



The 12th Emerging Information & Technology Conference

"Research, Innovation, and Commercialization"

The University of Toronto
Toronto, Ontario, Canada

Thursday-Friday, August 16-17, 2012

Program

Day 1 (Thursday, August 16, 2012)

8/16 (Thu) 8:00 am - 6:00 pm: Registration

Room:

8/16 (Thu) 8:30 am - 9:40 am: Opening Speech

Chair: **Dr. Peter Liu**, Department of Medicine, the University of Toronto

Dr. Ching-Fuh Lin, Department of Electrical Engineering, National Taiwan University

Room: BA 1200

Ambassador Chih-Kung Liu

Representative

Taipei Economic and Cultural Office in Canada

(駐加拿大台北經濟文化代表處代表劉志攻博士)

Opening Keynote Speech

"Technological Convergence and the Transformation of Medicine and Public Health"

Dr. David Naylor

President

The University of Toronto

Parallel Sessions:

8/16 (Thu) 9:40 am - 11:10 am: Technical Session D1-W1-T1: New Green Energy/Environment/Sustainability, Intelligent/Electric Vehicle

Chair: **Dr. Ching-Fuh Lin**, Graduate Institute of Photonics and Optoelectronics, National Taiwan University (台灣大學光電工程學研究所所長暨電機工程學系林清富教授)

Room: BA 2179

"Development of an Integrated Multiscale Modelling Framework for Wind Energy Application"

Dr. Fue-Sang Lien

Professor, Department of Mechanical Engineering
University of Waterloo
(滑鐵盧大學機械工程系連復桑教授)

“Artificial Photosynthesis on Metal-Nitride Nanowire Arrays”

Dr. Zetian Mi

Assistant Professor, Department of Electrical and Computer Engineering
McGill University

“Light Harvesting Schemes for High-performance Polymer Solar Cells”

Dr. Fang-Chung Chen

Associate Professor, Department of Photonics and Display Institute
National Chiao Tung University
(交通大學光電工程系陳方中教授)

8/16 (Thu) 9:40 am - 11:10 am: Technical Session D1-W2-T1: Medicine, Public Health, Biomedical Science and Engineering

Chair: **Dr. Peter Liu**, Department of Medicine, the University of Toronto
Room: BA 3008

“Overcoming the Logistical Challenges of Mesenchymal Stem Cell Therapy for Heart Disease”

Dr. Te-Chung Lee

Associate Professor, Department of Biochemistry and Biomedical Engineering
The State University of New York at Buffalo

“Automating the Radiation Therapy Process”

Dr. Thomas Purdie

Medical Physicist, Radiation Medicine Program, Princess Margaret Hospital
Assistant Professor, Department of Radiation Oncology, The University of Toronto

“Genetics of Alzheimer's Disease”

Dr. Li-San Wang

Assistant Professor, Department of Pathology and Laboratory Medicine
School of Medicine
University of Pennsylvania
(賓州大學醫學院王立三教授)

8/16 (Thu) 9:40 am - 11:10 am: Technical Session D1-W3-T1: New Materials Science and Engineering, Nanotechnology

Chair: **Dr. Huey-Liang Hwang**, Institute of Electronic Engineering, National Tsing Hua University (清華大學電機工程學系暨電子工程研究所黃惠良教授)
Room: BA 3012

“Materials for the Thermoelectric Energy Conversion, Enhanced via Nanostructuring”

Dr. Holger Kleinke

Professor and Canada Research Chair
Waterloo Institute for Nanotechnology
Department of Chemistry
University of Waterloo

“Micro/Nanomechanical Resonators: Materials, Design, and Applications”

Dr. Srikar Vengallatore

Associate Professor and Canada Research Chair
Department of Mechanical Engineering
McGill Institute for Advanced Materials
McGill University

“Formation of Single-Crystal Si Thin Foil using Nano-structure Etching”

Dr. Ching-Fuh Lin

Chair, Graduate Institute of Photonics and Optoelectronics and
Professor, Department of Electrical Engineering
National Taiwan University

(台灣大學光電工程學研究所所長暨電機工程學系林清富教授)

8/16 (Thu) 9:40 am - 11:10 am: Technical Session D1-W4-T1: Broadband Technologies and Multimedia Services, Cloud Computing, Cyber Security, and SoC

Chair: **Dr. Li-Chun Wang**, Department of Electrical Engineering, National Chiao Tung University (交通大學電機工程學系主任暨特聘教授王蒞君教授)

Room: BA 3116

“Broadband Wireless Access over Fibre-connected Massively Distributed Antennas”

Dr. Victor C.M. Leung

Professor and TELUS Mobility Research Chair
Department of Electrical and Computer Engineering
The University of British Columbia

(英屬哥倫比亞大學電機暨電腦工程學系梁中明教授)

“Localization of Wireless Terminals in Indoor Environment”

Dr. Shahrokh Valaee

Director, Wireless and Internet Research Laboratory
Professor, Department of Electrical and Computer Engineering
The University of Toronto

“Recent Developments in 3D Vision, Image Segmentation and Object/Action Recognition”

Dr. Jonathan Wu

Professor and Canada Research Chair
Department of Electrical and Computer Engineering
University of Windsor

8/16 (Thu) 11:10 am - 11:30 am: Break

Parallel Sessions:

8/16 (Thu) 11:30 am - 1:00 pm: Technical Session D1-W1-T2: New Green Energy/Environment/Sustainability, Intelligent/Electric Vehicle

Chair: **Dr. Fue-Sang Lien**, Department of Mechanical Engineering, University of Waterloo (滑鐵盧大學機械工程系連復桑教授)

Room: BA 2179

“Challenges in Numerical Simulation of Unconventional Oil and Gas Reservoirs”

Dr. Zhangxin (John) Chen

Professor, NSERC/AERI/Foundation CMG Chair and iCORE Chair

Director, Schlumberger iCenter for Simulation & Visualization
Department of Chemical and Petroleum Engineering
University of Calgary
(卡尔加里大学化学与石油工程学系陈掌星教授)

“Hysteresis Control of Voltage Source Converters for Synchronous Machine Emulation”

Dr. Zeb Tate

Assistant Professor, Department of Electrical and Computer Engineering
The University of Toronto

“My Career with Photovoltaics”

Dr. Huey-Liang Hwang

Professor, Department of Electrical Engineering & Institute of Electronic Engineering
National Tsing Hua University

(清華大學電機工程學系暨電子工程研究所黃惠良教授)

8/16 (Thu) 11:30 am – 1:00 pm: Technical Session D1-W2-T2: Medicine, Public Health, Biomedical Science and Engineering

Chair: **Professor Hsueh-Fen Juan**, Institute of Molecular and Cellular Biology, National Taiwan University (台灣大學分子細胞生物學研究所阮雪芬教授)

Room: BA 3008

“Pyrophosphatase: a Membrane Embedded Proton-Pumping Protein”

Dr. Yuh-Ju Sun

Professor, the Institute of Bioinformatics and Structural Biology &
Department of Life Sciences
National Tsing Hua University

(清華大學生物資訊與結構生物研究所暨生命科學系孫玉珠教授)

“Principles of Protein Folding from Coarse-Grained Models”

Dr. Hue Sun Chan

Professor, Departments of Biochemistry, Molecular Genetics, and Physics
The University of Toronto

(多倫多大學生物化學系、分子遺傳學系、暨物理系陳曉新教授)

“Bioinformatics Analysis of Mass Spectrometry Data for Proteomics”

Dr. Bin Ma

Professor and University Research Chair
School of Computer Science
University of Waterloo

(滑铁卢大学计算机科学系首席科研马斌教授)

“Evaluating Sites of Post-Translational Modification in p53 using Convergent Association Testing”

Dr. David K.Y. Chiu

Professor, Department of Computing and Information Science
The University of Guelph

(圭尔夫大学计算机与信息科学系趙國耀教授)

8/16 (Thu) 11:30 am – 1:00 pm: Technical Session D1-W3-T2: New Materials Science and Engineering, Nanotechnology

Chair: **Dr. Da-Hsuan Feng**, Senior Vice President, National Tsing Hua University
(清華大學資深副校長馮達旋教授)

Room: BA 3012

“Paper-Based Micro Sensors”

Dr. Xinyu Liu

Assistant Professor, Department of Mechanical Engineering
McGill University

(麦吉尔大学机械工程学系刘新宇教授)

“Functional Biodegradable Nanomaterials for Drug Delivery”

Dr. Chong Cheng

Assistant Professor, Department of Chemical and Biological Engineering
(纽约州立大学水牛城分校化学工程与生物工程学系程翀教授)

Mr. Chih-Kuang Chen

Ph.D. Candidate, Department of Chemical and Biological Engineering
The State University of New York at Buffalo

(纽约州立大学水牛城分校化学工程和生物工程学系陈致光)

“Engineering, Kinetics and Fate of Nuclear-Targeting Nanoparticles”

Dr. Warren Chan

Canada Research Chair of BioNanotechnology
Associate Professor, Institute of Biomaterials and Biomedical Engineering

Mr. Peter Tang

Ph.D. Candidate, Institute of Biomaterials & Biomedical Engineering
Integrated Nanotechnology & Biomedical Sciences Laboratory
The University of Toronto

(多倫多大學生物材料和生物醫學工程研究所湯士毅)

8/16 (Thu) 11:30 am – 1:00 pm: Technical Session D1-W4-T2: Broadband Technologies and Multimedia Services, Cloud Computing, Cyber Security, and SoC

Chair: **Dr. Chi-Hsiang Yeh**, Department of Electrical and Computer Engineering, Queen's University (女王大學電機暨電腦工程學系葉啟祥教授)

Room: BA 3116

“Web Caching Prefetching by ART2 Neural Network”

Dr. Wenying Feng

Professor, Department of Computing & Information Systems and
Department of Mathematics
Trent University

“Cloud Computing and Resource Allocation in Cloud”

Dr. Ling Guan

Canada Research Chair
Director, Ryerson Multimedia Research Lab
Professor, Department of Electrical and Computer Engineering
Ryerson University

“Autonomous Resilient Routing for Selective Forwarding Attack in Wireless Sensor Networks”

Dr. Shanchieh Jay Yang

Associate Professor & Department Head
Department of Computer Engineering
Rochester Institute of Technology
(羅徹斯特理工學院電腦工程學系主任楊善傑教授)

8/16 (Thu) 1:00 pm - 2:30 pm: Lunch

8/16 (Thu) 2:30 pm - 3:30 pm: The Keynote and Panel Session

Moderator: **Dr. Da-Hsuan Feng**, Senior Vice President, National Tsing Hua University
(清華大學資深副校長馮達旋教授)
Room: BA 1200

Dr. Janice Stein

Director, Munk School of Global Affairs
University of Toronto

Parallel Sessions:

8/16 (Thu) 3:30 pm – 5:00 pm: Technical Session D1-W1-T3: New Green Energy/Environment/Sustainability, Intelligent/Electric Vehicle

Chair: **Dr. Ching-Fuh Lin**, Graduate Institute of Photonics and Optoelectronics, National Taiwan University (台灣大學光電工程學研究所所長暨電機工程學系林清富教授)
Room: BA 2179

“Fabrication of Printable Organic Photovoltaics, One Step Closer to Commercialization”

Dr. Ta-Ya Chu

Research Officer, National Research Council Canada
(加拿大國家研究理事會朱達雅博士)

Dr. Haibo Zeng

Assistant Professor, Department of Electrical and Computer Engineering
McGill University

“Fuel Ethanol Production: Technology and Process Development”

Dr. Yen-Han Lin

Professor, Department of Chemical and Biological Engineering
University of Saskatchewan

8/16 (Thu) 3:30 pm – 5:00 pm: Technical Session D1-W2-T3: Medicine, Public Health, Biomedical Science and Engineering

Chair: **Dr. Peter Liu**, Department of Medicine, the University of Toronto
Room: BA 3008

“Engineering Liver on Lab Chip”

Dr. Cheng-Hsien Liu

Professor, Department of Power Mechanical Engineering
National Tsing Hua University
(清華大學動力機械工程學系劉承賢教授)

“Targeting Tumor Microenvironment for Cancer Detection and Therapeutic Efficacy Evaluation”

Dr. Zheng-Rong Lu

Professor, Department of Biomedical Engineering
Case Western Reserve University
(凯斯西储大学生物医学工程学系吕正荣教授)

“Revealing Biological Contexts in Signed Molecular Network”

Dr. Hsuan-Cheng Huang
Professor, Institute of BioMedical Informatics
National Yang Ming University
(陽明大學生物醫學資訊研究所黃宣誠教授)

“Bone Marrow Tissue Engineering”

Dr. J.H. David Wu
Professor, Departments of Chemical Engineering and of Biomedical Engineering
University of Rochester
(羅徹斯特大學化學工程學系暨生物醫學工程學系吳政惠教授)

8/16 (Thu) 3:30 pm – 5:00 pm: Technical Session D1-W3-T3: New Materials Science and Engineering, Nanotechnologies

Chair: **Dr. Ta-Ya Chu**, National Research Council Canada, (加拿大國家研究理事會朱達雅博士)
Room: BA 3012

“Electrically Conductive Bacterial Nanowires: Fundamentals and Applications”

Dr. Jun Yang
Associate Professor, Department of Mechanical and Materials Engineering
The University of Western Ontario
(西安大略大學機械與材料工程學系楊軍教授)

“Nanomanufacturing: Manipulation and Characterization of Nanomaterials inside SEM”

Dr. Yu Sun
Canada Research Chair in Micro and Nano Engineering Systems
Associate Professor, Department of Mechanical and Industrial Engineering
(多倫多大學機械與工業工程學系孫鈺教授)

Mr. Brandon Chen
Ph.D. Student
The University of Toronto

Dr. Huey-Liang Hwang

Professor, Department of Electrical Engineering & Institute of Electronic Engineering
National Tsing Hua University
(清華大學電機工程學系暨電子工程研究所黃惠良教授)

8/16 (Thu) 3:30 pm – 5:00 pm: Technical Session D1-W4-T3: Broadband Technologies and Multimedia Services, Cloud Computing, Cyber Security, and SoC

Chair: **Dr. Li-Chun Wang**, Department of Electrical Engineering, National Chiao Tung University (交通大學電機工程學系主任暨特聘教授王蒞君教授)
Room: BA 3116

“Digital Image Forensics: There is More to a Picture Than Meets the Eye”

Dr. Siwei Lyu

Assistant Professor, Department of Computer Science
The State University of New York at Albany
(纽约州立大学奥尔巴尼分校计算机科学系吕思伟教授)

“Interactive Video Object Cutout from Live Sequences”

Dr. Minglun Gong

Associate Professor, Department of Computer Science
Memorial University of Newfoundland
(纽芬兰纪念大学计算机科学系龚明伦教授)

“Trends and Challenges in Supercomputing”

Dr. Charng-Da Lu

Computational Scientist, Center for Computational Research
The State University of New York at Buffalo
(纽约州立大学水牛城分校电脑研究中心吕长达博士)

Day 2 (Friday, August 17, 2012)

8/17 (Fri) 9:00 am - 5:00 pm: Registration

Room:

Parallel Sessions:

8/17 (Fri) 9:40 am - 11:10 am: Technical Session D2-W1-T1: New Green Energy/Environment/Sustainability, Intelligent/Electric Vehicle Technologies

Chair: **Dr. Yen-Han Lin**, Department of Chemical and Biological Engineering, University of Saskatchewan

Room: BA 2179

“Refining the Sunshine: the Sustainability of Microalgal Biofuels”

Dr. Christopher Q. Lan

Associate Professor, Department of Chemical and Biological Engineering
University of Ottawa

(渥太华大学化学和生物工程系蘭青道教授)

“Zero-Energy Building and Building Energy Efficiency”

Dr. Xinlei Wang

Associate Professor of Bioenvironmental Engineering
Department of Agricultural and Biological Engineering
University of Illinois at Urbana-Champaign

“Combining Solid Oxide Fuel Cells and Compressed Air Energy Storage for Load-Following Power Production with Near-Zero CO₂ Emissions”

Dr. Thomas A. Adams II

Assistant Professor, Department of Chemical Engineering
McMaster University

8/17 (Fri) 9:40 am - 11:10 am: Technical Session D2-W2-T1: Medicine, Public Health, Biomedical Science and Engineering

Chair: **Dr. Hsueh-Fen Juan**, Institute of Molecular and Cellular Biology, National Taiwan University (台灣大學分子細胞生物學研究所阮雪芬教授)

Room: BA 3008

“Developing Novel Molecular Probes for Bacterial Detection”

Dr. Yingfu Li

Canada Research Chair in Nucleic Acids Research
Professor of Biochemistry and Biomedical Sciences &
Chemistry and Chemical Biology
McMaster University

(麦克马斯特大学生物化学生物医学李应福教授)

“A Human Ubiquitin Conjugating Enzyme (E2) - HECT E3 Ligase Structure-function Screen”

Dr. Yi Sheng

Assistant Professor, Department of Biology
York University

(约克大学生物学系盛祎教授)

“Next Generation MRI Contrast Agent”

Dr. Xiao-an Zhang

Assistant Professor, Department of Chemistry and
Department of Physical and Environmental Sciences
The University of Toronto

(多伦多大学化学系、物理和环境科学系张晓安教授)

“Synthetic Biology Approach for Building Artificial Cell”

Dr. Allen Po-Chih Liu

Assistant Professor, Department of Mechanical Engineering
University of Michigan, Ann Arbor

(密歇根大学安娜堡分校机械工程系刘柏池教授)

**8/17 (Fri) 9:40 am - 11:10 am: Technical Session D2-W3-T1: New
Materials Science and Engineering, Nanotechnologies**

Chair: **Dr. Ta-Ya Chu**, National Research Council Canada, (加拿大国家研究理事会朱达雅博士)

Room: BA 3012

“3D Nanowire Architectures for Highly-Efficient Photoelectrochemical Anodes”

Dr. Xudong Wang

Assistant Professor, Department of Materials Science and Engineering
University of Wisconsin-Madison

(威斯康星大学麦迪逊分校材料科学与工程系王旭东教授)

“Nanofabrication by Nanoimprint and Electron Beam Lithography and Applications”

Dr. Bo Cui

Director, Waterloo Nanofabrication Group
Assistant Professor, Department of Electrical and Computer Engineering
University of Waterloo

(滑铁卢大学电子与计算机工程系崔波教授)

“Chalcogenide Glass Resonant Cavity Devices for On-chip Infrared Sensing”

Dr. Juejun Hu

Assistant Professor, Department of Materials Science and Engineering
University of Delaware

(特拉华州立大学材料科学与工程系胡崛隽教授)

**8/17 (Fri) 9:40 am - 11:10 am: Technical Session D2-W4-T1: Broadband
Technologies and Multimedia Services, Cloud Computing, Cyber Security,
and SoC**

Chair: **Dr. Chi-Hsiang Yeh**, Department of Electrical and Computer Engineering, Queen's
University (女王大学电机暨电脑工程学系叶啟祥教授)

Room: BA 3116

“Combining Quantitative Location Information and Qualitative Connectivity Information for
Clustering in Wireless Sensor Networks”

Dr. Chung-Horng Lung

Associate Professor, Department of Systems and Computer Engineering
Carleton University

(卡爾頓大學電腦工程學系龍中弘教授)

“Survivable Virtual Infrastructure Management in Virtualized Data Centers”

Dr. Jian Tang

Assistant Professor, Department of Electrical Engineering and Computer Science
Syracuse University

(雪城大學電子工程和計算機科學系唐劍教授)

“Securing Entropy Sources in Cloud Computers”

Dr. Yu Chen

Assistant Professor, Department of Electrical and Computer Engineering
The State University of New York at Binghamton

“Video over Infrastructure-Based Cognitive Radio Networks”

Dr. Chih-Wei Huang

Assistant Professor, Department of Communication Engineering
National Central University

(中央大學通訊工程學系黃志煒教授)

8/17 (Fri) 11:10 am - 11:30 am: Break

Parallel Sessions:

8/17 (Fri) 11:30 am – 1:00 pm: Technical Session D2-W1-T2: New Green Energy/Environment/Sustainability, Intelligent/Electric Vehicle

Chair: **Dr. Ching-Fuh Lin**, Graduate Institute of Photonics and Optoelectronics, National Taiwan University (台灣大學光電工程學研究所所長暨電機工程學系林清富教授)

Room: BA 2179

“Catalytic Reforming of Ethanol into Methane Using Near- and Super-critical Water and Its Potential Application as a Fuel for Internal Combustion Engines”

Dr. Chunbao (Charles) Xu

Associate Professor, Department of Chemical and Biochemical Engineering
The University of Western Ontario

(西安大略大學化學工程與生物化工系徐春保教授)

“Hydrothermal Conversion of Lignocellulosic Biomass to Alkanes and 5-HMF”

Dr. Zhongchao Tan

Associate Professor, Department of Mechanical and Mechatronics Engineering
University of Waterloo

(滑鐵盧大學機械與機械電子工程系譚中超教授)

“n-Butanol Production through Native and Engineered Microorganisms”

Dr. Si-Yu Li

Assistant Professor, Department of Chemical Engineering
National Chung Hsing University

(中興大學化學工程學系李思禹教授)

8/17 (Fri) 11:30 am – 1:00 pm: Technical Session D2-W2-T2: Medicine, Public Health, Biomedical Science and Engineering

Chair: **Dr. Peter Liu**, Department of Medicine, the University of Toronto

Room: BA 3008

“Targeting ErbB Receptors for Cancer Therapy with New Ideas”

Dr. Zhixiang Wang

Professor, Department of Medical Genetics
University of Alberta

(阿尔伯特大学医学遗传学系王智翔教授)

“Stem Cell Biology and Regenerative Medicine in Skeletal Development and Disease”

Dr. Wei Hsu

Professor of Biomedical Genetics and Oncology
University of Rochester Medical Center

(羅徹斯特大學醫學中心生物醫學遺傳學暨腫瘤學許瑋教授)

“Postpartum Depression and Misregulation of Stress Signaling in Luman Recruitment Factor (LRF, or CREBRF)-deficient Mice”

Dr. Ray Lu

Associate Professor, Department of Molecular and Cellular Biology
University of Guelph

(圭尔夫大学分子与细胞生物学系陸銳教授)

8/17 (Fri) 11:30 am – 1:00 pm: Technical Session D2-W3-T2: New Materials Science and Engineering, Nanotechnologies

Chair: **Dr. Huey-Liang Hwang**, Institute of Electronic Engineering, National Tsing Hua University (清華大學電機工程學系暨電子工程研究所黃惠良教授)

Room: BA 3012

“A Framework of Nano Crystal Growth”

Dr. Hanchen Huang

Connecticut Clean Energy Fund Professor in Sustainable Energy
Department of Mechanical Engineering
University of Connecticut

(康涅狄格大学机械工程系黄汉臣教授)

“Magnified Hard X-ray Imaging at Nano Scales”

Dr. Gu Xu

Professor, Department of Materials Science and Engineering
McMaster University

(麥克馬斯特大學材料科学与工程学系许谷教授)

“Selectively Transparent and Conducting Photonic Crystal for Enhanced Photovoltaics and Allied Devices”

Dr. Nazir P. Kherani

Associate Professor, Departments of Electrical & Computer Engineering and
Materials Science & Engineering
The University of Toronto

8/17 (Fri) 11:30 am – 1:00 pm: Technical Session D2-W4-T2: Broadband Technologies and Multimedia Services, Cloud Computing, Cyber Security, and SoC

Chair: **Dr. Li-Chun Wang**, Department of Electrical Engineering, National Chiao Tung University (交通大學電機工程學系主任暨特聘教授王蒞君教授)
Room: BA 3116

Dr. Uyen Trang Nguyen

Associate Professor, Department of Computer Science and Engineering
York University

“Gamma Codes: A Low-Overhead Low-Complexity Network Coding Solution”

Dr. Masoud Ardakani

Associate Professor, Department of Electrical & Computer Engineering
University of Alberta

Dr. Chi-Hsiang Yeh

Associate Professor, Department of Electrical and Computer Engineering
Queen's University

(女王大學電機暨電腦工程學系葉啟祥教授)

8/17 (Fri) 1:00 pm - 2:30 pm: Lunch

Parallel Sessions:

8/17 (Fri) 2:30 pm – 4:00 pm: Technical Session D2-W1-T3: New Green Energy/Environment/Sustainability, Intelligent/Electric Vehicle

Chair: **Dr. Ta-Hui Lin**, Department of Mechanical Engineering, National Cheng-Kung University (成功大學機械工程系特聘教授林大惠教授)

Room: BA 2179

“Exploring the Opportunity of Using Electric Vehicles as an Energy Distribution Network”

Dr. Ting Zhu

Assistant Professor, Department of Computer Science
The University of New York at Binghamton

Dr. Jie Yu

Assistant Professor, Department of Chemical Engineering
MCMaster University

(麦克马斯特大学化学工程学系余杰教授)

Dr. Ching-Fuh Lin

Chair, Graduate Institute of Photonics and Optoelectronics and
Professor, Department of Electrical Engineering
National Taiwan University

(台灣大學光電工程學研究所所長暨電機工程學系林清富教授)

8/17 (Fri) 2:30 pm – 4:00 pm: Technical Session D2-W2-T3: Medicine, Public Health, Biomedical Science and Engineering

Chair: **Dr. Peter Liu**, Department of Medicine, the University of Toronto
Room: BA 3008

“Emerging Role of microRNAs in Preeclampsia”

Dr. Chun Peng

Professor, Department of Biology

York University
(约克大学生物学系彭纯教授)

“Small Molecules as Inducers to Direct Stem Cell Differentiation”

Dr. Qiao Li

Assistant Professor, Department of Pathology and Laboratory Medicine
School of Medicine
University of Ottawa
(渥太华大学医学院李樵教授)

“Blocking Ectopic ATP Synthase Suppresses Lung Adenocarcinoma Cell Growth”

Dr. Hsueh-Fen Juan

Professor, Department of Life Science, Institute of Molecular and Cellular Biology, Graduate
Institute of Biomedical Electronics and Bioinformatics, National Taiwan University
(台灣大學分子細胞生物學研究所阮雪芬教授)

**8/17 (Fri) 2:30 pm – 4:00 pm: Technical Session D2-W3-T3: New Materials
Science and Engineering, Nanotechnologies**

Chair: **Dr. Huey-Liang Hwang**, Institute of Electronic Engineering, National Tsing Hua
University (清華大學電機工程學系暨電子工程研究所黃惠良教授)
Room: BA 3012

“Polyoxometalate Modified Carbon Nanotubes for Electrochemical Capacitors”

Dr. Keryn K. Lian

Associate Professor, Department of Materials Science and Engineering
University of Toronto
(多伦多大学材料科学与工程系连珂教授)

Dr. Andrei Sazonov

Associate Professor, Department of Electrical and Computer Engineering
University of Waterloo

“Plasmonic Nanoantenna and Nanolaser”

Dr. Shangjr (Felix) Gwo

Vice President for Research & Development
Professor, Department of Physics
National Tsing Hua University
(清華大學研究發展處研發長暨物理系果尚志教授)

**8/17 (Fri) 2:30 pm – 4:00 pm: Technical Session D2-W4-T3: Broadband
Technologies and Multimedia Services, Cloud Computing, Cyber Security,
and SoC**

Chair: **Dr. Chi-Hsiang Yeh**, Department of Electrical and Computer Engineering, Queen's
University (女王大學電機暨電腦工程學系葉啟祥教授)
Room: BA 3116

“An Agent-based Infrastructure for Mobile Commerce”

Dr. Xining Li

Director, Intelligent Mobile Agents Laboratory (IMAGO Lab)
Professor, School of Computer Science

The University of Guelph
(圭尔夫大学计算机学院李西宁教授)

“Parallelization of Spectrum Sensing Algorithms Using Graphic Processing Units”

Dr. Sao-Jie Chen

Professor, Department of Electrical Engineering
National Taiwan University

(台灣大學電機工程學系陳少傑教授)

“Mobile Cloud in 5G Wireless”

Dr. Li-Chun Wang

Distinguished Professor & Chairman, Department of Electrical Engineering
National Chiao Tung University

(交通大學電機工程學系主任暨特聘教授王蒞君教授)