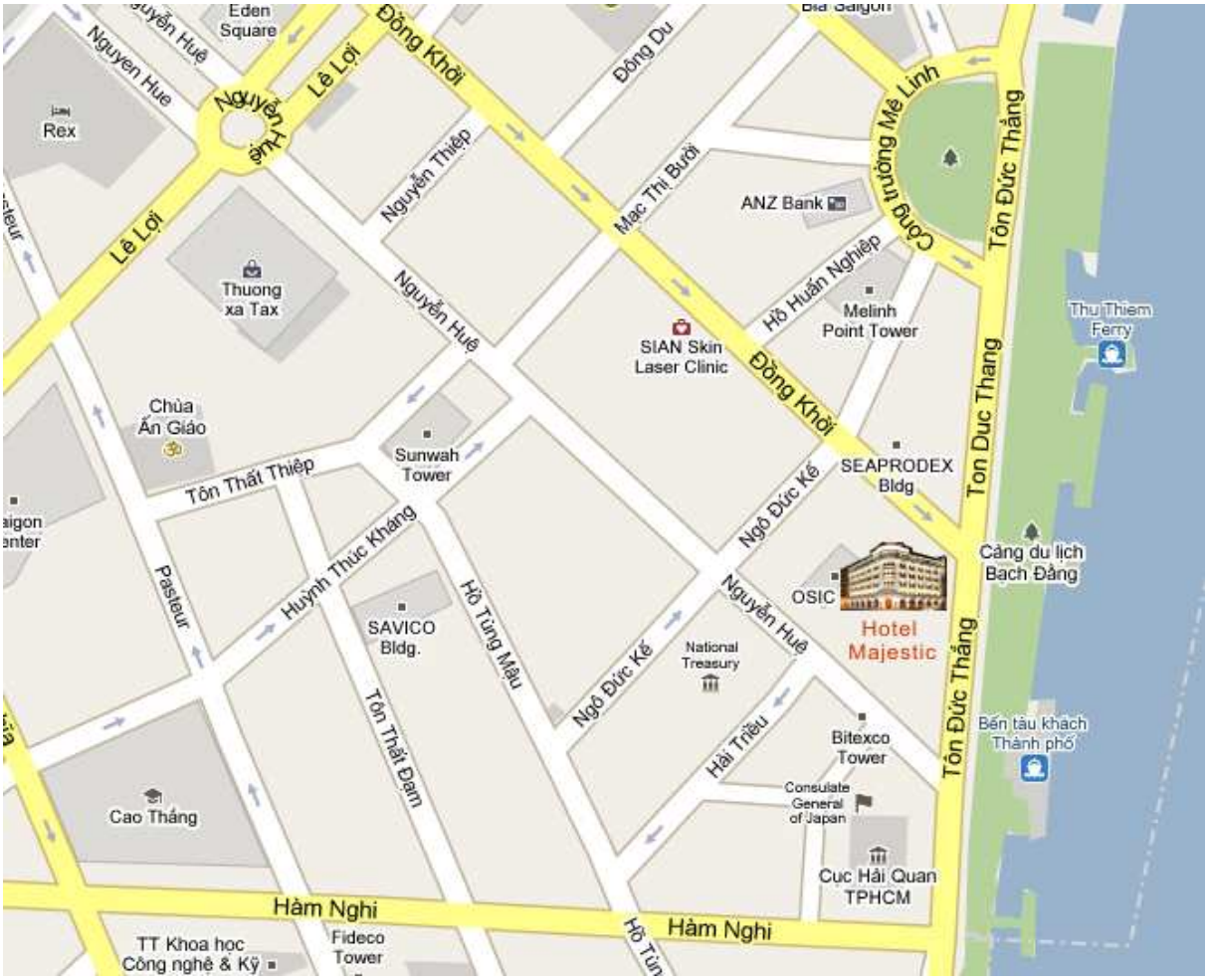
Hotel Majestic Saigon

Address: 1 Dong Khoi Str., Dist. 1,
Ho Chi Minh City, Vietnam
Tel: (84-8) 3829 5517
Fax: (84-8) 3829 5510
E-Mail: sales@majesticsaigon.com.vn
Website:www.majesticsaigon.com.vn

Opened in 1925 as the city's finest abode, the Majestic has gone through several reincarnations over the years, changes that reflect the tumultuous history of Vietnam. During World War II, the Japanese Imperial Army used this French colonial structure as a military barracks. During the Vietnam War, it was frequented by foreign correspondents and espionage agents.

How to get to Majestic Hotel:

The best way to get to the hotel is to use Airport Taxi. You can buy a taxi ticket at the counter right after the luggage collection. The price varies from 7USD to 10USD for your trip from the airport to your hotel in downtown.



Conference Registration:

Conference registration will take place on the fifth floor of the Hotel Majestic Saigon during the following time:

- Tuesday, October 19th, 2010: from 15h20 to 17h00
- Wednesday, October 20th, 2010: from 8h00 to 8h30
- Thursday, October 21st, 2010: from 8h00 to 8h30

Conference Welcome Reception:

There will be an welcome reception from 19h30 to 22h00, October 19th 2010, in the 7th floor of the Hotel Majestic Saigon.

Conference Dinner:

Conference dinner will take place at Binh Quoi Tourist Village (Làng Du lịch Bình Quới). The address of the conference dinner venue is as follows:

Address: 1147 Binh Quoi, Phuong 28, Binh Thanh District

Telephone: (84.9) 35566 020 - 35566 021

Conference contact:

If you need assistance during the conference time, please contact the Local Arrangement Chair:

Dr. Tuan Do-Hong

Cell phone: 0988649240

PROGRAM OVERVIEW

Morning Sessions

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<tr><th>Time/Date</th><th>19 October</th><th>20 October</th><th>21 October</th><th>22 October</th></tr>
<tr><td>8h00 – 8h30</td><td rowspan="5"></td><td>Registration</td><td>Registration</td><td></td></tr>
<tr><td rowspan="3">8h30 – 10h10</td><td rowspan="3">Opening Ceremony
Room: Prima Ballroom A</td><td>Keynote speech 5
by Prof. Bumman Kim,
Pohang Univ. of Science & Tech., Korea
Room: Prima Ballroom A
Chair: Prof. Phan Anh</td><td>Session 1E
Wireless Communications II
Room: Prima Ballroom A
Chair: Prof. Tadashi Fujino</td></tr>
<tr><td>Keynote speech 6
by Prof. Mérouane Debbah,
Supélec, France
Room: Prima Ballroom A
Chair: Prof. Phan Anh</td><td>Session 2E
Communication Protocols and Networking
Room: Boardroom A
Chair: Prof. Tran Xuan Nam</td></tr>
<tr><td>REV Workshop
Room: Prima Ballroom B</td><td>Session 3E
Signal Processing II & Optical Communications
Room: Prima Ballroom B
Chair: Prof. Le Tien Thuong</td></tr>
<tr><td>10h10 – 10h20</td><td colspan="3">Coffee break</td></tr>
<tr><td rowspan="3">10h20 – 12h00</td><td rowspan="2">Keynote speech 1
by Dr. Saracco Roberto
Telecom Italia, Italy
Room: Prima Ballroom A
Chair: Prof. Huynh Huu Tue</td><td>Session 1B
Cognitive Radio
Room: Prima Ballroom A
Chair: Prof. Tho Le-Ngoc</td><td>Session 1F
VLSI & Embedded Systems
Room: Prima Ballroom A
Chair: Dr. Dinh Duc Anh Vu</td></tr>
<tr><td rowspan="2">Session 2B
Signal Detection and Interference Mitigation Techniques
Room: Boardroom A
Chair: Prof. Sébastien Roy</td><td rowspan="2">Session 2F
Cooperative Communications
Room: Boardroom A
Chair: Prof. Huynh Huu Tue</td></tr>
<tr><td>Keynote speech 2
by Prof. Maurice Bellanger,
CNAM, France
Room: Prima Ballroom A
Chair: Prof. Huynh Huu Tue</td><td>REV Workshop and Exhibitions
Room: Prima Ballroom B</td></tr>
<tr><td>12h00 – 13h30</td><td colspan="3">Lunch break</td></tr>
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Afternoon Sessions

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<tr><th>Time/Date</th><th>19 October</th><th>20 October</th><th>21 October</th><th>22 October</th></tr>
<tr><td rowspan="3">13h30 – 15h10</td><td rowspan="4"></td><td>Keynote speech 3
by Prof. Sébastien Roy,
Laval University, Canada
Room: Prima Ballroom A
Chair: Prof. Vu Dinh Thanh</td><td>Session 1C
Ultra Wide Band
Room: Prima Ballroom A
Chair: Prof. Wen-Xun Zhang</td><td rowspan="3"></td></tr>
<tr><td>Keynote speech 4
by Prof. Magdy A. Bayoumi,
University of Louisiana, USA
Room: Prima Ballroom A
Chair: Prof. Vu Dinh Thanh</td><td>Session 2C
Channel Modeling and Estimation
Room: Boardroom A
Chair: Prof. Matthias Paetzold</td></tr>
<tr><td>REV Workshop
Room:</td><td>Session 3C
Signal Processing I
Room: Prima Ballroom B
Chair: Prof. Maurice Bellanger</td></tr>
<tr><td>15h10 – 15h20</td><td colspan="3">Coffee break</td></tr>
<tr><td rowspan="3">15h20 – 17h00</td><td rowspan="3">Registration
Venue:
Majestic Hotel, 5th floor</td><td>Session 1A
Communication Theory
Room: Prima Ballroom A
Chair: Prof. Dinh The Cuong</td><td>Session 1D
Wireless Communications I
Room: Prima Ballroom A
Chair: Prof. Mérouane Debbah</td><td rowspan="3"></td></tr>
<tr><td>Session 2A
Ad hoc and Sensor Networks I
Room: Boardroom A
Chair: Prof. Magdy A. Bayoumi</td><td>Session 2D
Ad hoc and Sensor Networks II
Room: Boardroom A
Chair: Prof. Tetsuya Miki</td></tr>
<tr><td>REV Workshop
Room: Prima Ballroom B</td><td>Session 3D
Systems & Circuits for Communications
Room: Prima Ballroom B
Chair: Prof. Bumman Kim</td></tr>
<tr><td>19h30 – 22h00</td><td>Welcome Reception
Venue:
Hotel Majestic, 7th floof</td><td>Conference Dinner
Binh Quoi tourist village 1</td><td></td><td></td></tr>
</table>

ATC2010 Opening Speech

Prof. Nguyen Van Ngo

Honorable President of REV

Steering Committee Co-Chairs

Dear distinguished guests,

Dear authors and attendees of the Conference

Today witnesses a significant event – the 3rd in the series of International Conferences on Advanced Technologies for Communications, co-organized by the Radio Electronics Association of Vietnam (REV) and the IEEE Communication Society (IEEE-ComSoc).

The conference is hosted by the Ho Chi Minh City University of Technology (HCMUT), in Ho Chi Minh City, the most important economic center in Vietnam, which plays an important role in driving the economy of Vietnam. I am thankful to HCMUT for the meticulous preparations it has made to hold this conference

I am delighted to welcome scholars, industrialists, from world-acclaimed universities, research institutes, industrial corporations, telecoms operators, and broadcasters in Australia, Canada, China, Denmark, France, Germany, Hong Kong, Islamic Republic of Iran, Italia, Japan, Republic of Korea, Norway, Portugal, Romania, Russia, Saudi Arabia, Singapore, Spain, Tunisia, Thailand, the USA, Vietnam, and major Vietnamese universities, R&D Centers in Hanoi, Haiphong, Hue, Danang, HCM City.

Science, technology and education, like culture in general, will bring peoples together. I do hope that the annual ATC Conference will become a rendezvous place for academic exchange, discussions on new ideas, appreciation on new technical solutions, professional experience sharing, technology transfer, and friendly meetings for all of us.

On behalf of the Conference Steering Committee, I would like to express the warmest welcome, the most sincere thanks to all the authors, attendees and distinguished guests present in this Conference. And especially, I would like to extend my sincere gratefulness to the international scholars who have attended from 4 to 6 REV and ATC/REV conferences as authors, chairs of sessions, and members of the IAC or the TPC, viz. Prof. Tetsuya Miki, Prof. Maurice Bellanger, Prof. Wenxun Zhang, Prof. Huu-Tue Huynh, Prof. Dinh-Thong Nguyen, Prof. Xuyen T. Vuong, Prof. Son T. Vuong, Dr. Saracco Roberto, and Prof. Hsiao-Hwa Chen.

As most of you know, the conferences ATC 2008 held in Ha Noi, and ATC 2009 in Hai Phong have been successful. But I expect that ATC 2010 will be more successful. This optimistic estimate is based on the increased innovation, the remarkable correspondence with the reality of the development of ITC in Vietnam, and especially the astonishingly harmonious coherence between the keynote speeches.

To illustrate my assertion, let us have a quick look at the keynote speeches on the first day of the Conference. In the first keynote speech, Dr. Saracco Roberto (Telecom Italia) will sketch out what

telecommunications may look like in 2020 and what steps should be taken to get there. He will address both technical and business issues, policies and market evolution.

The keynote speech of Prof. Merouane Debbah of Supélec, France, will present one of the most attractive and productive areas in today's communication: wireless communications. His emphasis is the crucial significance of a problem that most recent research efforts have ignored: the importance of wireless networks' environmental responsibility! Reading Prof. Merouane Debbah's paper, I am troubled by the fact that the MW and SW radio broadcasting transmitters of many countries still compete in output power, to the extend that at some localities the ionosphere is modulated (Luxemburg effect). It is urgent to develop "green" wireless communications by improving HF energy efficiency and reducing environmental impact.

The two speeches that follow are devoted to the optimization of spectrum efficiency. These proposals are potentially complementary, but each presents a distinct approach to the problem. On the basis of the essential characteristics of the radio spectrum for communication: a limited resource that can be accessed from everywhere, Prof. Maurice Bellanger (CNAM, France) suggests the best way to optimize communications is to provide the highest spectral efficiency and offer maximal access flexibility. Opportunistic networks, the most innovative part of his concept, aim at exploiting the sections in the spectrum that are not being used at a particular place and at a particular time. Fully opportunistic networks will avoid global coordination and synchronization of the communication systems, promising light infrastructure. An overview of potential applications will be given, and technical solutions will be presented.

Prof. Sébastien Roy (Laval University, Canada) proposes a different approach to "squeeze the Spectral Lemon:" making the best use of the development of novel signal processing techniques, exploiting the latest in communication theory, while keeping a focus throughout on associated implementation issues, such as algorithmic complexity, power consumption, etc. This research approach, bridging theory and implementation under a pragmatic mindset, yielded promising results. We will look at how these techniques can improve spectral efficiency in current wireless systems.

The picture on "*What telecommunications may look like in 2020*" will be fully complete when we add the keynote speech entitled "*Technical Trend and Role of Advanced Optical Communications*" that Prof. Tetsuya Miki (UEC, Japan) will present at the REV 2010 workshop.

There is no doubt that during last 30 years, optical technologies have magnified point-to-point transmission capability by about 100,000 times, from 100Mbps to 10Tbps, and data communication capability by about one million times, from 1,200bps to 1Gbps.

In the near future, optical communications are strongly expected to realize energy-saving technologies, since enlarging network capacity requires additional energy for network facilities. For long-distance transmission systems, optical coherent transmission technologies similar to wireless radio transmission technologies such as QAM, OFDM, etc., are extensively studied; and for the area of access network, wireless and optical convergence technologies such as ROF (Radio over Fiber) are essential for future Pico-cell and/or Femto-cell mobile environments.

Of course, the keynote speeches and invited papers that will be presented on the second day are also very attractive.

Prof. Tran Xuan Nam is an experienced TPC Chair; he never serves all the best dishes at the beginning of the banquet!

I am confident that my enthusiastic remarks will be confirmed in the plenary sessions and also in the technical sessions of the Conference, The joint effort of authors, organizers and all the attendees will contribute to the major success of ATC/REV 2010.

I wish everyone a very fruitful and productive time and with that, I declare ATC/REV 2010 officially open. Thank you.

Tutorials

Thursday, 21 October 2010

Tutorial: **Basic Components and Characteristics of Satellite Communication Links**

Lecturer: **Dr. Xuyen T. Vuong,** *Artel Inc., USA*

Time: **14h00 – 16h00**

Room: **R231**

Chair: **Dr. Dang Thanh Tin, Ho Chi Minh City University of Technology**

Abstract: Participants will learn basic components and characteristics of earth stations, satellite, and communication links. Topics to be covered include Decibels and Backoffs, Antenna Gain and Polarization; G/T and EIRP Values and Footprints; ALC, SFD and PAD Attenuation; Modulation, FEC Coding, and BER-Eb/No Performance; Multiplexing and Multiple Access; Propagation, Sun Transit and Rainfall Effects; Allocated Bandwidth, Power Equivalent Bandwidth.

Lecturer's biography: Dr. Vuong is Chief Scientist at ARTEL where he is also Chief Engineer of the $2.1B DSTS-G program. Through the DSTS-G program, he has been responsible for design of satellite links and networks to support various applications using almost 6000 MHz of bandwidth on 60 FSS GSO satellites from Eutelsat, Intelsat, SES, Telesat, EchoStar, Hispamar, GE Satellite, XTAR, Paradigm, and JSAT. He cofounded VT TECH Corp. and provided consulting work to Hughes Network Systems (as a systems engineer in network security and network management for the design of the Ka-band Spaceway satellite system), to NASA/Glenn Research Center (on satellite technology and commercial LEO mission services to complement TDRSS), to Motorola (on traffic analysis of the Ka-band Teledesic system), Comtech Mobile Datacom (on test plans and testing of CDMA modems on the NOAA/GOES satellite), AsiaSat (on satellite technical parameters and earth stations' operational constraints). His former employers include Canadian Astronautics, Comsat Labs, GTE Spacenet, SAIC, SPAR Aerospace, and Telesat Canada.

Dr. Vuong received his BSEE in 1971 from California State University, MEng (Electrical) in 1973 from Carleton University, and PhD in 1976 from University of Western Ontario. Prior to going to industry, he briefly taught at University of Ottawa and Concordia University.

Keynote Speakers

Wednesday, 20 October 2010

Keynote Speaker 1: **Towards the Year 2020: Evolution of Telecommunications Infrastructures and Biz**

Speaker: **Dr. Saracco Roberto,** *Telecom Italia, Italy*

Time: **10h20 – 11h10**

Room: **Prima Ballroom A**

Chair: **Prof. Huynh Huu Tue, Bac Ha International University**

Abstract: The talk will address the challenges in evolving the telecommunications infrastructures balancing the investment with the short medium terms revenues and creating at the same time a future proof infrastructure. The talk will present the result of a work carried out by 400 people in Telecom Italia in the first two months of 2010 to foresee what telecommunications may look like in 2020 and what steps should be taken to get there. It will address both technical and business issues, radio and fixed, policies and out of the box competition.

Speaker's biography: College degree in Computer Science, University degree in Math, and post doc in Physics. He joined Telecom Italia in 1971 contributing to the development of the first SPC system in Italy. Through the years he worked on Data Transmission, Switching, Network Management. In the last 10 years he has worked on the economic side of telecommunications, creating and directing a research group at the Future Centre in Venice. ww.telecomfuturecentre.it Author of many papers and 9 books in the area of Telecommunications, with the last 5 on the topic of Living and Communicating in the next decade, he has worked in the foresight Panel of the European Commission, charged to imagine Internet beyond 2020.

He is currently Director of Telecom Italia Future Centre, in Venice, and co Chair of the Edge-Core group of the Communications Future Program of the MIT. Since 2007 he is rapporteur on Information Communications Technologies at the Science, Technology and Society Forum tracking the progress in the application of the Kyoto agreements and proposing their evolution. Senior member of IEEE-COMSOC, he has served in many roles, including TC Secretary, NM Chair, VP Membership Relations. He is currently COMSOC Director for Sister and Related Societies and member of the Strategic Committee and Emerging Technology Committee of IEEE. He received the Salah Aidarous Award in 2005 for his contribution to network management and the 2007 Donald McLellan Meritorious Service Award for his contribution to strengthening the Communications Society presence worldwide.

Wednesday, 20 October 2010

Keynote Speaker 2: **Opportunistic Unsynchronized Cognitive Radio Networks**

Speaker: **Prof. Maurice Bellanger,** *CNAM, France*

Time: **11h10 – 12h00**

Room: **Prima Ballroom A**

Chair: **Prof. Huynh Huu Tue, Bac Ha International University**

Abstract: The radio spectrum has two essential characteristics for communication, it is a limited resource which can be accessed from everywhere. The objective of the concept of cognitive radio is to make the best of this situation, by providing the highest spectral efficiency and offering the maximal access flexibility. Opportunistic networks, which are the most innovative part of the concept, aim at exploiting the sections in the spectrum that are not occupied at a particular place and at a particular time. After a review of the standardization activity at ITU-R, in preparation to the the forthcoming World Radiocommunications Conference in 2011 (WRC'2011), an alternative is proposed to the cognitive pilot channel (CPC)), which exploits a centralized data base to achieve coordinated spectrum sharing and joint radio resource management. Fully opportunistic networks avoid global coordination and synchronization of the communication systems. They rely on the capabilities of the terminals, particularly spectrum sensing and monitoring, and some general rules to establish and terminate connections. They are characterized by their agility and light infrastructure.

Then, an overview of potential applications will be given, emphasizing the relevance of the opportunistic approach and the complementarity to existing conventional radio networks. Technical solutions will be presented, particularly regarding the physical and the medium access control layers. In conclusion, the conditions for the proliferation of opportunistic networks will be discussed.

Speaker's biography: Maurice Bellanger graduated from ENST (Ecole Nationale Supérieure des Télé-communications), Paris, in 1965 and received the doctorate degree from the university of Paris in 1981. He joined the company Philips Communications in France in 1967 and, since then, he has worked on digital signal processing and applications in telecommunications.

In 1991, he joined CNAM (Conservatoire National des Arts et Métiers), a public education and research institute, as a professor of electronics. Since 2008, he is the coordinator of the European Research FP7-project Phydyas (Physical layer for dynamic access and cognitive radio).

Elected a fellow of the IEEE in 1984, for contributions to the theory of digital filtering and the applications to communication systems, he was the technical program chairman of the conference ICASSP'82 in Paris. He was the president of EURASIP, the European Association for Signal Processing, from 1986 to 1992 and the chairman of the France section of URSI (Union RadioScientifique Internationale) from 2006 to 2008. He is a member of the French Academy of Technology.

Wednesday, 20 October 2010

Keynote Speaker 3: **Squeezing the Spectral Lemon: Advances in Signal Processing and Coding to Improve Spectral Efficiency**

Speaker: **Prof. Sébastien Roy,** *Laval University, Canada*

Time: **13h30 – 14h20**

Room: **Prima Ballroom A**

Chair: **Prof. Vu Dinh Thanh, Ho Chi Minh City University of Technology**

Abstract: Over the last few years, a research program was undertaken in collaboration with InterDigital Canada under the theme "Advanced Broadband Transceivers." The aim was the development of novel signal processing techniques, exploiting the latest in communication theory and having fundamental advantages, while keeping a focus throughout on associated implementation issues, such as algorithmic complexity, power consumption, etc. This research approach, bridging theory and implementation under a pragmatic mindset, yielded rather promising results. For example, it is known that MIMO techniques are the key to augmenting effective link throughput without bandwidth expansion. However, it is still problematic in practice to incorporate multiple antennas on handsets because of cost/power/size constraints. As a solution, virtual MIMO techniques based on sphere decoding were developed which can effectively at the receiver separate more co-channel signals than there are receive antennas.

Also, new powerful quasi-cyclic LDPC codes were devised which allow encoding in linear complexity. Furthermore, new joint decoding techniques were developed as well as efficient parallel hardware implementations. Together, these techniques are capable of aggregate throughputs above 10 Gbps on an FPGA. Multi-rate codec architectures were also developed and then applied in ARQ (automated repeat request) schemes, as well as relaying / network coding scenarios. We will look at how these techniques can improve spectral efficiency in current wireless systems. Approaches for further gains will also be discussed, including distributed arrays, cognitive radio, cognitive networks, interference alignment, and network coding.

Speaker's biography: Sébastien Roy (S'95-M'02) received the B.Sc. and M.Sc. degrees in electrical engineering from Laval University, Québec, QC, Canada, in 1991 and 1993, respectively, and the Ph.D. degree from Carleton University, Ottawa, ON, Canada, in 2000. He is currently Full Professor with the Department of Electrical and Computer Engineering, Laval University, where he is pursuing research in the system-level and implementation aspects of signal processing for communications as well as space-time processing and space-time coding. From 2000 to 2002, he was a Natural Sciences and Engineering Research Council of Canada (NSERC) Postdoctoral Fellow at Laval University. He has also been active in industrial consulting with companies such as InterDigital and MacDonald Dettwiller, and was involved in the organization of several international conferences. In 2007 and 2009, he was an invited professor at l'École Nationale Supérieure de Sciences Appliquées et de Technologie (ENSSAT), Lannion, France. He received 5 teaching awards and in 2007 received the award for excellence in technology transfer from the strategic network on Systems and Technologies for Advanced Communications (SYTAcom). Dr. Roy was also awarded the award for Post-Graduate Research Excellence from the Canadian Institute for Telecommunications Research in 2000.

Wednesday, 20 October 2010

Keynote Speaker 4: **Wireless Sensors Networks Infrastructure for Oil Industry**

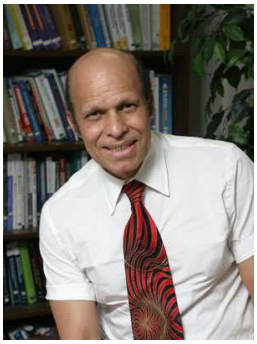
Speaker: **Prof. Magdy A. Bayoumi,** *University of Louisiana at Lafayette, USA*

Time: **14h20 – 15h10**

Room: **Prima Ballroom A**

Chair: **Prof. Vu Dinh Thanh, Ho Chi Minh City University of Technology**

Abstract: Computers, communication, and sensing technologies are converging to change the way we live, interact, and conduct business. Wireless sensor networks reflect such convergence. These networks are based on collaborative efforts of a large number of sensor nodes. They should be low-cost, low-power, and multifunction. These nodes have the capabilities of sensing, data processing, and communicating. Sensor networks have a wide range of applications, from monitoring sensors in industrial facilities to control and management of energy applications to military and security fields. Because of the special features of these networks, new network technologies are needed for cost effective, low power, and reliable communication. These network protocols and architectures should take into consideration the special features of sensor networks such as: the large number of nodes, their failure rate, limited power, high density, etc. In this talk the impact of wireless sensor networks will be addressed, several of the design and communication issues will be discussed, and a case study of a current project of using such networks in Oil Industry; seismic analysis and drilling, management of off-shore oil and natural gas platforms in the gulf region, Instrumentation, and security will be given.



Speaker's biography: Dr. Magdy A. Bayoumi is Director of The Center for Advanced Computer Studies (CACS), and Department Head of the Computer Science Department at the University of Louisiana at Lafayette (UL Lafayette). He is also the Z.L. Loflin Eminent Scholar Endowed Chair Professor in Computer Science. Dr. Bayoumi has been a faculty member in CACS since 1985. He received B.Sc. and M.Sc. degrees in Electrical Engineering from Cairo University, Egypt; M.Sc. degree in Computer Engineering from Washington University, St. Louis; and Ph.D. degree in Electrical Engineering from the University of Windsor, Canada. Dr. Bayoumi is the recipient of the 2009 IEEE Circuits and Systems Meritorious Service Award. He is also the recipient of the IEEE Circuits and Systems Society 2003 Education Award, and he is an IEEE Fellow. He has been on the Editorial Board of several important scientific Journals. Besides, he is involved in different social activities. In fact, he is a member of Lafayette Chamber of Commerce where he was a member of the Economic Development, Education, and Tourism Committees. He was also a technology columnist and writer of the Lafayette newspaper "The Daily Advertiser". Dr Bayoumi was on the Governor’s commission for developing a comprehensive energy policy for the State of Louisiana, 2002-2003.

Thursday, 21 October 2010

Keynote Speaker 5: **Recent Trend of Power Amplifiers for Transmitters of Mobile Communication**

Speaker: **Prof. Bumman Kim**, *Pohang University of Science and Technology, Korea*

Time: **08h30 – 09h20**

Room: **Prima Ballroom A**

Chair: **Prof. Phan Anh, Bac Ha International University**

Abstract: Linear Power amplifiers become very a hot issue for the mobile communication. The main focus is high efficiency to reduce cost. The other is the flexibility to handle various services. The meet the requirements, the transmitters are assisted by digital technique. The performance of the unit PAs is improved significantly using GaN technology. The class E, J, F and saturated amplifiers are heavily researched. To improve the performance further, the unit amplifiers are utilized in transmitter architectures such as Doherty amplifier, Envelope Tracking, and class-S , which are assisted by digital circuits. These advanced architectures will be introduced. Finally, the digital predistortion technique will be discussed, which is the main linearization technique of the transmitters.

Speaker's biography: Bumman Kim (M'78–SM'97–F'07) received the Ph.D. degree in electrical engineering from Carnegie Mellon University, Pittsburgh, PA, in 1979. From 1978 to 1981, he was engaged in fiber-optic network component research with GTE Laboratories Inc.,Waltham, MA. In 1981, he was with the Central Research Laboratories, Texas Instruments Incorpo-rated, Dallas, where he was involved in development of GaAs power field-effect transistors (FETs) and monolithic microwave integrated circuits (MMICs).He has developed a large-signal model of a power FET, dual-gate FETs for gain control, high-power distributed amplifiers, and various millimeter-wave MMICs. Since 1989, he has been with the Pohang University of Science and Technology (POSTECH), Pohang, Korea, where he is a Namko Professor with the Department of Electrical Engineering, and Director of the Microwave Application Research Center, where he is involved in device and circuit technology for RF integrated circuits (RFICs). He was a Visiting Professor of electrical engineering with the California Institute of Technology, Pasadena, in 2001. He has authored over 250 technical papers. Dr. Kim is a member of the Korean Academy of Science and Technology and the Academy of Engineering of Korea. He was an Associate Editor of the IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES and a distinguished Lecturer of the IEEE Microwave Theory and Techniques Society (IEEE MTT-S).

Thursday, 21 October 2010

Keynote Speaker 6: **Green Wireless Communications for the Future**

Speaker: **Prof. Mérouane Debbah,** *Supélec, France*

Time: **09h20 – 10h10**

Room: **Prima Ballroom A**

Chair: **Prof. Phan Anh, Bac Ha International University**

Abstract: Wireless communication is one of the most attractive and productive areas in today's communication field. So far, wireless systems have been optimized in terms of spectrum efficiency and transmission reliability. However, most of the recent research efforts have ignored the importance of wireless network's environmental responsibility, e.g., energy efficiency and environmental impact. Recently, it has been shown that the accumulation of greenhouse gases in the atmosphere is growing faster than originally predicted. This realization has led to a push towards "green" wireless communications that strives for improving energy efficiency as well as reducing environmental impact. The need to develop green wireless communication systems turns out to be more and more urgent as wireless networks are becoming ubiquitous. This talk identifies many research and industry opportunities to enable future green wireless communications.

Speaker's biography: Mérouane Debbah was born in Madrid, Spain. He entered the Ecole Normale Suprieure de Cachan (France) in 1996 where he received his M.Sc and Ph.D. degrees respectively in 1999 and 2002. From 1999 to 2002, he worked for Motorola Labs on Wireless Local Area Networks and prospective fourth generation systems. From 2002 until 2003, he was appointed Senior Researcher at the Vienna Research Center for Telecommunications (FTW) (Vienna, Austria) working on MIMO wireless channel modeling issues. From 2003 until 2007, he joined the Mobile Communications de-partment of the Institut Eurecom (Sophia Antipolis, France) as an Assistant Professor. He is presently a Professor at Supelec (Gif-sur-Yvette, France), holder of the Alcatel-Lucent Chair on Flexible Radio. His research interests are in information theory, signal process-ing and wireless communications. Mérouane Debbah is the recipient of the "Mario Boella" prize award in 2005, the 2007 General Symposium IEEE GLOBECOM best paper award, the Wi-Opt 2009 best paper award as well as the Valuetools 2007,Valuetools 2008 and CrownCom2009 best student paper awards. He is a WWRF fellow.

Keynote Speakers for REV Workshop

Wednesday, 20 October 2010

REV Workshop Keynote Speaker 1: **Fiber To The Home – The Ultimate Goal of Communication Era**

Speaker: **Mr. Takatoshi Arai,** *Fujikura Ltd., Japan*

Time: **15h20– 16h10**

Room: **Prima Ballroom B**

Chair: **Prof. Le Tien Thuong, Ho Chi Minh City University of Technology**

Abstract: Fiber To The Home (FTTH), the use of optical fiber to deliver communication signals from the central office equipment to the end user's premises, has been considered as the ultimate goal. Nowadays, the number of FTTH subscribers in the world has reached over 40 millions and Japan is leading the market. This presentation provides the newest technologies to reduce time and cost of FTTH construction work, including lessens learned from massive deployment in Japan.

Speaker's biography: Takatoshi Arai is currently Associate Executive Officer of Fujikura Ltd. After graduating the faculty of electronic engineering in the University of Tokyo, he joined Fujikura in 1976. He has engaged in numerous developing projects. In optical fibers, he designed and manufactured new type of single-mode fibers which forecast the age of long-haul Giga- bit transmission system. Then, he joined the team of the arc fusion splicing machine. The model name of "FSM-01" was the first commercial base fusion splicer which was employed by NTT and other major carriers in the world. After that, in the system group, he engaged in developing video transmission equipment. He has developed both analog and digital links. Using FM-FDM technology, he successfully opened the door of low-cost multi-channel video signal transmission system. With the combination of Er-doped optical fiber amplifier, that system was widely used as the CATV use. In 1988, he moved to the network engineering section to design optical networks for major customers in Japan. He served also as the Japanese delegation of IEC/SC86A and ITU-T/SG6. From 1999 to 2001, he worked for AFL Telecommunications in USA to develop American market. From 2007, as the General Manager of Global Telecommunication Strategy and Marketing Division, he is directing world-wide FTTH business. Fujikura has been awarded many FTTH projects such as Telecom Malaysia's HSBB project, TOT's Phuket project and PLDT's Manilla area FTTH service.

Thursday, 21 October 2010

REV Workshop Keynote Speaker 2: **Technical Trend and Role of Advanced Optical Communications**

Speaker: **Prof. Tetsuya Miki,** *The University of Electro-Communications, Japan*

Time: **08h30 – 09h20**

Room: **Prima Ballroom B**

Chair: **Prof. Dinh The Cuong, Le Quy Don Technical University**

Abstract: Optical communications played quite important roles to lead the digitalization of telecommunication networks, the world wide penetration of Internet, and so on, since early 1980's. During last 30 years, optical technologies magnified point-to-point transmission capability by about 100 thousand times, from 100Mbps to 10Tbps, and customers' data communication capability by about one million times, from 1,200bps to 1Gbps. These optical communications would be requested continuously to evolve their broadband capability, because the network traffic volume is expected to increase almost 1.4 times a year for the time being. On the other hand, optical communications are strongly anticipated to realize energy saving technologies, since enlarging network capacity requires additional energy for network facilities. Under these situations, as for long distance transmission systems, optical coherent transmission technologies similar to wireless radio transmission technologies such as QAM, OFDM, etc are extensively studied. As for energy saving network systems, many researchers are challenging to realize photonic networking based on optical burst switching and/or optical packet switching. For the area of access network, wireless and optical convergence technologies such as ROF (Radio over Fiber) must be essential for future pico-cell and/or femto-cell mobile environment.

Speaker's biography: Tetsuya Miki (M'70–SM'95–F'00–LF'09) was received M.E. and Ph.D. degrees from Tohoku University, Japan in 1967 and 1970, respectively. He joined the Electrical Communication Laboratories of NTT in 1970, where he was engaged in the research and development of high-speed digital transmission systems, optical communication systems, FTTH (Fiber to the Home) systems, SDH (Synchronous Digital Hierarchy) and ATM (Asynchronous Transfer Mode) transport networks, and network operation systems. He was the Executive Manager of the NTT Optical Network Systems Laboratories from 1992 to 1995. Since July, 1995, he was a Professor at UEC, working in photonic networks, Radio-over-Fiber broadband networking, and dependable networks. He was a Member of the Board of Directors for the university in 2008 and 2009, and he is currently an Executive Assistant to President from 2010. Dr. Miki is very active in organizing international technical conferences /symposiums/workshops, and was in charge of chairs and/or committee members for IEEE ICC/GLOBECOM, IEEE ISLS89, IEEE NOMS92, IEEE PON Workshop, IOOC, APCC, OECC, APSITT, and so on. He was a Vice President of IEEE ComSoc in 1998 and 1999, a Vice President of IEICE in 2003 and 2004, and he is currently a Board Member of IEICE.

Wednesday, 20 October 2010

Session 1A: **Communication Theory**

Time: **15h20 – 17h00**

Room: **Prima Ballroom A**

Chair: **Prof. Dinh The Cuong, Le Quy Don Technical University**

1. **Performances of Coded OFDM/OQAM Over PLC Impaired by Impulsive and Colored Noise**
   Gaëtan Ndo, France Télécom, Orange Labs, France
   Pierre Siohan, France Télécom, Orange Labs, France
   Marie-Hélène Hamon, France Télécom, Orange Labs, France

2. **Improved Decoder Schemes for QOSTBCs Based on Single-Symbol Decoding**
   Van Bien Pham, Nanjing University of Science and Technology, China
   Weixing Sheng, Nanjing University of Science and Technology, China
   Hao Wang, Nanjing University of Science and Technology, China

3. **Iterative Thresholding for Impulsive Noise Mitigation in OFDM-Based PLC receivers Implementing Blanking Nonlinearity**
   Khalifa Al-Mawali, RMIT University, Australia
   Zahir Hussain, RMIT University, Australia

4. **A Fast Design for LDPC Matrices**
   Liet Cao Van, Vietnam Television Center, Vietnam
   Thanh Nguyen Dang, Vietnam Television Center, Vietnam

5. **A Deterministic Lower Bound for the Radius in Sphere Decoding Search**
   Victor M. Garcia, Universidad Politecnica de Valencia, Spain
   Sandra Roger, Universidad Politecnica de Valencia, Spain
   Rafael A. Trujillo, Universidad Politecnica de Valencia, Spain
   Antonio M. Vidal, Universidad Politecnica de Valencia, Spain
   Alberto Gonzalez, Universidad Politecnica de Valencia, Spain

Wednesday, 20 October 2010

Session 2A: **Ad hoc and Sensor Networks I**

Time: **15h20 – 17h00**

Room: **Boardroom A**

Chair: **Prof. Magdy A. Bayoumi, University of Louisiana at Lafayette**

1. **Ad Hoc Network in a Disaster Area: a Composite Mobility Model and Its Evaluation** [Invited Paper]
   Stéphane Pomportes, Université Paris-Sud XI, France
   Joanna Tomasik, SUPELEC Systems Sciences (E3S), France
   Véronique Vèque, Université Paris-Sud XI, France

2. **Power and Performance Tradeoff of MAC Protocol for Wireless Sensor Network Employing Unmanned Aerial Vehicle**
   Tu Dac Ho,-Waseda University, Japan
   Jingyu Park, Waseda University, Japan
   Shigeru Shimamoto, Waseda University, Japan

3. **Energy Efficiency of Cooperative Strategies in Wireless Sensor Networks**
   Le Quang Vinh Tran, University of Rennes 1, France
   Olivier Berder, University of Rennes 1, France
   Olivier Sentieys, University of Rennes 1, France

4. **WiSeCoMaSys: a Tool for Data Collection and Management of Wireless Sensor Networks**
   Vo Que Son, University of Bremen, Germany
   Wenning Bernd-Ludwig, University of Bremen, Germany
   Görg Carmelita, University of Bremen, Germany
   Timm-Giel Andreas, Hamburg University of Technology, Germany

5. **An Expending Ring Search Algorithm for Mobile Adhoc Networks**
   Duy Ngoc Pham, Van Lang University, Vietnam
   Van Duc Nguyen, Hanoi University of Technology, Vietnam
   Van Tien Pham, Hanoi University of Technology, Vietnam
   Ngoc Tuan Nguyen, Hanoi University of Technology, Vietnam
   Xuan Bac Do, Hanoi University of Technology, Vietnam
   Claus Kuperschmidt, Leibniz University of Hannover
   Thomas Kaiser, Leibniz University of Hannover

Thursday, 21 October 2010

Session 1B: **Cognitive Radio**

Time: **10h20 – 12h00**

Room: **Prima Ballroom A**

Chair: **Prof. Tho Le-Ngoc, McGill University**

1. **More Practical Spectrum Sensing Technique in Cognitive Radio Networks**
   Pham Duy Phong, Hanoi University of Technology, Vietnam
   Trung Chinh Dang, Hanoi University of Technology, Vietnam
   Van Yem Vu, Hanoi University of Technology, Vietnam
   Van Khang Nguyen, Hanoi University of Technology, Vietnam

2. **A Novel Multi-Dimensional Spectrum Estimation Technique**
   Viet-Ha Pham, Université Laval, Canada
   Dominic Grenier, Université Laval, Canada
   Jean-Yves Chouinard, Université Laval, Canada

3. **Joint Power and Admission Control for Underlay Spectrum Sharing in Cognitive Radio Networks**
   Sooyeol Im, Korea Advanced Institute of Science and Technology, Korea
   Wonsop Kim, Korea Advanced Institute of Science and Technology, Korea
   Yunsuk Kang, Korea Advanced Institute of Science and Technology , Korea
   Hyuckjae Lee, Korea Advanced Institute of Science and Technology, Korea

4. **QoS Provisioning Multi-level Spectrum Allocation Algorithm**
   Jing Li, Southeast University, China
   Tingting Zhu, Southeast University, China
   Pingping Xu, Southeast University, China
   Thi Kim Tung To, Southeast University, China

5. **Ant Colony Optimization Approach to Interference Minimizing Code Assignment in Cognitive CDMA Networks**
   Mahsa Shafiee, Amirkabir University of Technology, Iran
   Hassan Aghaei Nia, Amirkabir University of Technology, Iran
   Ali Jafarnia Jahromi, Amirkabir University of Technology, Iran
   Negin Sokhandan, Amirkabir University of Technology, Iran

Thursday, 21 October 2010

Session 2B: **Signal Detection and Interference Mitigation Techniques**

Time: **10h20 – 12h00**

Room: **Prima Ballroom A**

Chair: **Prof. Sébastien Roy, Laval University**

1. **An Improved Lattice Reduction Aided Detection Based on Gram-Schmidt Procedure**
   Caio Masakazu Kinoshita, The University of Electro-Communications, Japan
   Yusuke Sasaki, The University of Electro-Communications, Japan
   Tadashi Fujino, The University of Electro-Communications, Japan

2. **An MMSE Detector Applying Reciprocal-Lattice Reduction in MIMO Systems**
   Hidekazu Negishi, The University of Electro-Communications, Japan
   Wei Hou, The University of Electro-Communications, Japan
   Tadashi Fujino, The University of Electro-Communications, Japan

3. **Combined Iterative Channel Estimation and Data Detection for Space-Time Block Codes**
   Ngoc Trung Tran, Le Quy Don Technical University, Vietnam
   Xuan Nam Tran, Le Quy Don Technical University, Vietnam
   The Cuong Dinh, Le Quy Don Technical University, Vietnam

4. **Ant Colony Based Multiuser Detection for Cooperative DS-CDMA Systems**
   Ali Jafarnia Jahromi, Amirkabir University of Technology, Iran
   Mohammad Abdizadeh, Amirkabir University of Technology, Iran

5. **Performance Analysis of Wavelet Subband Based Voice Activity Detection in Cocktail Party Environment**
   Van Tuan Pham, Danang University of Technology, Vietnam
   Michael Stark, Graz University of Technology, Austria
   Erhard Rank, Graz University of Technology, Austria

Thursday, 21 October 2010

Session 1C: **Ultra Wide Band**

Time: **13h30-15h10**

Room: **Prima Ballroom A**

Chair: **Prof. Wen-Xun Zhang, South East University**

1. **Ultra-Wide Band Low-profile Spiral Antennas Using an EBG Ground Plane**
   The Phuong Tran, Hanoi University of Sciences and Technology, Vietnam
   Van Yem Vu, Hanoi University of Sciences and Technology, Vietnam

2. **Experimental Evaluation of UWB Transmission Waveform for Short-Range Wireless Networks**
   Pitak Keawbunsong, King Mongkut's Institute of Technology Ladkrabang, Thailand
   Sathaporn Promwong, King Mongkut's Institute of Technology Ladkrabang, Thailand
   Suvepol Sittichivapak, King Mongkut's Institute of Technology Ladkrabang, Thailand

3. **Investigation of Doppler Effect in UWB-Based Rotor-Telemetry System**
   Amina Ayadi-Miessen, Leibniz Universität Hannover, Germany
   Claus Kupferschmidt, Leibniz Universität Hannover, Germany
   Thi Chung Le, Leibniz Universität Hannover, Germany
   Hans-Peter Kuchenbecker, Leibniz Universität Hannover, Germany
   Thomas Kaiser, Leibniz Universität Hannover, Germany

4. **Band-Notched Characteristic Using Ground Stubs for Compact UWB Antennas**
   Y.F. Weng, The University of Hong Kong, Hong Kong
   S.W. Cheung, The University of Hong Kong, Hong Kong
   T.I. Yuk, The University of Hong Kong, Hong Kong

5. **Compact Planar Antennas for Ultra-Wideband Applications**
   Phuong Hong Phan, Ho Chi Minh City University of Technology, Vietnam
   Duong Van Nguyen, Vietnam Telecoms National, Vietnam

Thursday, 21 October 2010

Session 2C: **Channel Modeling and Estimation**

Time: **13h30-15h10**

Room: **Boardroom A**

Chair: **Prof. Matthias Uwe Paetzold, University of Agder, Norway**

1. **Design of Measurement-Based Correlation Models for Shadow Fading** [Invited Paper]
   Matthias Pätzold, University of Agder, Norway
   Nurilla Avazov, University of Agder, Norway
   Van Duc Nguyen, Hanoi University of Technology, Vietnam

2. **On the Autocorrelation Function of Rice Processes for Unsymmetrical Doppler Power Spectral Densities**
   Akmal Fayziyev, University of Agder, Norway
   Matthias Pätzold, University of Agder, Norway
   Neji Youssef, SUP'COM Tunis, Tunisia

3. **Channel Auto-Correlation and Doppler Spectrum of MIMO Systems Using Circular Array**
   Phu Bui Huu, Ho Chi Minh City University of Science, Vietnam
   Khoa Dang Le, Ho Chi Minh City University of Science, Vietnam
   Vinh Nguyen Anh, Ho Chi Minh City University of Science, Vietnam

4. **Designing Orthogonal Pilot Scheme for Semi-Blind Channel Estimation in MIMO Systems**
   Dinh-Thuan Do, Vietnam National University, Vietnam
   Dinh-Thanh Vu, Ho Chi Minh City University of Technology, Vietnam

5. **ETP Model Approximation for SIMO-OFDM MRC System in Rayleigh Fading Environment**
   Quoc Anh Vu, The University Of Electro-Communications,, Japan
   Changarkame Vanmany, The University Of Electro-Communications, Japan
   Bajracharya Anmol, The University Of Electro-Communications, Japan
   Yoshio Karasawa, The University Of Electro-Communications, Japan

Thursday, 21 October 2010

Session 3C: **Signal Processing I**

Time: **13h30-15h10**

Room: **Prima Ballroom B**

Chair: **Prof. Maurice Bellanger, CNAM**

1. **A Tensorial Approach to Single Trial Recognition for Brain Computer Interface**
   Anh Huy Phan, Brain Science Institute, RIKEN, Japan
   Andrzej Cichocki, Brain Science Institute, RIKEN, Japan
   Thanh Vu Dinh, Ho Chi Minh city University of Technology, Vietnam

2. **Classification of Scenes Based on Multiway Feature Extraction**
   Anh Huy Phan, Brain Science Institute, RIKEN, Japan
   Andrzej Cichocki, Brain Science Institute, RIKEN, Japan
   Thanh Vu Dinh, Ho Chi Minh City University of Technology, Vietnam

3. **Accelerated Parallel Magnetic Resonance Imaging with Multi-Channel Chaotic Compressed Sensing**
   Tan Tran Duc, University of Engineering and Technology, VNUH, Vietnam
   Phong Dinh Van, University of Engineering and Technology, VNUH, Vietnam
   Truong Minh Chinh, Hue University, Vietnam
   Trung Nguyen Linh, University of Engineering and Technology, VNUH, Vietnam

4. **Super-Resolution Image Construction from High-Speed Camera Sequences**
   Hong-Thinh Nguyen, University of Engineering and Technology, VNUH, Vietnam
   Viet-Dung Nguyen, University of Engineering and Technology, VNUH, Vietnam
   Ha Vu Le, University of Engineering and Technology, VNUH, Vietnam

5. **Texture Image Retrieval Using Phase-Based Features in the Complex Wavelet Domain**
   Hoang Nguyen-Duc, Vietnam Television, Vietnam
   Thuong Le-Tien, Ho Chi Minh University of Technology, Vietnam
   Tuan Do-Hong, Ho Chi Minh University of Technology, Vietnam
   Cao Bui-Thu, Ho Chi Minh University of Technology, Vietnam

Thursday, 21 October 2010

Room 1D: **Wireless Communications I**

Time:	**15h20-17h00**
Room:	**Prima Ballroom A**
Chair:	**Prof. Mérouane Debbah, Supélec**

1. **Non-Cooperative Power Scheduling for Wireless MIMO Networks**
   Chao Zhou, Southeast University, China
   Yizhi Xu, Southeast University, China
   Thi Oanh Bui, Southeast University, China
   Pingping Xu, Southeast University, China

2. **A Study of SLM PAPR Reduction of OFDM Signals Without Side Information**
   Toshiharu Kojima, The University of Electro-Communications, Japan
   Yuki Shida, The University of Electro-Communications, Japan
   Tadashi Fujino, The University of Electro-Communications, Japan

3. **Performance Analysis of Threshold-based Relaying with Partial Relay Selection Over Rayleigh Fading Channels**
   Bao Vo Nguyen Quoc, Posts and Telecommunications Institute of Technology, Vietnam
   Cuong Quoc Le, Posts and Telecommunications Institute of Technology, Vietnam
   Hyung Yun Kong, University of Ulsan, Korea

4. **A 16QAM Super-Orthogonal Space-Frequency Code for Broadband Mobile Communication Systems with Two Transmit Antennas**
   Corneliu Eugen Sterian, Polytechnic University of Bucharest, Romania
   Yi Wu, University of Agder, Norway
   Matthias Pätzold, University of Agder, Norway

5. **A New Time and Frequency Synchronization Scheme for OFDM Systems in Time Varying Channel**
   Mohammad Abdizadeh, Sharif University of Technology, Iran
   Ali Jafarnia Jahromi, Amirkabir University of Technology, Iran

Thursday, 21 October 2010

Room 2D: **Ad hoc and Sensor Networks II**

Time: **15h20-17h00**

Room: **Boardroom A**

Chair: **Prof. Tetsuya Miki, The University of Electro-Communications**

1. **Performance of Decode-and-Forward Cooperative Relaying Over Rayleigh Fading Channels with Impulsive Noise**
   Khuong Ho Van, McGill University, Canada
   Tho Le-Ngoc, McGill University, Canada

2. **Predictive RSS with Fuzzy Logic Based Vertical Handoff Algorithm in Heterogeneous Wireless Networks**
   Sunisa Kunarak, King Mongkut's University of Technology Thonburi, Thailand
   Raungrong Suleesathira, King Mongkut's University of Technology Thonburi, Thailand

3. **Performance Analysis of Decode-and-Forward Relaying for Multi-hop Alamouti Transmission Over Rayleigh Fading Channels**
   Tam Thi Be Nguyen, Ho Chi Minh City University of Technology, Vietnam
   Thanh Tran-Thien, Ho Chi Minh City University of Technology, Vietnam
   Tuan Do-Hong, Ho Chi Minh City University of Technology, Vietnam
   Bao Vo Nguyen Quoc, Posts and Telecommunications Institute of Technology, Vietnam

4. **On the Power Efficiency of Cooperative Routing With Multihop Cooperative Transmission**
   Zahra Mobini, K.N.Toosi University of technology, Iran
   MohammadAli Mohammadi, K.N.Toosi University of technology, Iran
   Sadan Zokaei, K.N.Toosi University of technology, Iran

5. **Channel Assignment in Ad-Hoc Networks Using a Common Channel: Algorithms and Metrics**
   [Invited Paper]
   Husnain Mansoor Ali, University Paris-Sud 11, France
   Anthony Busson, University Paris-Sud 11, France
   Véronique Vèque, University Paris-Sud 11, France
   Thanh Minh Tran, University Paris-Sud 11, France

Thursday, 21 October 2010

Session 3D: **Systems & Circuits for Communications**

Time: **15h20-17h00**

Room: **Prima Ballroom B**

Chair: **Prof. Bumman Kim, Pohang University of Science and Technology**

1. **Modified Second Order Digital Phase Locked Loop with Large Lock-in Range**
   Santanu Chattopadhyay, JK College, India

2. **2.4-GHz 0.18-µm CMOS Highly Linear Power Amplifier**
   Yongbing Qian, Southeast University, China
   Wenyuan Li, Southeast University, China
   Zhigong Wang, Southeast University, China

3. **Compact Tri-band Bandpass Filter Based on Short Stubs and Crossed Open Stubs**
   Wenjie Feng, Nanjing University of Science & Technology, China
   Minh Tan Doan, Nanjing University of Science & Technology, China
   Wenquan Che, Nanjing University of Science & Technology, China

4. **A 3rd- and 5th-Order Intermodulation Products Generator for Predistortion of Base-Station HPAs**
   Xiaolei Sun, The University of Hong Kong, Hong Kong
   S.W Cheung, The University of Hong Kong, Hong Kong
   T.I Yuk, The University of Hong Kong, Hong Kong

5. **Design of Dual Band Band-pass Filter Using Defected Ground Structure**
   Changjiang You, Southeast University, China
   Xiaowei Zhu, Southeast University, China

Friday, 22 October 2010

Session 1E: **Wireless Communications II**

Time: **8h30 - 10h10**

Room: **Prima Ballroom A**

Chair: **Prof. Tadashi Fujino, The University of Electro-Communications**

1. **Blind CFO Estimation for OFDM-IDMA System in Rayleigh Fading Multipath Channel**
   Yasamine Zrelli, INSTITUT TELECOM, Telecom Bretagne, France
   Sébastien Houcke, INSTITUT TELECOM, Telecom Bretagne, France
   Charlotte Langlais, INSTITUT TELECOM, Telecom Bretagne, France
   Mahmoud Ammar, National Ingineering School of Tunis, Tunisia

2. **Wideband Beamforming for Reducing Co-Channel Interference in Broadband Wireless Communication Systems**
   Tuan Do-Hong, Ho Chi Minh City University of Technology, Vietnam
   Chau Dang-Nguyen, Ho Chi Minh City University of Technology, Vietnam
   Le Hoang Tuan Nguyen, Ho Chi Minh City University of Technology, Vietnam
   Ha Ta-Hong, Ho Chi Minh City University of Technology, Vietnam

3. **Analysis of Power Control in Satellite-based WCDMA Links**
   K. Sam Shanmugan, Univeristy of Kansas, United States

4. **Performance Analysis of Hybrid Scheme for Semi-Blind Channel Estimation in MIMO Systems**
   Dinh-Thuan Do, Vietnam National University, Vietnam
   Dinh-Thanh Vu, Ho Chi Minh City University of Technology, Vietnam

5. **A Wideband Time-Delay Line Inspired by CRLH TL Unit Cell**
   Jun Zhang, The University of Hong Kong, Hong Kong
   S.W. Cheung, The University of Hong Kong, Hong Kong
   T.I. Yuk, The University of Hong Kong, Hong Kong

Friday, 22 October 2010

Session 2E: **Communication Protocols and Networking**

Time: **8h30 - 10h10**

Room: **Boardroom A**

Chair: **Prof. Tran Xuan Nam, Le Quy Don Technical University**

1. **Improvement of Successful Lookup Ratio of Chord Distributed Hash Table (DHT) in Wireless Communication Environment**
   Hung Nguyen Chan, Hanoi University of Technology, Vietnam
   Vinh Vu Thanh, Thai Nguyen University, Vietnam
   Giang Ngo Hoang, Hanoi University of Technology, Vietnam

2. **Network Simulator: Importance of an Accurate Model of The Physical Layer**
   Quoc-Anh Bui, Institut TELECOM, TELECOM Bretagne, France
   Sébastien Houcke, Institut TELECOM, TELECOM Bretagne, France

3. **Implementation and Evaluation of Local Breakout Method for IP-based Femtocell Networks**
   Tsunehiko Chiba, KDDI R&D Laboratories, Inc., Japan
   Manabu Ito, KDDI R&D Laboratories, Inc., Japan
   Hidetoshi Yokota, KDDI R&D Laboratories, Inc., Japan
   Yoshikazu Miyanaga, Hokkaido University, Japan

4. **Road Connectivity-based Routing for Vehicular Ad Hoc Networks**
   Nadia Brahmi, IRSEEM-ESIGELEC, France
   Mounir Boussedjra, IRSEEM-ESIGELEC, France
   Joseph Mouzna, IRSEEM-ESIGELEC, France
   Mireille Bayart, Université des Sciences et Technologie de Lille, France

5. **An Enhanced Anti-Collision Protocol for RFID Networks**
   Nam Tuan Le, Kookmin University, Korea
   Yeong Min Jang, Kookmin University, Korea
   Sun Woong Choi, Kookmin University, Korea

Friday, 22 October 2010

Session 3E: **Signal Processing II & Optical Communications**

Time: **8h30 - 10h10**

Room: **Prima Ballroom B**

Chair: **Prof. Le Tien Thuong, Ho Chi Minh City University of Technology**

1. **Error Reduction in Non-electric Measurement by Interpolation Combined with Loop Transformation Method**
   Thang Pham Ngoc, Hung Yen University of Technology and Education, Vietnam
   Thanh Bui Trung, International University - Vietnam National University, Vietnam

2. **Optimal Spatial-temporal Weight Prediction for Inter-Frame Coding of H.264/AVC Video Sequences**
   Dung Vo, University of California at San Diego, United States
   Chan-Won Seo, Sejong University, Korea
   Daqian Jin, IP Video Solutions, Motorola, United States
   Truong Q. Nguyen, University of California at San Diego, United States

3. **A Code Tracking Bias Analysis of the Single and Double EML Schemes for GNSS Civil Signals**
   Seungsoo Yoo, Konkuk University, Korea
   Junghyuck Lee, Konkuk University, Korea
   Sanghyo Jeong, Konkuk University, Korea
   Sun Yong Kim, Konkuk University, Korea

4. **Direct Modulation of an Opto-Electronic Oscillator: Towards Radio Over Fiber**
   Lam Duy Nguyen, SATIE / d'Alembert Institute / ENS Cachan, Vietnam
   Bernard Journet, SATIE / d'Alembert Institute / ENS Cachan, Vietnam
   Doan Mien Vu, Vietnam Academy of Science and Technology, Vietnam
   Van Luc Vu, Vietnam Academy of Science and Technology, Vietnam

5. **A Photonic Band Gap Power-Balanced Asymmetrical T-Junction**
   Thu Ngo-Thi, Hanoi University of Technology, Vietnam
   Chien Dao-Ngoc, Hanoi University of Technology, Vietnam

Friday, 22 October 2010

Session 1F: **VLSI & Embedded Systems**

Time: **10h20 - 12h00**

Room: **Prima Ballroom A**

Chair: **Dr. Dinh Duc Anh Vu, Ho Chi Minh City University of Technology**

1. **A Combination of Hardware and Software to Detect Memory Corruption in Embedded Systems**
   Nam Ho, National University of Ho Chi Minh City, Vietnam
   Anh-Vu Dinh-Duc, National University of Ho Chi Minh City, Vietnam

2. **Genetic Programming Approach for SoC/IP Floorplanning Applications**
   Phuong Hong Phan, Ho Chi Minh City University of Technology, Vietnam
   Thanh Duc Tong, Arrive Technology Vietnam, Vietnam

3. **Optimal Routing Algorithms for Hyper-De Bruijn Networks**
   Ngoc Nguyen Chi, Ho Chi Minh City University of Technology, Vietnam
   Thanh Vu Dinh, Ho Chi Minh City University of Technology, Vietnam

4. **CFSB: A Load Balanced Switch Architecture with O(1) Complexity Throughout the Whole Switching Process**
   Zhijun Shen, Southwest Jiaotong University, China
   Huashen Zeng, Southwest Jiaotong University, China
   Zhijiang Gao, Southwest Jiaotong University, China

5. **FPGA-Based Architecture for Cognitive Radio Handheld Devices**
   Duong Nguyen The Dai, HCMC University of Technology, Vietnam
   Thuong Le Tien, HCMC University of Technology, Vietnam
   Hoang Ngo Duc, HCMC University of Technology, Vietnam
   Ngoc Nguyen Minh Khanh, HCMC University of Technology, Vietnam
   Thanh Le Phu, HCMC University of Technology, Vietnam

Friday, 22 October 2010

Session 2F: **Cooperative Communications**

Time: **10h20 - 12h00**

Room: **Boardroom A**

Chair: **Prof. Huynh Huu Tue, Bac Ha International University**

1. **Jointly Optimal Precoder and Power Allocation for an Amplify-and-Forward Half-Duplex Relay System** [Invited paper]
   Leonardo Jiménez Rodríguez, McGill University, Canada
   Nghi H. Tran, McGill University, Canada
   Tho Le-Ngoc, McGill University, Canada

2. **General Order Antenna Selection in Dual-Hop Amplify Forward System with Multi-Antenna Relay**
   Arun K. Gurung, RMIT University, Australia
   Fawaz S. Al-Qahtani, King Abdulaziz City for Science and Technology (KACST), Saudi Arabia
   Zahir M. Hussain, RMIT University, Australia
   Hussein Alnuweiri, Texas A&M University at Qatar, Qatar

3. **Adaptive Modulation for Distributed Switch-and-Stay Combining with Single Relay**
   Thien Thanh Tran, Ho Chi Minh City University of Technology, Vietnam
   Tuan Do-Hong, Ho Chi Minh City University of Technology, Vietnam
   Quoc Bao Vo Nguyen, Posts and Telecommunications Institute of Technology, Vietnam

4. **Performance Analysis of Amplify-Forward Relay in Mixed Nakagami-*m* and Rician Fading Channels**
   Arun K. Gurung, RMIT University, Australia
   Fawaz S. Al-Qahtani, King Abdulaziz City for Science and Technology (KACST), Saudi Arabia
   Zahir M. Hussain, RMIT University, Australia
   Hussein Alnuweiri, Texas A&M University at Qatar, Qatar

5. **Cooperative MIMO and Relay Association Strategy**
   Tuan-Duc Nguyen, International University of HCMC, Vietnam
   Linh Mai, International University of HCMC, Vietnam
   Olivier Berder, Rennes 1 University, France
   Olivier Sentieys, Rennes 1 University, France

Friday, 22 October 2010

Session 3F: **Antennas and Propagation**

Time: **10h20 – 12h00**

Room: **Prima Ballroom B**

Chair: **Prof. Phan Anh, Bac Ha International University**

1. **Design Dual Band Microstrip Antenna for Next Generation Mobile Communication**
   Tran Minh Tuan, National Institute of Information and Communications Strategy, Vietnam

2. **Flexible PSO-based Optimization of Millimeter-Wave Triple-Band Antennas by the Use of Fractal Configuration**
   Hieu Nguyen-Duc, Hanoi University of Technology, Vietnam
   Chien Dao-Ngoc, Hanoi University of Technology, Vietnam

3. **Novel Compact Antennas for MIMO Wireless Communication Systems**
   Dinh Thanh Le, The University of Electro-Communications, Japan
   Masahiro Shinozawa, The University of Electro-Communications, Japan
   Yoshio Karasawa, The University of Electro-Communications, Japan

4. **Antennas and Propagation for Body Area Networks**
   Da Ma, Southeast University, China
   Wen-Xun Zhang, Southeast University, China

5. **An Empirical Channel Model for Human Body Communication**
   Thanh Pham Viet, Chosun University, Korea
   Youn Tae Kim, Chosun University, Korea
   Thuy Le Thi Minh, Hanoi University of Agriculture, Vietnam
   Tuy Ho Anh, Hanoi University of Technology, Vietnam