The 3rd Young Investigator Conference
(EITA-YIC 2013)

"Leadership, Innovation, Growth"

Ray and Maria Stata Center
Massachusetts Institute of Technology
Cambridge, Massachusetts, U.S.A.

Thursday – Friday, August 1-2, 2013

Program

(Draft as of 8/1/13)

Day 1 (Thursday, August 1, 2013)

8/1 (Thu) 8:30 am - 6:00 pm: Registration
Room: **32-155**

8/1 (Thu) 9:00 am - 9:50 am: Opening Speech
Chair: **Dr. Lin-wen Hu,** Associate Director & Principal Research Scientist, Nuclear Reactor Laboratory (NRL), Massachusetts Institute of Technology
(麻省理工學院核子反應爐實驗室副主任胡玲文博士)
Room: **32-155**

Welcome Remarks:

Ms. Anne Hung
Director General, Taipei Economic and Cultural Office in Boston
(駐波士頓台北經濟文化辦事處洪慧珠處長)

Parallel Sessions:
8/1 (Thu) 9:50 am - 11:20 am: Technical Session D1-W1-T1: Earth and Atmospheric Sciences, Aerospace and Ocean Engineering

Chair: **Dr. Erwan Monier,** Research Scientist, Joint Program on the Science and Policy of Global Change, Center for Global Change Science, Massachusetts Institute of Technology
Room: **32-124**

"Modeling Land Surface Processes in Earth System Models"

Dr. Zong-Liang Yang
Professor and Jackson Chair
Director, Center for Integrated Earth System Science
Jackson School of Geosciences
University of Texas at Austin

Dr. Chien Wang
Senior Research Scientist of Atmospheric Chemistry
Center for Global Change Science
Massachusetts Institute of Technology
(麻省理工学院全球变化科学中心大气化学实验室王谦博士)

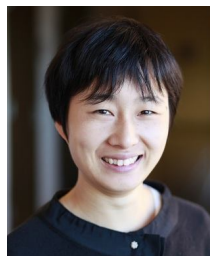"Water Vapor Isotope Analyzer: a New Tool for Atmospheric Research"

Dr. Xiahong Feng
Frederick Hall Professor of Earth Sciences
Dartmouth College

8/1 (Thu) 9:50 am - 11:20 am: Technical Session D1-W2-T1: Medicine, Public Health, Biomedical Science and Engineering

Chair: **Dr. Woei-jyh (Adam) Lee,** Scientist, National Institutes of Health
(美國國家衛生研究院李偉智博士)

Room: **32-155**

Dr. Yun Li
Assistant Professor, Department of Genetics
The University of North Carolina at Chapel Hill

Dr. Jing Maria Zhang
Assistant Professor, Department of Statistics
Yale University

Dr. Hungyun Lin
Senior Scientist
Pfizer Inc.

Dr. Jr-Shin Li
Associate Professor, Department of Electrical and Systems Engineering
Washington University in St. Louis
(聖路易華盛頓大學電機與系統工程學系李智新教授)

8/1 (Thu) 9:50 am - 11:20 am: Technical Session D1-W3-T1: New Materials Science and Engineering, Nanotechnology and New Green Energy

Chair: **Dr. Lin-wen Hu,** Associate Director & Principal Research Scientist, Nuclear Reactor Laboratory (NRL), Massachusetts Institute of Technology
(麻省理工學院核子反應爐實驗室副主任胡玲文博士)

Room: **32-144**

"Designer Germanium Quantum Dots for Novel Nano-electronics, Photonics, and Energy Saving Devices"

Dr. Pei-Wen Li
Professor, Department of Electrical Engineering
National Central University
(中央大學電機工程學系李佩雯教授)

"Photonics and plasmonics for solar energy"

Dr. Jeremy Nathan Munday
Assistant Professor, Institute for Research in Electronics and Applied Physics
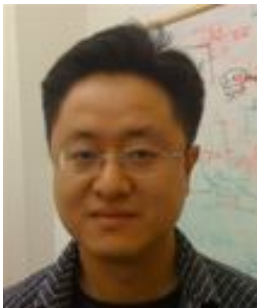University of Maryland, College Park

"Electrochemical Fabrication of Optical Transparent and Tunable Wettability Nickel Hydroxide for 2D Microfluidic Channels"

Dr. Shien-Ping Feng
Assistant Professor, Department of Mechanical Engineering
The University of Hong Kong
(香港大學機械工程系馮憲平教授)

"Plasma-Assisted Nanoprinting and Doping Technology for Manufacturing MoS2-Based Nanoelectronic Devices"

Dr. Xiaogan Liang
Assistant Professor, Department of Mechanical Engineering
The University of Michigan, Ann Arbor

8/1 (Thu) 11:20 am - 11:35 am: Break

Parallel Sessions:
8/1 (Thu) 11:35 am – 1:05 pm: Technical Session D1-W1-T2: Earth and Atmospheric Sciences, Aerospace and Ocean Engineering

Chair: **Dr. Wen-Wen Tung,** Associate Professor, Department of Earth and Atmospheric Sciences, Purdue University

(普渡大學地球與大氣科學系董文文教授)

Room: **32-124**

"Understanding The Wake in Tidal Turbines Arrays: Experimental Investigation of Turbulence Budget Using Porous Disks"

Dr. Heng Xiao
Assistant Professor, Department of Aerospace and Ocean Engineering
Virginia Polytechnic Institute and State University
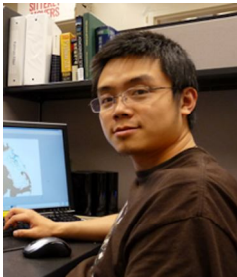
4

"Offshore Wind Energy in Taiwan"

Dr. Hsin-Haou Huang
Assistant Professor, Department of Engineering Science and Ocean Engineering
National Taiwan University
(臺灣大學工程科學及海洋工程學系黃心豪教授)

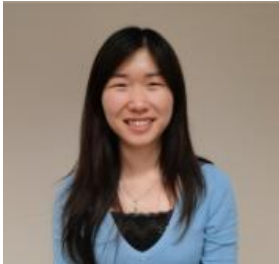"Local air-sea feedback mechanisms over the shallow water region of the Maritime Continent"

Dr. Pengfei Xue
Postdoc Associate, Department of Earth, Atmospheric and Planetary Sciences
Massachusetts Institute of Technology

"Improving Regional Evapotranspiration Simulation"

Dr. Liyi Xu
Postdoctoral Associate, Center for Global Change Science
Massachusetts Institute of Technology

8/1 (Thu) 11:35 am – 1:05 pm: Technical Session D1-W2-T2: Medicine, Public Health, Biomedical Science and Engineering

Chair: **Dr. Yi-Hsiang (Sean) Hsu,** Assistant Professor, School of Medicine
Harvard University
(哈佛大學醫學院許益祥教授)
Room: **32-155**

Ms. Joyce Yang
Ph.D. Candidate in Biological & Biomedical Sciences
Harvard University
(哈佛大學楊立琦)

"Identifying enhancer–promoter interactions in the human genome"

Ms. Yih-Chii Hwang
Ph.D. Candidate in Genomics and Computational Biology
Department of Pathology and Laboratory Medicine
Perelman School of Medicine, University of Pennsylvania
(賓州大學黃奕綺)

"Genetically Engineered Multi-Purpose Red Blood Cells"

Dr. Hsiang-Ying (Sherry) Lee
Postdoctoral Associate, Whitehead Institute for Biomedical Research
Massachusetts Institute of Technology
(麻省理工學院李湘盈博士)

"Mortality and hospital utilization patterns in the Old Order Amish"

Dr. Woei-jyh (Adam) Lee
Scientist, National Institutes of Health
(美國國家衛生研究院李偉智博士)

8/1 (Thu) 11:35 am – 1:05 pm: Technical Session D1-W3-T2: New Materials Science and Engineering, Nanotechnology and New Green Energy

Chair: **Dr. Jung-Tsung Shen,** Assistant Professor, Department of Electrical & Systems Engineering, Washington University in St. Louis
(聖路易華盛頓大學電機暨系統工程學系沈榮聰教授)

Room: **32-144**

"Towards Sustainable Energy: Carbon Capture, Utilization and Storage (CCUS)"

Dr. Ah-Hyung (Alissa) Park
Lenfest Junior Professor in Applied Climate Science
Associate Director of Lenfest Center for Sustainable Energy
Department of Earth and Environmental Engineering
Department of Chemical Engineering
Columbia University

"Scalable 3-D Nanostructure Array Integration and Manufacturing: A Nanomaterials Roadmap toward Ultrahigh Efficiency, Robustness, and Multi-functionality"

Dr. Pu-Xian Gao
Associate Professor, Department of Chemical, Materials and Biomolecular
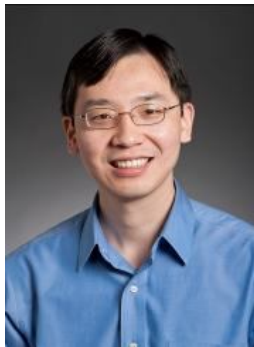& Institute of Materials Science
University of Connecticut, Storrs

"Synthesis and Applications of Two-Dimensional Materials beyond Graphene"

Dr. Albert Yi-Hsien Lee
Assistant Professor, Department of Material Science and Engineering
National Tsing Hua University
(清華大學材料科學工程學系李奕賢教授)

"Multifunctional polymer nanofibers with high thermal conductivity and Young's modulus"

Dr. Sheng Shen
Assistant Professor, Department of Mechanical Engineering
Carnegie Mellon University

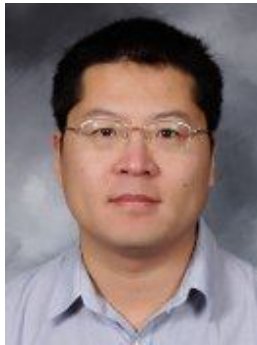## 8/1 (Thu) 1:05 pm - 2:35 pm: Lunch

Parallel Sessions:
8/1 (Thu) 2:35 pm – 4:05 pm: Technical Session D1-W1-T3: Earth and Atmospheric Sciences, Aerospace and Ocean Engineering
Chair: **Dr. Hsin-Haou Huang,** Assistant Professor, Department of Engineering Science and Ocean Engineering, National Taiwan University
Room: **32-124**

"Impact of aging mechanism on model simulated carbonaceous aerosols"

Dr. Shiliang Wu
Assistant Professor, Department of Geological and Mining Engineering and Sciences
Assistant Professor, Department of Civil and Environmental Engineering
Michigan Technological University

"Uncertainty in regional climate projections"

Dr. Erwan Monier
Research Scientist, Joint Program on the Science and Policy of Global Change
Center for Global Change Science
Massachusetts Institute of Technology

"Asymmetry of the Convection in the Madden-Julian Oscillation"

Dr. Wen-wen Tung
Associate Professor, Department of Earth, Atmospheric, and Planetary Sciences
Purdue University
(普渡大學地球與大氣科學系董文文教授)

8/1 (Thu) 2:35 pm – 4:05 pm: Technical Session D1-W2-T3: Medicine, Public Health, Biomedical Science and Engineering

Chair: **Dr. Aichi Chien,** Assistant Professor, Biomedical Physics IDP, Division of Interventional Neuroradiology, Department of Radiological Sciences, Ronald Reagan UCLA Medical Center, David Geffen School of Medicine at UCLA

(加州大學洛杉磯分校大衛格芬醫學院簡艾琪教授)

Room: **32-155**

"Selfassembled Polymeric Particles for Drug Delivery"

Dr. Ying Liu
Assistant Professor, Department of Chemical Engineering
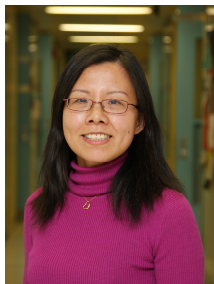The University of Illinois at Chicago
(伊利诺大学芝加哥校区刘颖教授)

"Neural Differentiation of Pluripotent Stem Cells and the Cell Labeling with Magnetic Superparamagnetic Iron Oxides"

Dr. Yan Li
Assistant Professor, Department of Chemical and Biomedical Engineering
Florida State University

"Structural Basis for Targeting Tight Control of PP2A Holoenzyme Biogenesis"

Dr. Yongna Xing
Assistant Professor, Department of Oncology
School of Medicine and Public Health
University of Wisconsin-Madison

"CoRAL: a machine learning approach to predict non-coding RNAs from small RNA-sequencing data"

Dr. Fanny Yuk Yee Leung
Postdoctoral Researcher, Department of Pathology and Laboratory Medicine
Penn Center for Bioinformatics
University of Pennsylvania
(賓州大學醫學院梁玉儀博士)

8/1 (Thu) 2:35 pm – 4:05 pm: Technical Session D1-W3-T3: New Materials Science and Engineering, Nanotechnology and New Green Energy

Chair: **Dr. Lin-wen Hu,** Associate Director & Principal Research Scientist, Nuclear Reactor Laboratory (NRL), Massachusetts Institute of Technology

(麻省理工學院核子反應爐實驗室副主任胡玲文博士)

Room: **32-144**

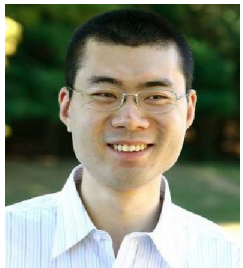"Designing Nanostructured Hybrid Materials for Energy Storage Technologies"

Dr. Guihua Yu
Assistant Professor, Materials Science & Engineering and Mechanical Engineering
Texas Materials Institute, The University of Texas at Austin

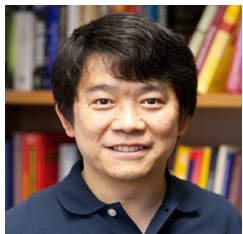"Nanomaterials for Future Green Computations"

Dr. Jie Xiang
Assistant Professor, Department of Electrical and Computer Engineering
University of California, San Diego

Dr. Yu-Lun Chueh
Associate Professor, Department of Material Science and Engineering
National Tsing Hua University
(清華大學材料科學工程學系闕郁倫教授)

Dr. Jung-Tsung Shen
Assistant Professor, Department of Electrical & Systems Engineering
Washington University in St. Louis
(聖路易華盛頓大學電機暨系統工程學系沈榮聰教授)

8/1 (Thu) 4:05 pm – 4:20 pm: Break
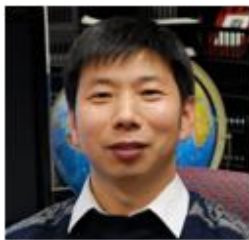
Parallel Sessions:
8/1 (Thu) 4:20 pm – 5:50 pm: Technical Session D1-W1-T4: Earth and Atmospheric Sciences, Aerospace and Ocean Engineering

Chair: **Dr. Wen-Wen Tung,** Associate Professor, Department of Earth and Atmospheric Sciences, Purdue University

(普渡大學地球與大氣科學系董文文教授)

Room: **32-124**

"Coupling of an advanced particle microphysics (APM) model with GEOS-Chem, WRF-Chem, and CAM5: Key features and applications"

Dr. Fangqun Yu
Senior Research Associate & Professor
Atmospheric Sciences Research Center
State University of New York at Albany

"Understand multi-scale climate processes over the Maritime Continent by analyzing observed and model simulated data"

Dr. Jian-Hua (Joshua) Qian
Associate Professor of Atmospheric and Climate Science
Department of Environmental, Earth & Atmospheric Sciences
University of Massachusetts, Lowell

"Remote and Local Forcing of Decadal Sea Level and Thermocline Depth Variability in the South Indian Ocean"

Dr. Weiqing Han
Associate Professor, Department of Atmospheric and Oceanic Sciences
University of Colorado at Boulder

8/1 (Thu) 4:20 pm – 5:50 pm: Technical Session D1-W2-T4: Medicine, Public Health, Biomedical Science and Engineering

Chair: **Dr. Woei-jyh (Adam) Lee,** Scientist, National Institutes of Health

(美國國家衛生研究院李偉智博士)

Room: **32-155**

"Investigating tissue specificity of cancer-causing germline mutations"

Dr. Jessica C. Mar
Assistant Professor, Department of Systems & Computational Biology &
Assistant Professor, Department of Epidemiology & Population Health
Albert Einstein College of Medicine

"Filter Feeding': Principled exploratory filtering approaches for sequence data to identify variants, genes, and regions for genetic follow-up studies"

Dr. Adam Naj
Instructor, Department of Biostatistics and Epidemiology
Senior Scholar, Center for Clinical Epidemiology and Biostatistics
Perelman School of Medicine, University of Pennsylvania

"Limb Regeneration: From Amphibians to Mammals"

Dr. Chia-Ho Cheng
Statistical Programmer Analyst
Institute for Aging Research
Harvard Medical School

8/1 (Thu) 4:20 pm – 5:50 pm: Technical Session D1-W3-T4: New Materials Science and Engineering, Nanotechnology and New Green Energy

Chair: **Dr. Jung-Tsung Shen,** Assistant Professor, Department of Electrical & Systems Engineering, Washington University in St. Louis

(聖路易華盛頓大學電機暨系統工程學系沈榮聰教授)

Room: **32-144**

"High-Efficiency Nanowire Light-Emitting Diodes for Phosphor-Free Solid-State Lighting"

Dr. Zetian Mi
Associate Professor, Department of Electrical and Computer Engineering
McGill University

"Fabrication of Functionalized Graphene-based Materials and Their Applications to Electrochemical Energy Storage"

Dr. Yu Ting
Nanyang Assistant Professor Division of Physical and Applied Physics
School of Physical & Mathematical Sciences
Nanyang Technological University
(南洋理工大学于霆教授)

Dr. Junxia (Lucy) Shi
Assistant Professor, the Department of the Electrical and Computer
Engineering
The University of Illinois at Chicago

"Building Three-Dimensional Surface Patterning on Nanostructures by Self-Assembly"

Dr. Jeong-Hyun Cho
Assistant Professor, Department of Electrical and Computer Engineering
University of Minnesota, Twin Cities

Day 2 (Friday, August 2, 2013)

8/2 (Fri) 8:30 am - 6:00 pm: Registration
Room: **32-155**

Parallel Sessions:
8/2 (Fri) 9:50 am - 11:20 am: Technical Session D2-W2-T1: Medicine, Public Health, Biomedical Science and Engineering
Chair: **Dr. Aichi Chien,** Assistant Professor, Biomedical Physics IDP, Division of Interventional Neuroradiology, Department of Radiological Sciences, Ronald Reagan UCLA Medical Center, David Geffen School of Medicine at UCLA

(加州大學洛杉磯分校大衛格芬醫學院簡艾琪教授)

Room: **32-155**

"Development of Pin1 inhibitors to treat aggressive cancers"

Dr. Shuo Dennis Wei
Postdoctoral Research Fellow, Department of Medicine
Beth Israel Deaconess Medical Center
Harvard Medical School

(哈佛醫學院魏碩博士)

Dr. Wen-Chi Chou
Postdoctoral Research Fellow, Hebrew SeniorLife
Harvard Medical School

"Designing Small Molecule Drugs for Staphylococcus Aureus Infection"

Dr. Fu-Yang (Albert) Lin
Postdoctoral Research Fellow, Springer Lab
Department of Biological Chemistry and Molecular Pharmacology
Harvard Medical School

"ATF3 induction and axon regeneration in DRG neurons"

Dr. Yung-Chih (Inge) Cheng
Postdoctoral Research Fellow
Clifford Woolf's Laboratory, Boston Children's Hospital
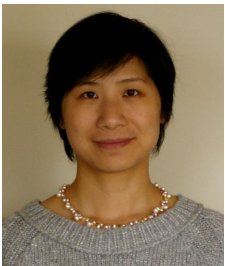Harvard Medical School

8/2 (Fri) 9:50 am - 11:20 am: Technical Session D2-W3-T1: New Materials Science and Engineering, Nanotechnology and New Green Energy

Chair: **Dr. Lin-wen Hu,** Associate Director & Principal Research Scientist, Nuclear Reactor Laboratory (NRL), Massachusetts Institute of Technology

(麻省理工學院核子反應爐實驗室副主任胡玲文博士)

Room: **32-144**

"Catalytic Characterization of Meso-/microporous Lamellar Zeolite Catalysts"

Dr. Dongxia Liu
Assistant Professor, Department of Chemical and Biomolecular Engineering
University of Maryland, College Park

Dr. Ying-Hao Eddie Chu
Assistant Professor, Department of Materials Science and Engineering
National Chiao Tung University
(交通大學材料系朱英豪教授)

"Hierarchical Carbon Nanotube Architectures for Water Treatment"

Dr. Chongzheng Na
Assistant Professor, Department of Civil & Environmental Engineering & Earth Sciences
Assistant Professor, College of Engineering
University of Notre Dame

"Nanowire-based Lead-Free Nanosolders for Nanoelectronics Assembly and Interconnection"

Dr. Zhiyong Gu
Associate Professor, Department of Chemical Engineering
University of Massachusetts Lowell
(麻州大學洛爾分校化學工程系谷志勇教授)

8/2 (Fri) 9:50 am - 11:20 am: Technical Session D2-W4-T1: Broadband and Wireless Computing, Web, Cloud Computing, Cyber Security, and Machine Learning

Chair: **Dr. Chen-Hsiang (Jones) Yu,** Zappix, Inc. and PetPace, LTD
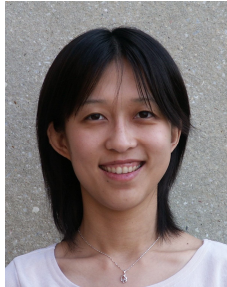Room: **32-124**

"Mobile-to-Mobile Cooperation in Uplink Cellular Communication"

Dr. Mai Vu
Associate Professor, Department of Electrical and Computer Engineering
Tufts University

"User Cooperation in Media-Sharing Social Networks"

Dr. H. Vicky Zhao
Associate Professor, Department of Electrical & Computer Engineering
University of Alberta

Dr. Tian Lan
Assistant Professor, Department of Electrical and Computer Engineering
George Washington University

"Understanding the Robustness of SSDs under Power Fault"

Dr. Feng Qin
Assistant Professor, Department of Computer Science and Engineering
The Ohio State University

8/2 (Fri) 11:20 am - 11:35 am: Break

Parallel Sessions:
8/2 (Fri) 11:35 am – 1:05 pm: Technical Session D2-W2-T2: Medicine, Public Health, Biomedical Science and Engineering

Chair: **Dr. Li-San Wang,** Assistant Professor, Department of Pathology and Laboratory Medicine, University of Pennsylvania Perelman School of Medicine

(賓州大學醫學院王立三教授)

Room: **32-155**

"Prevention of Hemorrhagic Stroke—the Role of Science and Engineering"

Dr. Aichi Chien
Assistant Professor, Biomedical Physics IDP, Division of Interventional Neuroradiology, Department of Radiological Sciences, Ronald Reagan UCLA Medical Center, David Geffen School of Medicine at UCLA

(加州大學洛杉磯分校大衛格芬醫學院簡艾琪教授)

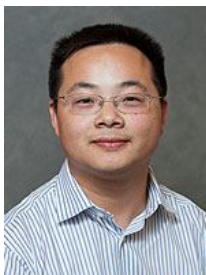"Magnetic Resonance guided Focused Ultrasound Treatment (MRgFUS)"

Dr. Chang-Sheng Mei
Assistant Professor, Department of Physics
Soochow University

(東吳大學物理系梅長生教授)

"Lipid-based nanoparticles for Intracellular Delivery of Proteins for Cancer Therapy"

Dr. Qiaobing Xu
Assistant Professor, Department of Biomedical Engineering and
Assistant Professor, Department of Chemical and Biological Engineering
Tufts University

Dr. Yi-Hsiang (Sean) Hsu
Assistant Professor, School of Medicine
Harvard University
(哈佛大學醫學院許益祥教授)

8/2 (Fri) 11:35 am – 1:05 pm: Technical Session D2-W3-T2: New Materials Science and Engineering, Nanotechnology and New Green Energy

Chair: **Dr. Jung-Tsung Shen,** Assistant Professor, Department of Electrical & Systems Engineering, Washington University in St. Louis
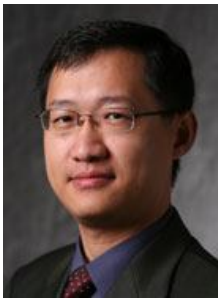(聖路易華盛頓大學電機暨系統工程學系沈榮聰教授)
Room: **32-144**

"Development of Schottky Structure Radiation Sensor on Freestanding Gallium Nitride"

Dr. Lei Raymond Cao
Assistant Professor and Director, Nuclear Analysis and Radiation Sensor Lab
Department of Mechanical and Aerospace Engineering
The Ohio State University

"Advanced modeling of pebble-bed reactors: granular flow simulation and radiation transport in stochastic media"

Dr. Wei Ji
Assistant Professor, Department of Mechanical, Aerospace, and Nuclear Engineering
Rensselaer Polytechnic Institute
(伦斯勒理工學院季崴教授)

"Enhanced Ion and Molecule Transport in 2-D Nanofluidic Channels"

Dr. Chuanhua Duan
Assistant Professor, Department of Mechanical Engineering
Boston University

Dr. Lin-wen Hu
Associate Director & Principal Research Scientist
Nuclear Reactor Laboratory (NRL)
Massachusetts Institute of Technology
(麻省理工學院核子反應爐實驗室副主任胡玲文博士)

8/2 (Fri) 11:35 am - 1:05 pm: Technical Session D2-W4-T2: Broadband and Wireless Computing, Web, Cloud Computing, Cyber Security, and Machine Learning

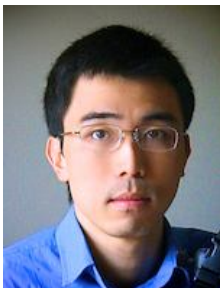Chair: **Dr. Chen-Hsiang (Jones) Yu,** Zappix, Inc. and PetPace, LTD
Room: **32-124**

"Continuous Gesture Recognition for Natural Interaction"
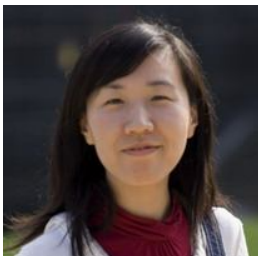

Ms. Ying Yin
Ph.D. Candidate, Computer Science and Artificial Intelligence Laboratory
Department of Electrical Engineering and Computer Science
Massachusetts Institute of Technology

"Exploiting Network Effects for Fraud and Malware Detection"

Dr. Duen Horng "Polo" Chau
Assistant Professor, School of Computational Science & Engineering
Georgia Institute of Technology

Dr. Jing Gao
Assistant Professor, Department of Computer Science and Engineering
The State University of New York at Buffalo
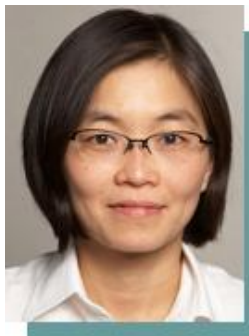
8/2 (Fri) 1:05 pm - 2:35 pm: Lunch

Parallel Sessions:
8/2 (Fri) 2:35 pm – 4:05 pm: Technical Session D2-W2-T3: Medicine, Public Health, Biomedical Science and Engineering

Chair: **Dr. Li-San Wang,** Assistant Professor, Department of Pathology and Laboratory Medicine, University of Pennsylvania Perelman School of Medicine

(賓州大學醫學院王立三教授)

Room: **32-155**

"Innate immune activation modulates HIV infection"

Dr. Theresa Li-Yun Chang
Principal Investigator, Public Health Research Institute
Associate Professor, Department of Microbiology and Molecular Genetics
UMDNJ-New Jersey Medical School

Dr. Abel Po-Hao Huang
Neurosurgeon, National Taiwan University Hospital, Yun-Lin branch
Clinical lecturer, College of Medicine, National Taiwan University Hospital
(台大醫院神經外科黃博浩醫師)

"Integrated Genomic Analysis of Prostate Cancer Disparities between Caucasian and African American Populations"

Dr. Bi-Dar Wang
Assistant Research Professor, Department of Pharmacology and Physiology
The George Washington University Medical Center
(喬治華盛頓大學醫學院王必達教授)

"GUCY2C at the intersection of obesity and colorectal cancer"

Dr. Jieru Egeria Lin
Research Fellow, Thomas Jefferson University

8/2 (Fri) 2:35 pm – 4:05 pm: Technical Session D2-W3-T3: New Materials Science and Engineering, Nanotechnology and New Green Energy

Chair: **Dr. Jung-Tsung Shen,** Assistant Professor, Department of Electrical & Systems Engineering, Washington University in St. Louis

(聖路易華盛頓大學電機暨系統工程學系沈榮聰教授)

Room: **32-144**

"Atmospheric-Pressure-Plasma-Jet Rapid Sintering Process for TiO2 Photoanodes of Dye-Sensitized Solar Cells"

Dr. I-Chun Cheng
Associate Professor, Graduate Institute of Photonics and Optoelectronics
Department of Electrical Engineering
National Taiwan University

(台灣大學電機工程學系陳奕君教授)

"Light up the Way of Energy Sustainability: from Green IT to Solar Energy"

Dr. Jifeng Liu
Assistant Professor, Thayer School of Engineering
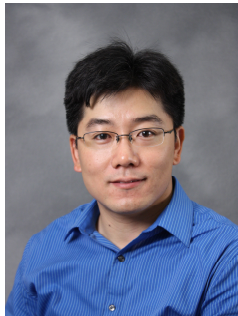Dartmouth College

"Design and Fabrication of Multifunctional Three-Dimensional Nanostructured Materials"

Dr. Chih-Hao Chang
Assistant Professor, Department of Mechanical & Aerospace Engineering
North Carolina State University

"Mechanics and Energy Transfer in Scalable Plasmonic Nanomanufacturing"

Dr. Liang Pan
Assistant Professor, School of Mechanical Engineering
Purdue University
(普渡大学机械工程学院潘亮教授)

8/2 (Fri) 2:35 pm - 4:05 pm: Technical Session D2-W4-T3: Broadband and Wireless Computing, Web, Cloud Computing, Cyber Security, and Machine Learning

Chair: **Dr. Chen-Hsiang (Jones) Yu,** Zappix, Inc. and PetPace, LTD
Room: **32-124**

Ms. Oshani Seneviratne
PhD Candidate, Computer Science and Artificial Intelligence Laboratory
Department of Electrical Engineering and Computer Science
Massachusetts Institute of Technology

"Adapting User Interfaces to Cultural Differences in Perception and Preferences"

Dr. Katharina Reinecke
Postdoctoral Fellow, Intelligent and Interactive Systems Group
School of Engineering and Applied Sciences
Harvard University

"Cyber-Physical Systems: From Learning, Optimization to Security"

Dr. Haibo He
Associate Professor, Department of Electrical, Computer, and Biomedical Engineering
Director, Computational Intelligence and Self-Adaptive Systems (CISA) Laboratory
University of Rhode Island

8/2 (Fri) 4:05 pm – 4:20 pm: Break

Parallel Sessions:
8/2 (Fri) 4:20 pm – 5:50 pm: Technical Session D2-W2-T4: Medicine, Public Health, Biomedical Science and Engineering

Chair: **Dr. Yi-Hsiang (Sean) Hsu,** Assistant Professor, School of Medicine, Harvard University (哈佛大學醫學院許益祥教授)
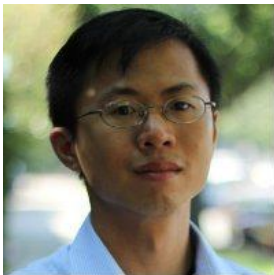
Room: **32-155**

"One-to-Many and Many-to-One Binding Mechanisms in Intrinsically Disordered Proteins"

Ms. Wei-Lun Hsu
Ph.D. Student, Center for Computational Biology and Bioinformatics
Department of Biochemistry and Molecular Biology
Indiana University School of Medicine

"Comparing and Intercoverting Expression Profiles from Microarrays to RNASeq"

Dr. Yaoyu E. Wang
Associate Director, Center for Cancer Computational Biology
Dana-Farber Cancer Institute
(波士頓達納法伯癌症研究所王耀煜博士)

"Vitamin D and Type 2 Diabetes: From Observation to Intervention"

Dr. Yiqing Song
Assistant Professor of Medicine, Division of Preventive Medicine
Brigham and Women's Hospital/Harvard Medical School
(哈佛医学院布莱根妇女医院宋一青教授)

"Alzheimer's Disease: A Genomics Approach"

Dr. Li-San Wang
Assistant Professor, Department of Pathology and Laboratory Medicine
University of Pennsylvania Perelman School of Medicine
(賓州大學醫學院王立三教授)

8/2 (Fri) 4:20 pm – 5:50 pm: Technical Session D2-W3-T4: New Materials Science and Engineering, Nanotechnology and New Green Energy

Chair: **Dr. Lin-wen Hu,** Associate Director & Principal Research Scientist, Nuclear Reactor Laboratory (NRL), Massachusetts Institute of Technology
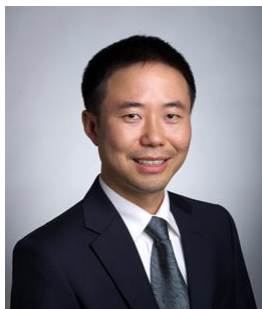(麻省理工學院核子反應爐實驗室副主任胡玲文博士)

Room: **32-144**

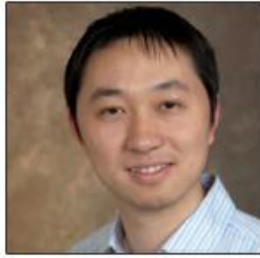"Silicon Photonics and Photonics Crystals"

Dr. Wei Jiang
Associate Professor, Department of Electrical and Computer Engineering & Institute for Advanced Materials, Devices and Nanotechnology
Rutgers, The State University of New Jersey

"Nano Plasmonic Devices based on Metasurfaces"

Dr. Yongmin Liu
Assistant Professor, Department of Mechanical and Industrial Engineering &
Department of Electrical and Computer Engineering
Northeastern University
(东北大学电子与计算机工程系刘咏民教授)

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)

Dr. Chien-Wen Hsieh
Assistant Professor, Institute of Lighting and Energy Photonics
National Chiao Tung University
(交通大學光電學院謝建文教授)

8/2 (Fri) 4:20 pm - 5:50 pm: Technical Session D2-W4-T4: Broadband and Wireless Computing, Web, Cloud Computing, Cyber Security, and Machine Learning

Chair: **Dr. Chen-Hsiang (Jones) Yu,** Zappix, Inc. and PetPace, LTD
Room: **32-124**

"A Measurement-based Study of MultiPath TCP Performance over Wireless Networks"

Mr. Yung-Chih Chen
Ph.D. Candidate, School of Computer Science
University of Massachusetts at Amherst
(麻州大學安默斯特分校陳勇志)

"Digital Humanities and its Challenges to Information Technologists"

Dr. Shih-Pei (Gail) Chen
Postdoctoral researcher, Fairbank Center for Chinese Studies
Harvard University

"Web Page Enhancement on Desktop and Mobile Browsers"

Dr. Chen-Hsiang (Jones) Yu
Director of Mobile Engineering and User Experience,
Zappix, Inc. and PetPace, LTD

Dr. Ping-Cheng Yeh
Associate Professor, Department of Electrical Engineering
National Taiwan University
(台灣大學電機工程學系葉丙成教授)