



**The 2nd Young Investigator Conference
(EITA-YIC 2012)**

"Leadership, Innovation, Growth"

**Cypress Ballroom
The Sheraton Palo Alto Hotel**

Thursday – Friday, July 26-27, 2012

Program

(Draft as of 7/8/12)

Day 1 (Thursday, July 26, 2012): Emerging Science & Technology

7/26 (Thu) 8:30 am - 5:00 pm: Registration

Room:

7/26 (Thu) 9:00 am - 9:50 am: Opening Speech

Room: Spruce



Chair: **Dr. Liang-Gee Chen**
National Taiwan University
(臺灣大學 陳良基博士)



Dr. Ching-Pin Chang
Stanford University
(史丹佛大學張景濱博士)

Opening Keynote:

<TBD>

Parallel Sessions:

**7/26 (Thu) 9:50 am - 11:20 am: Technical Session D1-W1-T1: Room: Juniper
Earth and Atmospheric Sciences, Aerospace and Ocean Engineering (1)**



Chair: **Professor Shu-Hua Chen**
University of California, Davis
(加州大學戴維斯分校陳淑華教授)

“Mathematical Modeling and Scientific Research”

Dr. Hung-Chi Kuo



Associate Dean, College of Science &
Chair Professor of Atmospheric Sciences
National Taiwan University

(臺灣大學理學院副院長郭鴻基特聘教授)

“Representation of Storm Weather in Numerical Climate Models”



Dr. Guang Jun Zhang

Research Meteorologist

Division of Climate, Atmospheric Science, Physical Oceanography
Scripps Institution of Oceanography

(斯克里普斯海洋研究所張廣俊博士)

“On the Limit of Predicting the Madden-Julian Oscillation”



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)

7/26 (Thu) 9:50 am - 11:20 am: Technical Session D1-W2-T1: Room: Spruce
Medicine, Public Health, Biomedical Science and Engineering (1)



Chair: **Dr. Cleo Yi-Fang Lee**

Stanford University

(史丹佛大學李怡芳博士)

“How Cells Respond to Their Mechanical Environment: from Substrate to Nucleus”



Dr. Julie Ying Hui Ji

Assistant Professor, Department of Biomedical Engineering

Purdue School of Engineering and Technology

Indiana University-Purdue University Indianapolis

(印第安納大學與普渡大學印第安納波里斯聯合分校生物醫學工程學系季英慧教授)

“Fingerprinting Ion Channel Dysfunction for Treating Cardiac Arrhythmias”



Dr. Ye Chen-Izu

Assistant Professor of Biomedical Engineering, Pharmacology, Medicine/
Cardiology

University of California, Davis

(加州大學戴維斯分校生物醫學工程學, 藥理學, 心臟學系陳晔教授)

“Toward an Imaging-Based Atlas of the Mouse Myocardial Fiber Structure”



Dr. Edward W. Hsu

Associate Professor, Department of Bioengineering

University of Utah

“Development of Nanoparticle-based Brain Tumor Therapeutic System”

Dr. Chung-Yin Huang

Postdoctoral Fellow, Department of Neurosurgery

Chang Gung Memorial Hospital

(長庚醫院神經外科黃瓊瑩博士)

7/26 (Thu) 9:50 am - 11:20 am: Technical Session D1-W3-T1: Room: Maple
New Materials Science and Engineering, Nanotechnology and New Green Energy (1)



Chair: **Professor Pei-Cheng Ku**
University of Michigan at Ann Arbor
(密西根大學安娜堡分校古培正教授)

“3D Bioactive Microspheres for Stem Cell Culture and Encapsulation”



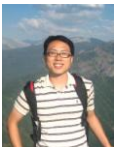
Dr. Jiasheng Yu
Assistant Professor, Department of Chemical Engineering
National Taiwan University
(臺灣大學化學工程學系游佳欣教授)

“Biomimetic Strategies for Engineering Protein- and Lipid-Based Biomaterials”



Dr. Xiaoyi Wu
Associate Professor, Department of Aerospace and Mechanical Engineering
The University of Arizona
(亞利桑納大學機械和航天工程系吳筱益教授)

“Nanobiology: Investigating Biological Processes at the Nanoscale”



Dr. Andrew Yu-Jen Wang
Postdoctoral Researcher, Department of Pediatrics
Stanford University
(史丹佛大學醫學院小兒科系王禹真博士)

“Enhanced Transfection Efficiency of PEGylated Cation Lipid-DNA Complexes Prepared with an Acid-Labile PEG-Lipid”



Dr. Chia-Ling Chan
Postdoctoral Research Associate, Materials Research Laboratory
University of California, Santa Barbara
(加州大學聖塔芭芭拉分校材料研究實驗室詹佳玲博士)

7/26 (Thu) 11:20 am - 11:35 am: Break

Parallel Sessions:

7/26 (Thu) 11:35 am – 1:05 pm: Technical Session D1-W1-T2: Room: Juniper
Earth and Atmospheric Sciences, Aerospace and Ocean Engineering (2)



Chair: **Professor Shau-Shiun (James) Jan**
National Cheng Kung University
(成功大學詹劭勳教授)

“Decision Making under Uncertainty with Application to Air Traffic Management”



Dr. Yan Wan

Assistant Professor, Department of Electrical Engineering
University of North Texas
(北德克萨斯大学电机工程学系万妍教授)

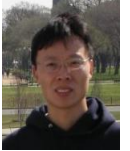
“Robust Alternative Position Navigation and Time (APNT) Systems for Aviation”



Dr. Sherman Lo

Senior Research Engineer, Global Positioning System (GPS) Lab
Stanford University

“Modeling and Computation for Large-scale Air Traffic Flow Optimization”



Dr. Dengfeng Sun

Assistant Professor, School of Aeronautics and Astronautics
Purdue University
(普渡大学航空航天工程系孫登峰教授)

**7/26 (Thu) 11:35 am – 1:05 pm: Technical Session D1-W2-T2: Room: Spruce
Medicine, Public Health, Biomedical Science and Engineering (2)**

Chair: **Dr. Pao-Yang Chen**
University of California, Los Angeles
(加州大學洛杉磯分校陳柏仰博士)

“Engineering Proteins for Sensing and Controlling Cellular Signals”



Dr. Michael Z. Lin

Assistant Professor, Departments of Pediatrics and Bioengineering
Stanford University

“Using Ultrasound Standing Wave Fields to Enhance Gene Delivery Efficiency – For Both Viral and Non-Viral DNA Vectors”



Dr. Yu-Hsiang Lee

Assistant Professor, Graduate Institute of Biomedical Engineering
National Central University
(中央大學生物醫學工程研究所李宇翔教授)

“Active DNA Demethylation during Plant Gametogenesis”



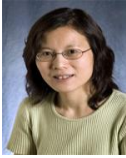
Dr. Tzung-Fu Hsieh

Associate Research Specialist, Department of Plant and Microbial Biology
University of California, Berkeley

**7/26 (Thu) 11:35 am – 1:05 pm: Technical Session D1-W3-T2: Room: Maple
New Materials Science and Engineering, Nanotechnology and New Green
Energy (2)**



Chair: **Professor Jung-Tsung Shen**
 Washington University in St. Louis
 (華盛頓大學聖路易斯校區沈榮聰教授)



Dr. Hong Shen
 Assistant Professor, Department of Chemical Engineering
 University of Washington

“Development of a M2M-based Agroecological Monitoring System – Making the M2M Technology to Large-Scale Practices and Beyond”



Dr. Richard (Cheng-Long) Chuang
 Postdoctoral Research Fellow, Intel-NTU Connected Context Computing Center
 Department of Bio-Industrial Mechatronics Engineering
 National Taiwan University
 (Intel-臺大創新研究中心, 臺灣大學生物產業機電工程學系莊欽龍博士)

“Transparent Photovoltaics”



Dr. Pei-Cheng Ku
 Assistant Professor, 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)

7/26 (Thu) 1:05 pm - 2:35 pm: Lunch

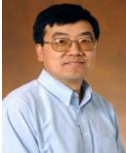
Parallel Sessions:

7/26 (Thu) 2:35 pm – 4:05 pm: Technical Session D1-W1-T3: Room: Juniper
Earth and Atmospheric Sciences, Aerospace and Ocean Engineering (3)



Chair: **Professor Wen-Wen Tung**
 Purdue University
 (普渡大學董文文教授)

“Harvesting Ocean Thermal Energy for Unmanned Underwater Explorations”



Dr. Yi Chao
 Principal Scientist
 Remote Sensing Solutions, Inc.
 (遥感技术与应用公司趙暉博士)

“Background Ozone and Carbon Monoxide over the North Atlantic for 2001-2011”



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

“Modification of Hurricane Helene (2006) Development by Dust-Radiation-Cloud Interactions”



Dr. Shu-Hua Chen

Associate Professor, Department of Land, Air, and Water Resources
University of California, Davis
(加州大學戴維斯分校陳淑華教授)

**7/26 (Thu) 2:35 pm – 4:05 pm: Technical Session D1-W2-T3: Room: Spruce
Medicine, Public Health, Biomedical Science and Engineering (3)**



Chair: **Dr. Leslie Chen**

Institute for Systems Biology
(系統生物研究所陳彥瑜博士)

“Road to Innovation: Burgeoning Technology that will Change Neurosurgery”



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)

“Finding Immune Mechanisms of Airway Inflammation in Pulmonary Diseases: the Role of Surfactant Protein D and Biomedical Informatics Applications”



Dr. Ko-Wei Lin

Postdoctoral Fellow, Division of BioMedical Informatics
School of Medicine
University of California, San Diego
(加州大學聖地牙哥分校醫學院林可薇博士)

“Erythroid/Myeloid Progenitors and Hematopoietic Stem Cells Originate from Distinct Populations of Endothelial Cells”

Dr. Michael Jin-Feng Chen

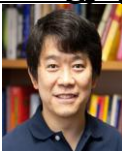
Post-doctoral Scientist, Stem Cell Program
Children's Hospital Boston
(波士頓兒童醫院陳錦峰博士)

“Intra-Uterine Calorie Restriction Regulates the Placental DNA Methylation Profile Influencing Fetal Development and Adult-type Chronic Diseases”

Dr. Pao-Yang Chen

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

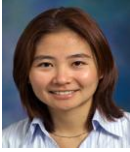
**7/26 (Thu) 2:35 pm – 4:05 pm: Technical Session D1-W3-T3: Room: Maple
New Materials Science and Engineering, Nanotechnology and New Green
Energy (3)**



Chair: **Professor Jung-Tsung Shen**

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

“Exchange Interactions in Perovskite Oxide Nanostructures”



Dr. Yayoi Takamura

Associate Professor, Department of Chemical Engineering and Materials Science
University of California, Davis

(加州大學戴維斯分校化學工程與材料科學學系高村教授)

“Computational Design of Photocatalytic Materials for Solar Powered Hydrogen Production”



Dr. Gyeong S. Hwang

Professor & Lyondell Corp. Endowed Faculty Fellow in Engineering
Department of Chemical Engineering
The University of Texas at Austin

“Microfluidic Applications in Optics and Biosensing”



Dr. Cindy K.Y. Tang

Assistant Professor, Department of Mechanical Engineering
Stanford University

“Thermal Conductivity of a Single Nylon-6 Nanofiber”



Dr. Ming-Chang Lu

Assistant Professor, Department of Mechanical Engineering
National Chiao Tung University

(交通大學機械工程學系呂明璋教授)

7/26 (Thu) 4:05 pm – 4:20 pm: Break

Parallel Sessions:

7/26 (Thu) 4:20 pm – 5:50 pm: Technical Session D1-W1-T4: Room: Juniper

Earth and Atmospheric Sciences, Aerospace and Ocean Engineering (4)

Smart Home



Chair: **Dr. Fang-Cheng Chan**

Illinois Institute of Technology

(伊利諾理工大學詹方正博士)

“On The Forefront of a New Generation of Aviation System Performance”



Dr. Seth Young

Associate Professor and Chair, Dept. of Aviation

Director, Center for Aviation Studies

The Ohio State University

“Global Navigation Satellite System Interference Monitoring System at Airport Environment”



Dr. Shau-Shiun (James) Jan

Associate Professor, Department of Aeronautics and Astronautics

National Cheng Kung University

(成功大學航空太空工程學系詹劭勳教授)

“Local Area Augmentation System (LAAS) Ground Receiver Interference Analysis and Mitigation”



Dr. Fang-Cheng Chan

Senior Research Associate, Department of Mechanical and Aerospace Engineering

Illinois Institute of Technology

(伊利諾理工大學機械和航天工程系詹方正博士)

7/26 (Thu) 4:20 pm – 5:50 pm: Technical Session D1-W2-T4: Room: Spruce
Medicine, Public Health, Biomedical Science and Engineering (4)



Chair: **Professor Ching-Pin Chang**

Stanford University

(史丹佛大學張景濱教授)

“Targeting Her2 in Tumor-initiating Cells in Non-Her2 Amplified Breast Cancer”



Dr. Cleo Yi-Fang Lee

Postdoctoral Research Fellow, Stanford Cancer Institute

Stanford University

(史丹佛大學醫學院癌症研究所李怡芳博士)

“Systems Biology and Medicine”



Dr. Leslie Chen

Research Scientist, Institute for Systems Biology

(系統生物研究所陳彥瑜博士)



Dr. Pin Yuan Chen

Visiting Scientist, University of California, San Francisco

Attending Physician and Assistant Professor

Department of Neurological Surgery

Chang Gung Memorial Hospital Linkou Medical Center

“Epigenetic Mechanism of Heart Muscle Development and Disease”



Dr. Ching-Pin Chang

Associate Professor, Department of Medicine

Stanford University

(史丹佛大學醫學院醫學系張景濱教授)

7/26 (Thu) 4:20 pm – 5:50 pm: Technical Session D1-W3-T4: Room: Maple
New Materials Science and Engineering, Nanotechnology and New Green Energy (4)

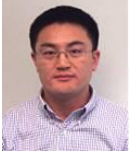


Chair: **Professor Pei-Cheng Ku**

University of Michigan at Ann Arbor

(密歇根大學安娜堡分校電機系古培正教授)

“Emerging Charge Trapping Nonvolatile Memories”



Dr. Jianlin Liu
 Professor, Department of Electrical Engineering
 University of California, Riverside
 (加州大学河滨分校电机工程学系刘建林教授)

" Plasmonic Metamaterials and Their Applications in Super Resolution Imaging "



Dr. Zhaowei Liu
 Assistant Professor, Department of Electrical and Computer Engineering
 University of California, San Diego
 (加州大学圣地亚哥分校电子及计算机工程系刘照伟教授)

"Nanostructured Thermoelectric Materials for Waste Heat Recovery"



Dr. Zhixi Bian
 Assistant Adjunct Professor, Department of Electrical Engineering
 University of California, Santa Cruz
 (加州大学圣克鲁兹分校电机工程学系边志喜教授)

" Quantum Nano-photonics: Photonics Interacting with Atomic Degrees of Freedom "



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)

Day 2 (Friday, July 27, 2012): New Media & Creative Industries

7/27 (Fri) 8:30 am - 5:00 pm: Registration

Room:

7/27 (Fri) 9:30 am - 10:30 am: Opening Speech

Room: Spruce



Chair: **Dr. Liang-Gee Chen**
 National Taiwan University
 (臺灣大學陳良基博士)



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

Opening Keynote:



Dr. Jane Yung-Jen Hsu
 Chair and Professor
 Department of Computer Science and Information Engineering
 National Taiwan University
 (台灣大學資訊工程學系系主任許永真教授)

7/27 (Fri) 10:30 am - 11:20 am: Plenary Session:

Room: Spruce



Chair: **Dr. Jia-Yu (Tim) Pan**
 Google Inc.
 (美國谷歌公司潘家煜博士)

Ms. Chun-Huan Ho
 Managing Director, Museum Shops & Restaurants
 National Palace Museum
 (故宮博物院商店與餐飲服務何春寰總經理)

7/27 (Fri) 11:20 am - 11:35 am: Break

Parallel Sessions:

7/27 (Fri) 11:35 am - 1:05 pm: Technical Session D2-W1-T1: Cloud Computing, Cyber Security, and Data Center Room: Spruce



Chair: **Dr. Ching-Chih Weng**
 Facebook, Inc.
 (Facebook 翁竟智博士)

“Security Challenges of the Internet of Things (IoT)”



Dr. Meiyuan Zhao
 Senior Research Scientist
 Intel Labs
 (英特尔研究院赵玫璦博士)



Dr. S. (Shyhtsun) Felix Wu
 Professor, Department of Computer Science
 University of California, Davis
 (加州大学戴维斯分校计算机科学系吳士駿教授)

“Combating Click Fraud: Challenges and Approaches”



Dr. Jia-Yu (Tim) Pan
 Software Engineer
 Google Inc.
 (美國谷歌公司潘家煜博士)

7/27 (Fri) 11:35 am - 1:05 pm: Technical Session D2-W2-T1 New Media, Web, and Entertainment Technology Room: Maple



Chair: **Dr. Jia-Yu (Tim) Pan**
 Google Inc.
 (美國谷歌公司潘家煜博士)

“Challenges and Opportunities of Machine Learning Research”



Dr. Chih-Jen Lin
 Distinguished Professor
 Department of Computer Science and Information Engineering
 National Taiwan University
 (台灣大學資訊工程學系林智仁特聘教授)

“Life of a Data Miner at Google”



Dr. Yu-To Chen
 Quantitative Analyst, Google Inc.
 (美國谷歌公司陳毓鐸博士)

“Directed Learning”



Dr. Edward Yi-Hao Kao
 Information Systems Lab
 Department of Electrical Engineering
 Stanford University
 (史丹佛大學電機系高奕豪博士)

7/27 (Fri) 1:05 pm - 2:35 pm: Lunch

Parallel Sessions:

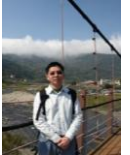
**7/27 (Fri) 2:35 pm - 4:05 pm: Technical Session D2-W1-T2:
 Cloud Computing, Cyber Security, and Data Center**

Room: Spruce



Chair: **Dr. Ching-Chih Weng**
 Facebook, Inc.
 (Facebook 翁竟智博士)

“Responding to Attacks in Cloud Computing Environment”



Dr. Yu-Sung (Hank) Wu
 Assistant Professor, Department of Computer Science
 National Chiao-Tung University
 (交通大學資訊工程系吳育松教授)

“Cloud Data Protection for the Masses”



Dr. Elaine (Runting) Shi
 Research Scientist, AMP Lab
 University of California, Berkeley
 (加州大学伯克利分校石润婷博士)

“Erasure Coding and Data Storage at Facebook”



Dr. Scott Chun-Yang Chen
 Facebook, Inc.
 (Facebook 陳俊仰博士)

**7/27 (Fri) 2:35 pm - 4:05 pm: Technical Session D2-W2-T2:
New Media, Web, and Entertainment Technology**

Room: Maple



Chair: **Dr. Yu-To Chen**
Google Inc.
(美國谷歌公司陳毓鐸博士)

“Everyday Sensing and Feedback”



Dr. Hao-Hua (Hao) Chu
Professor, Department of Computer Science and Information Engineering
Graduate Institute of Networking and Multimedia
National Taiwan University
(台灣大學資訊工程學系朱浩華教授)

“Which Tweets Will Be Headlines? Hierarchical Bayesian Models for Bridging Social Media and Traditional Media”



Dr. Yan Liu
Assistant Professor, Department of Computer Science
University of Southern California
(南加州大学计算机科学系刘燕教授)

“DBLOG: an Open Universe Probabilistic Programming Language for Relational Modeling”

Dr. Lei Li
Postdoctoral Fellow, Department of Electrical Engineering and Computer Science
University of California, Berkeley
(加州大学伯克利分校李磊博士)

7/27 (Fri) 4:05 pm – 4:20 pm: Break

Parallel Sessions:

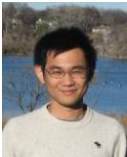
**7/27 (Fri) 4:20 am - 5:50 pm: Technical Session D2-W1-T3:
Cloud Computing, Cyber Security, and Data Center**

Room: Spruce



Chair: **Dr. Jia-Yu (Tim) Pan**
Google Inc.
(美國谷歌公司潘家煜博士)

“Cloud-based Speech Recognition for Mobile Applications”



Dr. Yun-Hsuan Sung
Senior Research Scientist
Google Inc.
(美國谷歌公司宋雲軒博士)

“Development of New Gerontechnologies and Gerontechnologists in a Rapidly Aging World”

Dr. Hen-I Yang
Smart Home Laboratory
Department of Computer Science
Iowa State University

(愛荷華州立大學計算機科學系楊恆毅博士)

“Facebook Recommendation System for Heterogeneous Content in Social Networks”



Dr. Ching-Chih Weng

Software Engineer
Facebook, Inc.

(Facebook 翁竟智博士)

**7/27 (Fri) 4:20 am - 5:50 pm: Technical Session D2-W2-T3:
New Media, Web, and Entertainment Technology**

Room: Maple



Chair: **Dr. Scott Chun-Yang Chen**

Facebook, Inc.

(Facebook 陳俊仰博士)

“Mobile Sensing for Behavior-aware Mobile Computing: a Language Approach”



Professor Joy Ying Zhang

Research Assistant Professor, Department of Electrical and Computer
Engineering

Carnegie Mellon University Silicon Valley

(卡内基梅隆大学硅谷校区电子与计算机工程系张盈教授)

“Taiwan's Representative Industrial Developments in Computer Graphics”



Professor Yu-Chi Lai

Assistant Professor, Department of Computer Science and Information
Engineering

National Taiwan University of Science and Technology

(台灣科技大學資訊工程系賴祐吉教授)



Dr. Jack M. Wang

Postdoctoral Scholar

Computer Graphics Lab and Neuromuscular Biomechanics Lab

Stanford University

(史丹佛大學王孟傑博士)