



**The First Young Investigator Conference
(EITC-YIC 2011)**

"Leadership, Innovation, Growth"

**Harvard University
Cambridge, Massachusetts, USA**

Thursday – Friday, August 18 – 19, 2011

Program

Building Abbreviations and Addresses (**Harvard University**):

MD (Maxwell Dworkin Building), School of Engineering and Applied Science (SEAS),
Address: 33 Oxford Street, Cambridge, Massachusetts 02138, USA

Day 1 (Thursday, August 18, 2011): Emerging Science & Technology

8/18 (T) 8:30 am - 6:00 pm : Registration

Room: MD-G123

8/18 (T) 9:00 am - 9:50 am : Opening Speech

Room: MD-G115



Chair: **Dr. Yi-Hsiang (Sean) Hsu**
Harvard University
(哈佛大學許益祥博士)



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

Opening Keynote:

“Academia Sinica and The National Research Program for Biopharmaceuticals (NRPB) – the role in biotechnological development of Taiwan”



Academician Andrew H.-J. Wang
Vice President, Academia Sinica
Republic of China (Taiwan)
(中央研究院副院長王惠鈞院士)

Parallel Sessions:

**8/18 (T) 9:50 am - 11:10 am : Technical Session D1-W1-T1:
Medicine/Public Health/Biotechnology/Bioinformatics (1)**

Room: MD-G135



Chair: **Professor Li-San Wang**
University of Pennsylvania
(賓州大學王立三教授)

“Discovering the Genetics Cause of Disease and New Mitochondrial Biology with MitoExome Sequencing”



Mr. Steve Hershman
Ph.D. Candidate
MGH, Harvard Systems Biology
Harvard University

“Integrative Network Analysis of Multimodal Genomic Microarrays”



Dr. Hsun-Hsien Chang
Children’s Hospital Informatics Program
Harvard Medical School
(哈佛醫學院張洵銑博士)

“Bioinformatics and Genomics for Aging and Neurodegeneration”



Dr. Kajia Cao
Research Associate
Department of Cell Development and Biology
University of Pennsylvania
(賓州大學曹卡佳博士)

“MCAB – Multiple Tumor Class Classification using Covariance among Binary Classifiers”



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

8/18 (T) 9:50 am - 11:10 am : Technical Session D1-W2-T1: Room: MD-G119
New Materials Science and Engineering, Nanotechnology (1)



Chair: **Professor Jeff Tza-Huei Wang**
Johns Hopkins University
(約翰霍普金斯大學王澤輝教授)

“Transforming Light and Sound With Metamaterials”



Professor Nicholas Xuanlai Fang
Mechanical Engineering Department
Massachusetts Institute of Technology
(麻省理工学院机械工程系方绚莱教授)

“Acoustic Tweezers: Patterning, Focusing, and Separating Cells and Microparticles Using Standing Surface Acoustic Waves (SSAW)”



Professor Tony Jun Huang
 Biomedical NanoElectroMechanicalSystems (BioNEMS)
 -- Multi-Physics of Micro/Nano Systems
 Department of Engineering Science and Mechanics
 The Pennsylvania State University
 (宾州州立大学黄竣教授)

“Microfluidics: From Laboratory Automation to Cellular Self-Organization”



Professor Pak Kin Wong
 Department of Aerospace and Mechanical Engineering
 The University of Arizona
 (亞利桑那大學航空航天與機械工程系黃百健教授)

“Quantum Dots-Enabled Highly Sensitive Detection of Epigenetic Cancer Markers in Clinical Samples”



Professor Jeff Tza-Huei Wang
 Departments of Mechanical Engineering, Biomedical Engineering and Oncology
 Johns Hopkins University
 (約翰霍普金斯大學機械工程系與生物醫學工程系王澤輝教授)

8/18 (T) 9:50 am - 11:10 am : Technical Session D1-W3-T1: Room: MD-G125
C4I (1): Broadband Technologies and Multimedia Services, Cloud Computing and Cyber Security



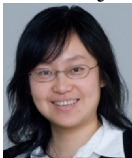
Chair: **Professor Wen-Chieh (Steve) Lin**
 National Chiao Tung University
 (交通大學林文杰教授)

“CloudSense: Continuous Fine-Grain Cloud Monitoring with Compressive Sensing”



Mr. Chit-Kwan Lin
 Ph.D. Candidate in Computer Science
 School of Engineering and Applied Sciences
 Harvard University
 (哈佛大學練哲軍)

“Anomaly Detection in Online Reputation Systems”



Professor Yan (Lindsay) Sun
 Department of Electrical, Computer and Biomedical Engineering
 University of Rhode Island
 (罗德岛大学孙琰教授)

“From Information Retrieval to Active Media”



Dr. Trista P. Chen
 Gracenote Inc.
 (陳佩君博士)

8/18 (T) 11:10 am - 11:25 am : Break

Room: MD-G123

Parallel Sessions:

8/18 (T) 11:25 am – 12:45 pm : Technical Session D1-W1-T2: Room: MD-G135
Medicine/Public Health/Biotechnology/Bioinformatics (2)



Chair: **Dr. Wen-Hui Lien**
Rockefeller University
(洛克菲勒大學連文慧博士)

“Cell Cycle-dependent Regulation of FoxM1 Activity by Phosphorylation”



Dr. Yi-Ju Chen
Postdoctoral Fellow
Department of Medicine, Abramson Family Cancer Research Institute
University of Pennsylvania
(賓州大學陳怡如博士)

“Integrins Traffic Rapidly via Circular Dorsal Ruffles and Macropinocytosis during Stimulated Cell Migration”



Dr. Zhizhan Gu
Postdoctoral Research Fellow
Division of Rheumatology, Immunology and Allergy, Department of Medicine
Brigham and Women's Hospital
Harvard Medical School
(哈佛醫學院顧智湛博士)

“Proteomic Assessment of a Cell Model of Spinal Muscular Atrophy”



Dr. Chia-Yen Wu
Department of Biological Sciences
University of Delaware
(德拉瓦大學吳佳燕博士)

“Toward the Treatment of Human Genetic Disorders”



Dr. Peng-Chieh Jessica Chen
Postdoctoral Fellow
Brigham & Women's Hospital
Harvard Medical School
(哈佛醫學院陳芄潔博士)

“Genome-Wide Maps of Histone Modifications in the Hair Follicle Lineages”



Dr. Wen-Hui Lien
Postdoctoral Fellow
Laboratory of Mammalian Cell Biology and Development
The Rockefeller University
(洛克菲勒大學連文慧博士)

8/18 (T) 11:25 am – 12:45 pm : Technical Session D1-W2-T2: Room: MD-G119
New Materials Science and Engineering, Nanotechnology (2)



Chair: **Professor Bingqing Wei**
University of Delaware
(德拉瓦大學魏秉庆教授)

“In-situ Transmission Electron Microscopy Studies on Nanowire Growth”



Professor Cheng-Yen Wen
Department of Materials Science and Engineering
National Taiwan University
(臺灣大學材料科學與工程學系溫政彥教授)

“Strength of Nanofiber Reinforced Composites”



Professor Quanfang Chen
Department of Mechanical, Materials and Aerospace Engineering
University of Central Florida
(中佛州大學機械材料與航太工程學系陳教授)

“Carbon-based 2D Materials, Structures and their Applications”



Dr. Robert Vajtai
Faculty Fellow
Department of Mechanical Engineering & Materials Science
Rice University

“CNT Supercapacitor Based Efficient Energy Management for Autonomous Wireless Sensor Nodes”



Professor Dongsheng Brian Ma
TxACE Chair Professor and Thrust Leader in Energy Efficiency
Texas Analog Center of Excellence (TxACE)
The University of Texas at Dallas
(德州大學達拉斯分校電機工程系馬東升教授)

**8/18 (T) 11:25 am – 12:45 pm : Technical Session D1-W3-T2: Room: MD-G125
C4I (2): Multimedia Services, Visualization and Web Technologies**



Chair: **Dr. Trista P. Chen**
Gracenote Inc.
(陳佩君博士)

“Web Page Readability Enhancement”



Mr. Chen-Hsiang (Jones) Yu
Ph.D. Candidate in EECS
Department of Electrical Engineering and Computer Science
Massachusetts Institute of Technology
(麻省理工學院電機工程與資訊科學系余禎祥)

“iPOEM: A GPS Tool for Integrated Management in Virtualized Data Centers”



Professor Ya-Yunn Su

Department of Computer Science & Information Engineering
National Taiwan University
(臺灣大學資訊工程學系蘇雅韻教授)

“Active Learning for Interactive 3D Scene Reconstruction”



Dr. Yao-Jen (Kevin) Chang

Research Associate, Advanced Multimedia Processing (AMP) Lab
School of Electrical and Computer Engineering
Cornell University
(康乃爾大學電機暨電腦工程學院張耀仁博士)

8/18 (T) 12:45 pm - 2:15 pm : Lunch

On Your Own

**8/18 (T) 2:15 pm - 3:15 pm: Keynote Panel Discussion:
New Green Energy, Environment, and Sustainability**

Room: MD-G115



Moderator: **Dr. Lin-wen Hu**

Massachusetts Institute of Technology
(麻省理工學院胡玲文博士)



Professor Gang Chen

Carl Richard Soderberg Professor of Power Engineering
Director, Pappalardo Micro and Nano Engineering Laboratories
Director, DOE EFRC: Solid-State Solar-Thermal Energy Conversion Center
Massachusetts Institute of Technology
(麻省理工学院机械工程系美国国家工程院院士陈刚教授)



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)

Parallel Sessions:

**8/18 (T) 3:15 pm – 4:35 pm : Technical Session D1-W1-T3:
Medicine/Public Health/Biotechnology/Bioinformatics (3)**

Room: MD-G135



Chair: **Dr. Huai-Kuang Tsai**

Academia Sinica
(中央研究院蔡懷寬博士)

“Characterization of Transcription Factor and MicroRNA Regulatory Networks Involved in Myelination”



Dr. Li-Wei Chang

Research Instructor, Department of Pathology and Immunology
Washington University in St. Louis
(聖路易華盛頓大學章立維博士)

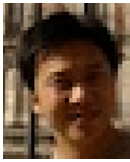
“Integrating Bioinformatics Technologies with Biomedical Research by Collaborative Consulting Model”



Dr. Yaoyu E. Wang

Bioinformatics Analyst
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)

“Precise Mapping for Bisulfite Sequencing in Generating DNA Methylation Profiles”



Dr. Pao-Yang Chen

Postdoctoral Fellow
Department of Molecular Cell and Developmental Biology
University of California at Los Angeles
(加州大學洛杉磯分校陳柏仰博士)

**8/18 (T) 3:15 pm – 4:35 pm : Technical Session D1-W2-T3:
New Materials Science and Engineering, Nanotechnology (3)**

Room: MD-G119



Chair: **Professor Jung-Tsung Shen**

Washington University in St. Louis
(聖路易華盛頓大學沈榮聰博士)

“Nanophotonic Emitters for Future Communication, Energy, and Health Care”

Professor Pei-Cheng Ku

Department of Electrical Engineering & Computer Science
The University of Michigan at Ann Arbor
(密歇根大學安娜堡分校電機系古培正教授)

“Organic and Inorganic Nanocrystal Thin Film Solar Cells”



Dr. Hsiang-Yu Chen

Postdoctoral Fellow, National Renewable Energy Laboratory
The U.S. Department of Energy
(美國國家可再生能源實驗室陳香好博士)

“Electromechanical Stability of Nanocrystalline Silicon Thin Film Transistors Made on Colorless Polyimide Foil Substrates”



Professor I-Chun Cheng

Graduate Institute of Photonics and Optoelectronics
Department of Electrical Engineering
National Taiwan University
(臺灣大學電機工程學系陳奕君教授)

“Nanostructured Group IV Elements for Energy Storage”



Professor Bingqing Wei

Associate Professor, Department of Mechanical Engineering
University of Delaware
(德拉瓦大學機械工程系魏秉庆教授)

8/18 (T) 3:15 pm – 4:35 pm : Technical Session D1-W3-T3: Room: MD-G125
C4I (3): Broadband Technologies, Cloud Computing, Supercomputing and Smart Home



Chair: **Dr. Jia-Yu (Tim) Pan**

Google U.S.A.
(美國谷歌公司潘家煜博士)

“Compressive Bidding for Wireless LAN Medium Access Control”



Mr. Tsung-Han Lin

Ph.D. Candidate in Computer Science
School of Engineering and Applied Sciences
Harvard University
(哈佛大學林宗翰)

“Make the Web Faster Through Cloud Routing”



Mr. Coach Wei

CEO, Yottaa Inc

“Human Centered Software Design for Multi-Modal Sensing Smart House”



Dr. Hen-I Yang

Smart Home Laboratory
Department of Computer Science
Iowa State University
(愛荷華州立大學楊博士)

“Current Status and Trend in Supercomputing”



Dr. Charng-Da Lu

The Center for Computational Research
The State University of New York at Buffalo
(紐約州立大學水牛城分校呂長達博士)

8/18 (T) 4:35 pm – 4:50 pm : Break

Room: MD-G123

Parallel Sessions:

8/18 (T) 4:50 pm – 6:10 pm : Technical Session D1-W1-T4:
Medicine/Public Health/Biotechnology/Bioinformatics (4)

Room: MD-G135



Chair: **Dr. Yi-Hsiang (Sean) Hsu**
Harvard University
(哈佛大學許益祥博士)

“Gene Set Testing, Stem Cells and Breast Cancer”



Dr. Di Wu
Postdoctoral Research Fellow
Department of Statistics
Harvard University
(哈佛大學博士)

“Medical Genetics: Using Pedigrees to Characterize the Founder Structure of a Closed Population”



Dr. Woei-Jyh (Adam) Lee
Fellow
National Institutes of Health
(美國國家衛生院李偉智博士)

“Using Modeling and Simulation on Personalized Medical Decision Support and Comparative Effectiveness Research”



Dr. Chih-Lin Chi
Postdoctoral Research Associate
Laboratory for Personalized Medicine, Center for Biomedical Informatics
Harvard Medical School
(哈佛醫學院紀志霖博士)

“Energy Restriction as an Antitumor Target of Thiazolidinediones”



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)

“Local Raster Scanning with Atomic Force Microscopy and its Application in Biology and Drug Development”



Peter I-Tsyuen Chang
Ph.D. Candidate in Mechanical Engineering
School of Engineering
Boston University
(波士頓大學機械系張以全)

**8/18 (T) 4:50 pm – 6:10 pm : Technical Session D1-W2-T4:
New Materials Science and Engineering, Nanotechnology (4)**

Room: MD-G119



Chair: **Professor Yu-Bin Chen**
National Cheng Kung University
(成功大學陳玉彬教授)

“Ultra-low-power Nonlinear Optical Devices”



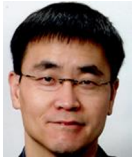
Professor Jung-Tsung Shen
 Department of Electrical & Systems Engineering
 Washington University in St. Louis
 (聖路易華盛頓大學電機暨系統工程學系沈榮聰教授)

"Optimization of Nano-Structures Embedded in Glass Windows for Energy-Saving"



Professor Yu-Bin Chen
 Assistant Professor, Department of Mechanical Engineering
 National Cheng Kung University
 (成功大學機械工程學系陳玉彬教授)

“”



Professor Hong Yang
 Department of Chemical Engineering
 University of Rochester
 (羅徹斯特大學楊教授)

8/18 (T) 4:50 pm – 6:10 pm : Technical Session D1-W3-T4: Room: MD-G125
C4I (4): Broadband Technologies and Multimedia Services, Cloud Computing and Cyber Security



Chair: **Mr. Tsung-Han Lin**
 Harvard University
 (哈佛大學林宗翰)

“A Simple Queueing Network Model of Mobility in a Campus Wireless Network”



Mr. Yung-Chih Chen
 Ph.D. Candidate in Computer Engineering
 Electrical and Computer Engineering Department
 University of Massachusetts Amherst
 (麻州大學安默斯特分校陳勇志)

“Making Virtual More Realistic: from a Computer Graphics Perspective”



Professor Wen-Chieh (Steve) Lin
 Department of Computer Science
 National Chiao Tung University
 (交通大學資訊工程學系林文杰教授)

“The Goals and Challenges of Click Fraud Penetration Testing Systems”



Dr. Jia-Yu (Tim) Pan
 Google U.S.A.
 (美國谷歌公司潘家煜博士)

Taiwan Night:

8/18 (T) 7:00 pm – 9:30 pm : Taiwan Cultural Festival

Film Festival (臺灣新銳電影回顧展)

Film Title: No Puedo Vivir Sin Ti (不能沒有你)

Venue: Carpenter Center, Harvard University (24 Quincy Street, Cambridge, MA 02138)



Organizer: **Mr. Steven Lai**
Director, Press Division
Taipei Economic and Cultural Office in Boston
(駐波士頓臺北經濟文化辦事處賴水池組長)

Day 2 (Friday, August 19, 2011): New Media & Creative Industries

8/19 (F) 8:30 am - 6:00 pm : Registration

Room: MD-G123

8/19 (F) 9:00 am - 9:50 am : Opening Speech

Room: MD-G115



Chair: **Professor Lin-shan Lee**
National Taiwan University
(臺灣大學李琳山教授)



Professor Lin-shan Lee
Dean, College of Electrical Engineering and Computer Science
National Taiwan University
(臺灣大學電機資訊學院李琳山院長)

Opening Keynote:

“Cultural Creative Industries v.s. National Palace Museum”



Dr. Kung-Shin Chou
Director, National Palace Museum
Republic of China (Taiwan)
(國立故宮博物院院長周功鑫博士)

**8/19 (F) 9:50 am - 11:10 am : Plenary Session 1:
New Media, Culture and Technology**

Room: MD-G115



Chair: **Professor C.-C. Jay Kuo**
University of Southern California
(南加州大學郭宗杰教授)

“World Culture and Heritage is One-click Away!
Have We Fully Explored the Potentials of New Media and Technology?”



Professor Ching-chih Chen
President, Global Connection and Collaboration, Inc.
(全球連結與合作董事長陳劉欽智教授)
Professor Emeritus of Simmons College
(美國波士頓西蒙斯學院榮譽教授)

“How an Art Museum Develops its Cultural Creative Applications and Services”



Professor Yung-Cheng Hsieh
 Dean, Office of Research and Development
 National Taiwan University of Arts
 (臺灣藝術大學研究發展處研發長謝顯丞教授)

8/19 (F) 11:10 am - 11:25 am : Break

Room: MD-G123

**8/19 (F) 11:25 am – 12:45 pm : Plenary Session 2:
 New Media, Entertainment Technology and Culture**

Room: MD-G115



Chair: **Professor Yung-Cheng Hsieh**
 National Taiwan University of Arts
 (臺灣藝術大學謝顯丞教授)

“Paradigm Shifts in Modern ICT Era and Future Trends”



Professor C.-C. Jay Kuo
 Director of the Signal and Image Processing Institute (SIPI) and
 Department of Electrical Engineering and Computer Science
 University of Southern California
 (南加州大學電機系郭宗杰教授)

“Melodic Variations: Toward Cross-Cultural Transformation”



Ms. Cheng-Zhi (Anna) Huang
 Ph.D. Candidate in Computer Science
 School of Engineering and Applied Sciences
 Harvard University
 (哈佛大學黃成之)

8/19 (F) 12:45 pm - 2:15 pm : Lunch

On Your Own

8/19 (F) 2:15 pm - 3:15 pm: Keynote Speech

Room: MD-G115



Moderator: **Professor Lin-shan Lee**
 National Taiwan University
 (臺灣大學李琳山教授)

“The Art of Tangible Bits”



Professor Hiroshi Ishii
 Muriel R. Cooper Professor of Media Arts and Sciences
 Associate Director of MIT Media Laboratory
 Head of Tangible Media Group, Media Lab
 Massachusetts Institute of Technology

**8/19 (F) 3:15 pm – 4:35 pm : Plenary Session 3:
 Creative Design, Digital Humanities**

Room: MD-G115



Chair: **Professor Yung-Cheng Hsieh**
National Taiwan University of Arts
(臺灣藝術大學謝顯丞教授)

“World Heritage for Digital Humanities: Sights in Creative Panophotography and Domoscopy”



Mr. Tito Dupret
Hypermedia Director of Patrimonium-mundi.org
Université Laval, Québec, Canada

“From Digital Archives to Digital Humanities”



Professor Jieh Hsiang
Distinguished Professor in Computer Science
Director, Research Center for Digital Humanities
National Taiwan University
(臺灣大學數位典藏中心主任暨資訊工程系特聘教授項潔教授)

8/19 (F) 4:35 pm – 4:50 pm : Break

Room: MD-G123

8/19 (F) 4:50 pm – 6:10 pm : Plenary Session 4:

Room: MD-G115

Future Development



Chair: **Professor Ching-chih Chen**
Global Connection and Collaboration & Simmons College
(全球連結與合作暨西蒙斯學院陳劉欽智教授)

Part A: 4:50 pm – 5:30 pm

“Towards Understanding the Ecology of Art History”



Dr. Maximilian Schich
DFG Visiting Research Scientist from Germany & CCNR
Northeastern University

Part B: 5:30 pm - 6:10 pm: Open Discussions and Q&A

Panel discussion will be participated by all invited speakers, including:



Professor Ching-chih Chen
Global Connection and Collaboration & Simmons College
(全球連結與合作暨西蒙斯學院陳劉欽智教授)



Dr. Kung-Shin Chou
National Palace Museum, Republic of China (Taiwan)
(國立故宮博物院周功鑫院長)



Mr. Tito Dupret
Université Laval, Québec, Canada



Professor Jieh Hsiang
National Taiwan University
(臺灣大學項潔教授)



Professor Yung-Cheng Hsieh
National Taiwan University of Arts
(臺灣藝術大學謝顯丞教授)



Professor Hiroshi Ishii
Massachusetts Institute of Technology



Professor C.-C. Jay Kuo
University of Southern California
(南加州大學郭宗杰教授)



Professor Lin-shan Lee
National Taiwan University
(臺灣大學李琳山教授)



Dr. Maximilian Schich
Northeastern University

Q&A open to all participants.