



**The Third EITA-Bio Conference  
(EITA-Bio 2015) or (EITA-EITC 2015)**

**"Recent Research in Biomedical Research"**

**Barry Lam Hall, College of EECS  
National Taiwan University  
Taipei, Republic of China (Taiwan)**

**Saturday-Sunday, October 24-25, 2015**

**Program**

**(Draft as of 10/30/15)**

***Day 1 (Saturday, October 24, 2015)***

**10/24 (Sat) 8:00 am - 4:00 pm: Registration**

Room: **Barry Lam Hall: BL-101**

**10/24 (Sat) 9:30 am - 10:00 am: Opening Session**



Chair: **Dr. Chyung-Ru Wang**, Professor, Department of Microbiology and Immunology, Feinberg School of Medicine, Northwestern University (西北大學醫學院王瓊如教授)



Chair: **Dr. Hsueh-Fen Juan**, Professor, Institute of Biomedical Electronics and Bioinformatics, Institute of Molecular and Cellular Biology, and Department of Life Science, Center for Systems Biology and Bioinformatics National Taiwan University (台灣大學分子細胞生物學研究所阮雪芬教授)  
Room: **Barry Lam Hall: BL-101**

**Opening Remarks:**



**Dr. Eric Y. Chuang**  
Professor, Department of Electrical Engineering, National Taiwan University  
Director and Professor, Graduate Institute of Biomedical Electronics and Bioinformatics  
Professor, Department of Electrical Engineering & Department of Life Science & Graduate Institute of Epidemiology and Preventive Medicine & Institute of

Zoology & Genome and Systems Biology Degree Program, College of Life Science & Graduate Institute of Oncology  
Director, Yong Lin Biomedical Engineering Center  
Deputy Director, Research and Development Center for Medical Devices  
Principal Investigator, Bioinformatics and Biostatistics Core Lab, NTU Center of Genomic Medicine  
National Taiwan University  
(臺灣大學電機工程學系與生醫電子與資訊學研究所所長莊曜宇教授)

## **Plenary Sessions:**

### **10/24 (Sat) 10:00 am - 11:00 am: Plenary Session (I):**



Chair: **Dr. Hsueh-Fen Juan**, Professor, Institute of Biomedical Electronics and Bioinformatics, Institute of Molecular and Cellular Biology, and Department of Life Science, Center for Systems Biology and Bioinformatics National Taiwan University (台灣大學分子細胞生物學研究所阮雪芬教授)  
Room: **Barry Lam Hall: BL-101**

### **Plenary Speaker:**



“Big Challenges of Big Data: What are the Prospects for the Future of Precision Medicine?”

**Dr. Yu Shyr**

Harold L. Moses Chair in Cancer Research  
Director, Vanderbilt Center for Quantitative Sciences  
Director, Vanderbilt Technologies for Advanced Genomics Analysis and Research Design  
Professor of Biostatistics, Biomedical Informatics, Cancer Biology, and Health

Policy  
Vanderbilt University School of Medicine  
(范德堡大學定量科學中心主任石瑜教授)

### **10/24 (Sat) 11:00 am - 11:15 am: Coffee Break**

### **10/24 (Sat) 11:15 am – 12:15 pm: Plenary Session (II)**



Chair: **Dr. Chyung-Ru Wang**, Professor, Department of Microbiology and Immunology, Feinberg School of Medicine, Northwestern University (西北大學醫學院王瓊如教授)  
Room: **Barry Lam Hall: BL-101**

**Plenary Speaker:**



“Big data in E. coli science”

**Dr. Hirotada Mori**

Professor, Department of Biological Sciences  
Nara Institute of Science and Technology

(奈良先端科學技術大學院大學生物科技學院森浩禎教授)

**10/24 (Sat) 11:35 am – 12:55 pm: Student Poster Competition**



Chair: **Dr. Hsueh-Fen Juan**, Professor, Institute of Biomedical Electronics and Bioinformatics, Institute of Molecular and Cellular Biology, and Department of Life Science, Center for Systems Biology and Bioinformatics National Taiwan University (台灣大學分子細胞生物學研究所阮雪芬教授)



Co-Chair: Dr. Chia-Lang Hsu, Postdoctoral Fellow, Institute of Molecular and Cellular Biology, and Department of Life Science, National Taiwan University (台灣大學分子細胞生物學研究所許家郎博士)

Room: **Barry Lam Hall: B1博理藝廊**

**10/24 (Sat) 12:15 pm - 2:15 pm: Lunch Break**

**Parallel Sessions:**

**10/24 (Sat) 2:15 pm – 3:35 pm: Technical Session D1-W1-T1: Machine Learning and Big Data, Biostatistics, In Silico Research and Biomedical Informatics**



Chair: **Dr. Aichi Chien**, Associate Professor, Division of Interventional Neuroradiology, Department of Radiological Sciences, Biomedical Physics IDP, David Geffen School of Medicine at UCLA, Ronald Reagan UCLA Medical Center (加州大學洛杉磯分校大衛格芬醫學院簡艾琪教授)

Room: **Barry Lam Hall: BL-113**



“A Bioinformatics Approach to the Infection of Hepatitis C Virus Using Human Protein-Protein Interaction Data”

**Dr. Ming-Jing Hwang**

Research Fellow, Institute of Biomedical Sciences  
Academia Sinica

(中央研究院生物醫學科學研究所黃明經博士)



“Genetic Association Studies on Alzheimer’s Disease in Taiwan Elderly”

**Dr. Karen Yen-Ching Chen**

Associate Professor, Institute of Epidemiology and Preventive Medicine,  
Department of Public Health  
Research Center for Gene, Environment and Human Health, College of Public  
Health  
National Taiwan University

(台灣大學流行病學與預防醫學研究所程蘊菁教授)



“Two-Stage Modified Toxicity Probability Interval Design for Low Target Toxicity Rate”

**Dr. Sheau-Chiann Chen**

Research Fellow, Center for Quantitative Sciences  
Vanderbilt University School of Medicine

(范德堡大學定量科學中心陳曉倩博士)



“Translating genomic sequences into neutralization activities and off-target effects of antibodies against influenza toward clinical trial outcomes”

**Dr. Hsih-Te Yang**

Assistant Professor, Institute of Medical Informatics  
Department of Computer Science and Information Engineering  
National Cheng Kung University

(成功大學資訊工程學系楊士德教授)

**10/24 (Sat) 2:15 pm – 3:35 pm: Technical Session D1-W2-T1: Medicine and Life Sciences, Biological and Biomedical Sciences**



Chair: **Dr. Nei-Li Chan**, Professor, Institute of Biochemistry and Molecular Biology, National Taiwan University (台灣大學醫學院生物化學暨分子生物學研究所詹迺立教授)

Room: **Barry Lam Hall: BL-112**



“Role of a tumor-associated NADH oxidase (tNOX) in stress-mediated cell death”

**Dr. Pin-Ju Chueh**

Professor, Institute of Biomedical Sciences  
Director, Division of Academic Exchange, Office of International Affairs  
National Chung Hsing University

(中興大學生物醫學研究所關斌如教授)



“Expression and Homeostasis of Stemness Properties in Cancer Disease”

**Dr. Rita Yen-Hua Huang**

Professor and Director, Department of Biochemistry and Molecular Cell Biology, College of Medicine  
Director, Center for Cell Therapy and Regeneration Medicine  
Taipei Medical University

(臺北醫學大學醫學科學研究所生物化學暨細胞分子生物學科主任黃彥華教授)



“Toward complete understanding of metabolic network of E. coli K-12: exploration of missing pathways by the genetic interaction analysis”

**Dr. Ai Muto**

Assistant Professor, Department of Biological Sciences  
Nara Institute of Science and Technology

(奈良先端科學技術大學院大學生物科技學院武藤愛教授)



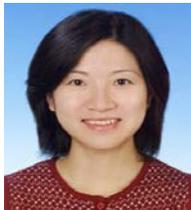
“Introduction of Micro-Western Array Platform and Biomedical Applications”

**Dr. Chih-Pin Chuu**

Associate Investigator, Institute of Cellular and System Medicine  
National Health Research Institutes

(國家衛生研究院細胞及系統醫學研究所褚志斌博士)

**10/24 (Sat) 2:15 pm – 3:35 pm: Technical Session D1-W3-T1:  
Biomaterials, Bio-SoC, Bio-Nanotech, Bio-NEMS/Bio-MEMS, and  
Biomedical Engineering and Systems**



Chair: **Dr. Chihchen Chen**, Associate Professor, Institute of NanoEngineering and MicroSystems (NEMS), National Tsing Hua University (清華大學奈米工程與微系統研究所陳致真教授)

Room: **Barry Lam Hall: BL-114**



“Nano/Micro Fluidic Systems for Circulating Tumor Cells (CTCs) Rapid Detection and Diagnosis”

**Dr. Fan-Gang Tseng**

Distinguished Professor, Department of Engineering and System Science  
Deputy Director, Biomedical Technology Research Center  
National Tsing-Hua University

(清華大學工程與系統科學系曾繁根教授)



**Dr. Chih-Ting Lin**

Associate Professor, Department of Electrical Engineering  
National Taiwan University

(台灣大學電機工程學系林致廷教授)

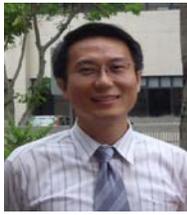


“Effects of Cold Plasma on Human Dental Pulp Stem Cells”

**Dr. Yun-Chien Cheng**

Assistant Professor, Department of Medical Engineering  
National Chiao-Tung University

(交通大學機械工程學系鄭雲謙教授)



“A Bead-Based Quantification Technique for Microorganisms using Optical Diffusometry”

**Dr. Oswald Han-Sheng Chuang**

Associate Professor, Department of Biomedical Engineering  
National Cheng Kung University

(成功大學生物醫學工程學系莊漢聲教授)

**10/24 (Sat) 2:15 pm – 3:35 pm: Technical Session D1-W4-T1: Wireless, Multimedia and Virtual Reality Health, Biomedical Devices and Sensing Systems, Cyber Security, and the Internet of Things (IoT) for Health**



Chair: **Dr. Ai-Chun Pang**, Director and Professor, Graduate Institute of Networking and Multimedia, and Professor, Department of Computer Science and Information Engineering, National Taiwan University (臺灣大學資訊工程學系兼資訊網路與多媒體研究所所長逢愛君教授)

Room: **Barry Lam Hall: BL-103**



**Dr. Feipei Lai**

Professor, Graduate Institute of Biomedical Electronics and Bioinformatics  
Department of Electrical Engineering  
National Taiwan University

(台灣大學電機工程學系生醫電子與資訊學研究所賴飛鵬教授)



“Nationwide Integrated Electronic Health Records: Opportunities and Challenges”

**Dr. Chien-Tsai Liu**

Professor and Chair, Graduate Institute of Biomedical Informatics  
Taipei Medical University

(臺北醫學大學醫學資訊研究所所長劉建財教授兼所長)



“Wireless Healthcare and Related Life Style Applications”

**Dr. Hsi-Pin Ma**

Associate Professor, Institute of Communications Engineering and  
Department of Electrical Engineering  
National Tsing Hua University

(清華大學電機工程學系馬席彬教授)



“Multiuser MIMO Systems: From Rate Adaptation to User Selection”

**Dr. Kate Ching-Ju Lin**

Associate Research Fellow, Research Center for Information Technology  
Innovation

Academia Sinica

(中央研究院資訊科技創新研究中心林靖茹博士)

**10/24 (Sat) 3:35 pm – 3:50 pm: Coffee Break**

**Parallel Sessions:**

**10/24 (Sat) 3:50 pm – 5:10 pm : Technical Session D1-W1-T2: Machine Learning and Big Data, Biostatistics, In Silico Research and Biomedical Informatics**



Chair: **Dr. Hsuan-Cheng Huang**, Director and Professor, Institute of  
BioMedical Informatics, National Yang Ming University (陽明大學生物醫學資訊研  
究所長黃宣誠教授)

Room: **Barry Lam Hall: BL-113**



**Dr. Von-Wen Soo**

Professor, Department of Computer Science  
National Tsing Hua University

(清華大學資訊系統與應用研究所蘇豐文教授)



“Next-generation Sequencing Data Analysis in Biomedical Applications”

**Dr. Chien-Yu Chen**

Professor, Department of Bio-Industrial Mechatronics Engineering

National Taiwan University

(臺灣大學生物產業機電工程學系陳倩瑜教授)



“A regulatory similarity measure using the location information of  
transcription factor binding sites in *Saccharomyces cerevisiae*”

**Dr. Darby Tien-Hao Chang**

Professor, Department of Electric Engineering

National Cheng Kung University

(成功大學電機工程學系張天豪教授)



“Monotonic Feature Selector (MFSelector)”

**Dr. I-Fang Chung**

Professor, Institute of BioMedical Informatics  
National Yang Ming University

(陽明大學生物醫學資訊研究所鍾翊方教授)

**10/24 (Sat) 3:50 pm – 5:10 pm: Technical Session D1-W2-T2: Medicine and Life Sciences, Biological and Biomedical Sciences**



Chair: **Dr. Hsueh-Fen Juan**, Professor, Institute of Biomedical Electronics and Bioinformatics, Institute of Molecular and Cellular Biology, and Department of Life Science, Center for Systems Biology and Bioinformatics National Taiwan University (台灣大學分子細胞生物學研究所阮雪芬教授)

Room: **Barry Lam Hall: BL-112**



“The roles of androgens and androgen receptor in stem and progenitor cells for skeletal regeneration”

**Dr. Hong-Yo Kang**

Professor, Graduate Institute of Clinical Medical Sciences  
College of Medicine, Chang Gung University

(長庚大學臨床醫學研究所康宏佑教授)



“Prc contributes to Escherichia coli evasion of classical complement-mediated serum killing”

**Dr. Ching-Hao Teng**

Associate Professor, Institute of Basic Medical Sciences  
National Cheng Kung University Medical College

(成功大學基礎醫學研究所鄧景浩教授)



“Superresolution Mapping Reveals the Molecular Architecture of Primary Cilia”

**Dr. Jung-Chi Liao**

Associate Research Fellow, Institute of Atomic and Molecular Sciences  
Academia Sinica

(中央研究院原子與分子科學研究所廖仲麒博士)



**Dr. Chih-Hong Wang**

Assistant Professor, Department of Biological Science and Technology  
National Chiao Tung University

(交通大學生物科技學系王志宏教授)

**10/24 (Sat) 3:50 pm – 5:10 pm : Technical Session D1-W3-T2: Biomaterials, Bio-SoC, Bio-Nanotech, Bio-NEMS/Bio-MEMS, and Biomedical Engineering and Systems**



Chair: **Dr. Fan-Gang Tseng**  
Distinguished Professor, Department of Engineering and System Science  
Deputy Director, Biomedical Technology Research Center  
National Tsing-Hua University  
(清華大學工程與系統科學系曾繁根教授)  
Room: **Barry Lam Hall: BL-114**



"Diffuse Optical Tomographic System"  
**Dr. Min-Chun Pan**  
Professor, Graduate Institute of Biomedical Engineering  
Department of Mechanical Engineering  
National Central University  
(中央大學生物醫學工程研究所潘敏俊教授)



"A label-free electrochemical impedimetry-based affinity biochip integrated with the AC electrokinetic mixer"  
**Dr. Ching-Chou Wu**  
Professor, Department of Bio-industrial Mechatronics Engineering  
National Chung Hsing University  
(中興大學生物產業機電工程學系吳靖宙教授)



"Bioinspired Conducting Polymers to Selectively Couple PC12 Cells"  
**Dr. Shyh-Chyang Luo**  
Assistant Professor, Department of Materials Science and Engineering  
National Taiwan University  
(臺灣大學材料科學及工程學系羅世強教授)



**Dr. Ling Chao**  
Assistant Professor, Department of Chemical Engineering  
National Taiwan University  
(臺灣大學化學工程學系趙玲教授)

**10/24 (Sat) 3:50 pm – 5:10 pm : Technical Session D1-W4-T2: Wireless, Multimedia and Virtual Reality Health, Biomedical Devices and Sensing Systems, Cyber Security, and the Internet of Things (IoT) for Health**



Chair: **Dr. Feipei Lai**

Professor, Graduate Institute of Biomedical Electronics and Bioinformatics  
Department of Electrical Engineering  
National Taiwan University

(台灣大學電機工程學系生醫電子與資訊學研究所賴飛鵬教授)

Room: **Barry Lam Hall: BL-103**



“Convex Geometric Analysis for Non-negative Blind Source Separation”

**Dr. Chong-Yung Chi**

Professor, Institute of Communications Engineering and  
Department of Electrical Engineering  
National Tsing Hua University

(清華大學電機工程學系祁忠勇教授)



“Design and Implementation of Physical Sensing and Fuzzy Control for  
Dynamic Shuttle Walking Exercise”

**Dr. Chih-Yu Wen**

Professor, Department of Electrical Engineering  
Director, Center for Research and Development of Engineering Technology  
National Chung Hsing University

(中興大學電機工程學系溫志煜教授)



“Next Generation Mission-Critical Machine-to-Machine Communications:  
Opportunities and Challenges”

**Dr. Hung-Yu Wei**

Professor, Department of Electrical Engineering  
National Taiwan University

(台灣大學電機工程學系魏宏宇教授)



“Design and Implementation of a Low-Complexity O-QPSK Transceiver with  
Spatial Modulation for Wireless Sensor Networks”

**Dr. Pei-Yun Tsai**

Associate Professor, Department of Electrical Engineering  
National Central University

(中央大學電機工程學系蔡佩芸教授)

**Day 2 (Sunday, October 25, 2015):**

**10/25 (Sun) 8:00 am - 4:00 pm: Registration**

Room: **Barry Lam Hall: BL-101**

**10/25 (Sun) 8:45 am - 10:00 am: Panel Discussions - Big Data Analytics, Data Science and Machine Learning: Challenges and Opportunities**



Moderator and Panelist: **Dr. Hsuan-Cheng Huang**, Director and Professor, Institute of BioMedical Informatics, National Yang Ming University (陽明大學生物醫學資訊研究所長黃宣誠教授)

Room: **Barry Lam Hall: BL-113**

**Panelists:**



**Dr. Yu Shyr**

Harold L. Moses Chair in Cancer Research  
Director, Vanderbilt Center for Quantitative Sciences  
Director, Vanderbilt Technologies for Advanced Genomics Analysis and Research Design  
Professor of Biostatistics, Biomedical Informatics, Cancer Biology, and Health Policy

Vanderbilt University School of Medicine

(范德堡大學定量科學中心主任石瑜教授)



**Dr. Hirotada Mori**

Professor, Department of Biological Sciences  
Nara Institute of Science and Technology  
(奈良先端科學技術大學院大學生物科技學院森浩禎教授)



**Dr. Chien-Yu Chen**

Professor, Department of Bio-Industrial Mechatronics Engineering  
National Taiwan University

(臺灣大學生物產業機電工程學系陳倩瑜教授)



**Dr. Aichi Chien**

Associate Professor, Division of Interventional Neuroradiology, Department of Radiological Sciences, Biomedical Physics IDP, David Geffen School of Medicine at UCLA, Ronald Reagan UCLA Medical Center

(加州大學洛杉磯分校大衛格芬醫學院簡艾琪教授)

## **Parallel Sessions:**

### **10/25 (Sun) 10:00 am – 11:20 am: Technical Session D2-W1-T1: Machine Learning and Big Data, Biostatistics, In Silico Research and Biomedical Informatics**



Chair: **Dr. Aichi Chien**, Associate Professor, Division of Interventional Neuroradiology, Department of Radiological Sciences, Biomedical Physics IDP, David Geffen School of Medicine at UCLA, Ronald Reagan UCLA Medical Center (加州大學洛杉磯分校大衛格芬醫學院簡艾琪教授)

Room: **Barry Lam Hall: BL-113**



“Identifying simple sequence repeats (SSRs) for personal genomes”

**Dr. Tun-Wen Pai**

Professor, Department of Computer Science and Engineering  
National Taiwan Ocean University

(臺灣海洋大學資訊工程學系白敦文教授)



“Contribution of Sequence Motif, Chromatin State and DNA Structure Features to Predictive Models of Transcription Factor Binding in Yeast”

**Dr. Huai-Kuang Tsai**

Associate Research Fellow, Institute of Information Science  
Academia Sinica

(中央研究院資訊科學研究所蔡懷寬博士)



“Combination of Genomic Technologies and Bioinformatics for Exploring New Toxicogenomics Biomarkers”

**Dr. Sher Singh**

Associate Professor, Department of Life Science  
National Taiwan Normal University

(臺灣師範大學生命科學系沈林琥教授)



“Identification of B-cell Epitopes Based on Immunoinformatics Approaches”

**Dr. Emily Chia-Yu Su**

Assistant Professor, Graduate Institute of Biomedical Informatics  
Taipei Medical University

(臺北醫學大學醫學資訊研究所蘇家玉教授)



“Biomarker discovery—Issues in ranking, model selection, and p-value calculation”

**Dr. Torbjörn E. M. Nordling**

Assistant Professor, Department of Mechanical Engineering  
National Cheng Kung University

**10/25 (Sun) 10:00 am – 11:20 am: Technical Session D2-W2-T1: Medicine and Life Sciences, Biological and Biomedical Sciences**



Chair: **Dr. Nei-Li Chan**, Professor, Institute of Biochemistry and Molecular Biology, National Taiwan University (台灣大學醫學院生物化學暨分子生物學研究所詹迺立教授)

Room: **Barry Lam Hall: BL-112**



“The interaction between metabolism to immunity”

**Dr. Chia-Lin Hsu**

Assistant Professor, Institute of Microbiology and Immunology  
National Yang-Ming University

(陽明大學微生物及免疫學研究所徐嘉琳教授)



**Dr. Helene Minyi Liu**

Assistant Professor, Department of Clinical Laboratory Sciences and Medical Biotechnology  
National Taiwan University

(臺灣大學醫學院醫學檢驗暨生物技術學系劉旻禕教授)

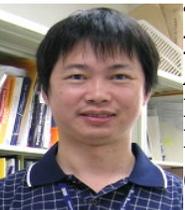


“Application of dendritic cell platform in medical research”

**Dr. Ching-Liang Chu**

Associate Professor, Graduate Institute of Immunology  
College of Medicine, National Taiwan University

(臺灣大學醫學院免疫學研究所朱清良教授)



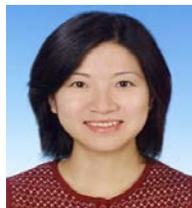
“Recombinant lipopeptide-based therapeutic HPV vaccine”

**Dr. Shih-Jen Liu**

Associate Investigator  
National Institute of Infectious Diseases and Vaccinology  
National Health Research Institutes

(國家衛生研究院感染症與疫苗研究所劉士任博士)

**10/25 (Sun) 10:00 am – 11:20 am: Technical Session D2-W3-T1:  
Biomaterials, Bio-SoC, Bio-Nanotech, Bio-NEMS/Bio-MEMS, and  
Biomedical Engineering and Systems**



Chair: **Dr. Chihchen Chen**, Associate Professor, Institute of NanoEngineering and MicroSystems (NEMS), National Tsing Hua University (清華大學奈米工程與微系統研究所陳致真教授)

Room: **Barry Lam Hall: BL-114**



“Three-dimensional refractive-index microscopy for live-cell imaging”

**Dr. Kung-Bin Sung**

Associate Professor, Graduate Institute of Biomedical Electronics and Bioinformatics

Department of Electrical Engineering

National Taiwan University

(台灣大學電機工程學系生醫電子與資訊學研究所宋孔彬教授)



“Fiber-needle optical coherence tomography image-guided system to assist epidural anesthesia”

**Dr. Wen-Chuan Kuo**

Professor, Institute of Biophotonics

National Yang-Ming University

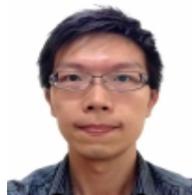
(陽明大學生醫光電研究所郭文娟教授)



**Dr. Meng-Tsan Tsai**

Associate professor, Graduate Institute of Electro-Optical Engineering  
Chang Gung University

(長庚大學光電工程研究所蔡孟燦教授)



“High-Speed Direct Visualization of Dynamics at the Nanoscale in Biological Systems”

**Dr. Chia-Lung Hsieh**

Assistant Research Fellow, Institute of Atomic and Molecular Science  
Academia Sinica

(中央研究院原子與分子科學研究所謝佳龍博士)



“Bilirubin Molecular Imaging for the Diagnosis of Cancers”

**Dr. Tzu-Ming Liu**

Associate Professor, Institute of Biomedical Engineering  
National Taiwan University

(台灣大學醫學工程學研究所劉子銘教授)

**10/25 (Sun) 10:00 am – 11:20 am: Technical Session D2-W4-T1: Wireless, Multimedia and Virtual Reality Health, Biomedical Devices and Sensing Systems, Cyber Security, and the Internet of Things (IoT) for Health**



Chair: **Dr. Ai-Chun Pang**, Director and Professor, Graduate Institute of Networking and Multimedia, and Professor, Department of Computer Science and Information Engineering, National Taiwan University (臺灣大學資訊工程學系兼資訊網路與多媒體研究所所長逢愛君教授)

Room: **Barry Lam Hall: BL-103**



“Interactive Technologies in Arts”

**Dr. Shih-Wei Sun**

Assistant Professor, Department of New Media Art  
Director, Ultra-Communication Vision Laboratory  
Taipei National University of the Arts  
(臺北藝術大學新媒體藝術學系孫士章教授)



“Mental Disorder Detection and Measurement using Latent Dirichlet Allocation and SentiWordNet”

**Dr. Hana Chih-Hua Tai**

Assistant Professor, Department of Computer Science and Information Engineering  
National Taipei University  
(台北大學資訊工程學系戴志華教授)



“A state-of-the art overview of computer-aided diagnosis in breast cancer”

**Dr. Chung-Ming Lo**

Assistant Professor, Graduate Institute of Biomedical Informatics  
Taipei Medical University  
(臺北醫學大學醫學資訊研究所羅崇銘教授)

**10/25 (Sun) 11:20 am – 11:35 am: Coffee Break**

**Parallel Sessions:**

**10/25 (Sun) 11:35 am – 12:55 pm: Technical Session D2-W1-T2: Machine Learning and Big Data, Biostatistics, In Silico Research and Biomedical Informatics**



Chair: **Dr. Tun-Wen Pai**, Professor, Department of Computer Science and Engineering, National Taiwan Ocean University (臺灣海洋大學資訊工程學系白敦文教授)

Room: **Barry Lam Hall: BL-113**



“Phylostratification of Human Cellular Networks”

**Dr. Hsuan-Cheng Huang**

Director and Professor, Institute of BioMedical Informatics  
National Yang Ming University

(陽明大學生物醫學資訊研究所長黃宣誠教授)



“Extracting Functional Information from Dynamics of Biomolecular Systems in Extremely High Dimension”

**Dr. Jung-Hsin Lin**

Research Fellow, Research Center for Applied Sciences & Institute of Biomedical Sciences  
Academia Sinica

(中央研究院應用科學研究中心及生物醫學科學研究所林榮信博士)

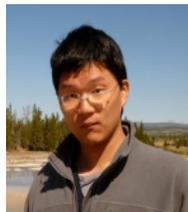


“Development of TOP-PCR (T Oligo-primed Polymerase Chain Reaction) for Efficient Amplification of Trace Amount of DNA in Body Fluids”

**Dr. Kuo-Ping Chiu**

Associate Research Fellow, Genomics Research Center  
Academia Sinica

(中央研究院基因體研究中心邱國平博士)



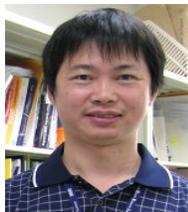
“Simple and efficient k-ordered FM-index construction for biological sequences”

**Dr. Jui-Hung Hung**

Assistant Professor, Institute of Bioinformatics and Systems Biology  
National Chiao-Tung University

(交通大學生物資訊及系統生物研究所洪瑞鴻教授)

**10/25 (Sun) 11:35 am – 12:55 pm: Technical Session D2-W2-T2: Medicine and Life Sciences, Biological and Biomedical Sciences**



Chair: **Dr. Shih-Jen Liu**, Associate Investigator, National Institute of Infectious Diseases and Vaccinology, National Health Research Institutes (國家衛生研究院感染症與疫苗研究所劉士任博士)

Room: **Barry Lam Hall: BL-112**



**Dr. Che Alex Ma**

The Taiwan Bio-Development Foundation (TBF) Chair in Biotechnology  
Associate Research Fellow, Genomics Research Center  
Academia Sinica

(中央研究院基因體研究中心馬徹博士)



“The effects of microRNAs in MAPK/ERK signaling pathway in Melanoma”

**Dr. Nianhan Ma**

Associate Professor, Institute of Systems Biology and Bioinformatics  
National Central University

(中央大學系統生物與生物資訊研究所馬念涵教授)



“Cellular Reprogramming Approaches for the Generation of Human Induced Neurons and Inner Ear Hair Cells”

**Dr. Yi-Chao Hsu**

Assistant Professor, Institute of Biomedical Sciences  
Mackay Medical College

(馬偕醫學院生物醫學研究所許益超教授)



“Low-dose resveratrol ameliorates lupus nephritis by restoration of FcγRIIB expression on autoreactive B lymphocytes to induce apoptosis”

**Dr. Shiang-Jong Tzeng**

Assistant Professor, Department of Pharmacology  
National Taiwan University

(臺灣大學醫學院藥理學研究所曾賢忠教授)

**10/25 (Sun) 11:35 am – 12:55 pm: Technical Session D2-W3-T2:  
Biomaterials, Bio-SoC, Bio-Nanotech, Bio-NEMS/Bio-MEMS, and  
Biomedical Engineering and Systems**



Chair: **Dr. Kung-Bin Sung**, Associate Professor, Graduate Institute of Biomedical Electronics and Bioinformatics, Department of Electrical Engineering, National Taiwan University (台灣大學電機工程學系生醫電子與資訊學研究所宋孔彬教授)

Room: **Barry Lam Hall: BL-114**



“Hybrid Nano-constructs for Cancer Therapy”

**Dr. Ja-An Annie Ho**

Professor, Department of Biochemical Science and Technology  
National Taiwan University

(台灣大學生化科技學系何佳安教授)



“Polypeptide Multilayer-Coated Electrodes for Monitoring Differentiation of Human Mesenchymal Stem Cells into Cardiomyocytes”

**Dr. Chun-Min Lo**

Associate Professor, Department of Biomedical Engineering  
National Yang-Ming University

(陽明大學生物醫學工程學系羅俊民教授)



“Microfluidic chip-approach for dissociating neurosphere cell aggregates”

**Dr. Chia-Hsien Hsu**

Assistant Investigator, Institute of Biomedical Engineering and Nanomedicine  
National Health Research Institutes

(國家衛生研究院生醫工程與奈米醫學研究所許佳賢博士)



“Development and Application of Functional Nanogenerators”

**Dr. Zong-Hong Lin**

Assistant Professor, Institute of Biomedical Engineering  
National Tsing Hua University

(清華大學生物醫學工程研究所林宗宏教授)

**10/25 (Sun) 11:35 am – 12:55 pm: Technical Session D2-W4-T2: Wireless, Multimedia and Virtual Reality Health, Biomedical Devices and Sensing Systems, Cyber Security, and the Internet of Things (IoT) for Health**



Chair: **Dr. Hung-Yu Wei**, Professor, Department of Electrical Engineering,  
National Taiwan University (台灣大學電機工程學系魏宏宇教授)

Room: **Barry Lam Hall: BL-103**



“3D Liver Vessel Reconstruction from CT Images”

**Dr. Shang-Hong Lai**

Professor and Chairman, Department of Computer Science  
National Tsing Hua University

(清華大學資訊工程系系主任賴尚宏教授)



**Dr. Chii-Wann Lin**

Professor, Institute of Biomedical Engineering, Institute of Bioelectronics and  
Bioinformatics, and Institute of Applied Mechanics  
National Taiwan University

(台灣大學醫學工程學研究所林啟萬教授)



“Neuromarkers for predicting the rehabilitation outcome after stroke”

**Dr. Chun-Chuan Chen**

Associate Professor, Graduate Institute of Biomedical Engineering  
National Central University

(中央大學生物醫學工程研究所陳純娟教授)



**Dr. Shih-Ching Yeh**

Associate Professor, School of Mobile Information Engineering  
Sun Yat-Sen University

(中山大學移動信息工程學院葉士青教授)

**10/25 (Sun) 11:35 am – 12:55 pm: Student Poster Competition**



Chair: **Dr. Hsueh-Fen Juan**, Professor, Institute of Biomedical Electronics and Bioinformatics, Institute of Molecular and Cellular Biology, and Department of Life Science, Center for Systems Biology and Bioinformatics National Taiwan

University (台灣大學分子細胞生物學研究所阮雪芬教授)



Co-Chair: **Dr. Chia-Lang Hsu**, Postdoctoral Fellow, Institute of Molecular and Cellular Biology, and Department of Life Science, National Taiwan University (

台灣大學分子細胞生物學研究所許家郎博士)

Room: **Barry Lam Hall: B1博理藝廊**

**10/25 (Sun) 12:55 pm – 2:15 pm: Lunch Break**

**Parallel Sessions:**

**10/25 (Sun) 2:15 pm – 3:35 pm: Technical Session D2-W1-T3: Machine Learning and Big Data, Biostatistics, In Silico Research and Biomedical Informatics**



Chair: **Dr. Jung-Hsin Lin**, Research Fellow, Research Center for Applied Sciences & Institute of Biomedical Sciences, Academia Sinica (中央研究院應用科學研究中心及生物醫學科學研究所林榮信博士)

Room: **Barry Lam Hall: BL-113**



**Dr. Yen-Wei Chu**

Associate Professor, Institute of Genomics and Bioinformatics  
National Chung Hsing University

(中興大學基因體暨生物資訊學研究所朱彥煒教授)



“Next-generation sequencing identifies novel, rare variants associated with human genetic diseases”

**Dr. Peng-Chieh Jessica Chen**

Assistant Professor, Institute of Clinical Medicine, College of Medicine  
National Cheng Kung University

(成功大學-臨床醫學研究所陳芃潔教授)



“The relationship between protein function and local structural conservation”

**Dr. Chih-Hao Lu**

Assistant Professor, Graduate Institute of Basic Medical Sciences  
China Medical University

(中國醫藥大學基礎醫學研究所陸志豪教授)



Ensembl@YM: Tools for automating the build of virtualized genome annotation database, browser, and a light-weighted online editor of gene structures”

**Dr. Yen-Hua Huang**

Assistant Professor, Institute of Biomedical Informatics  
Center for Systems and Synthetic Biology  
National Yang-Ming University

(陽明大學生物醫學資訊研究所黃彥華教授)

### **10/25 (Sun) 2:15 pm – 3:35 pm: Technical Session D2-W2-T3: Medicine and Life Sciences, Biological and Biomedical Sciences**



Chair: **Dr. Che Alex Ma**, The Taiwan Bio-Development Foundation (TBF) Chair in Biotechnology, Associate Research Fellow, Genomics Research Center

Academia Sinica (中央研究院基因體研究中心馬徹博士)

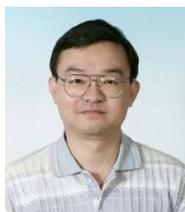


“EZHZ-mediated epigenetic regulation of cancer/stem cells”

**Dr. Long-Yuan Li**

Associate Professor, Graduate Institute of Cancer Biology  
China Medical University

(中國醫藥大學癌症生物學研究所李龍緣教授)



“Immuno-Targeting ENO1 as A Novel Strategy for Cancer Therapy”

**Dr. Neng-Yao Shih**

Associate Investigator, National Institute of Cancer Research  
National Health Research Institutes

(國家衛生研究院癌症研究所施能耀博士)



“Oncogene MCT-1 promotes aneuploidy and tumor metastasis”

**Dr. Hsin-Ling Hsu**

Associate Investigator, Institute of Molecular and Genomic Medicine  
National Health Research Institutes

(國家衛生研究院分子與基因醫學研究所徐欣伶博士)



“Peering into Neural Stem Cells in Live Brain: Multidisciplinary Approaches to Investigating Neural Development and Disorder”

**Dr. Jin-Wu Tsai**

Assistant Professor, Institute of Brain Science  
School of Medicine, National Yang-Ming University

(陽明大學醫學院腦科學研究所蔡金吾教授)

**10/25 (Sun) 2:15 pm – 3:35 pm: Technical Session D2-W3-T3:  
Biomaterials, Bio-SoC, Bio-Nanotech, Bio-NEMS/Bio-MEMS, and  
Biomedical Engineering and Systems**



Chair: **Dr. Ja-An Annie Ho**

Professor, Department of Biochemical Science and Technology  
National Taiwan University

(台灣大學生化科技學系何佳安教授)

Room: **Barry Lam Hall: BL-114**



**Dr. Her-Ming Chiueh**

Associate Professor, Institute of Biomedical Engineering  
National Chiao-Tung University

(交通大學生醫工程研究所關河鳴教授)



“Novel Biodegradable Emulsions for Vaccine Adjuvant Development”

**Dr. Ming-Hsi Huang**

Associate Investigator, National Institute of Infectious Diseases and  
Vaccinology

National Health Research Institutes

(國家衛生研究院感染症與疫苗研究所黃明熙博士)



“An Innovative Bio-Sensing Scheme and Platform Embedded in a Dental Implant Fixture for Painless and Long-Term Bio-Medical Analysis”

**Dr. Chih-Cheng Lu**

Associate Professor, Institute of Mechatronic Engineering  
National Taipei University of Technology

(台北科技大學機電整合研究所呂志誠教授)



"Fabrication and applications of proteome microarrays"

**Dr. Chien-Sheng Chen**

Associate Professor, Graduate Institute of Systems Biology and Bioinformatics  
National Central University

(中央大學系統生物與生物資訊研究所陳健生教授)

**10/25 (Sun) 2:15 pm – 3:35 pm: Technical Session D2-W4-T3: Wireless, Multimedia and Virtual Reality Health, Biomedical Devices and Sensing Systems, Cyber Security, and the Internet of Things (IoT) for Health**



Chair: **Dr. Sao-Jie Chen**

Professor, Graduate Institute of Electronics Engineering and  
Electrical Engineering Department  
National Taiwan University

(台灣大學電機工程學系陳少傑教授)

Room: **Barry Lam Hall: BL-103**



"Low Power Wireless ECG Acquisition Circuits and Systems for Body Sensor Networks"

**Dr. Shuenn-Yuh Lee**

Professor, Department of Electrical Engineering  
National Cheng Kung University

(成功大學電機工程學系李順裕教授)



"Microelectronic Contact Lens for Healthcare"

**Dr. Yu-Te Liao**

Assistant Professor, Department of Electrical and Computer Engineering  
National Chiao-Tung University

(交通大學電機工程學系廖育德教授)



"Development of Wireless Sensing Devices for Diagnosis and Rehabilitation Application"

**Dr. Chao-Min Wu**

Assistant Professor, Department of Electrical Engineering  
National Central University

(中央大學電機工程學系吳炤民教授)



"EEG-based Functional Brain Network and its Clinical Applications"

**Dr. Yi-Li Tseng**

Assistant Professor, Department of Electrical Engineering  
Fu Jen Catholic University

(天主教輔仁大學電機工程學系曾乙立教授)

**10/25 (Sun) 3:35 pm – 3:50 pm: Coffee Break**

**Parallel Sessions:**

**10/25 (Sun) 3:50 pm – 5:10 pm: Technical Session D2-W1-T4: Machine Learning and Big Data, Biostatistics, In Silico Research and Biomedical Informatics**



Chair: **Dr. Peng-Chieh Jessica Chen**, Assistant Professor, Institute of Clinical Medicine, College of Medicine, National Cheng Kung University (成功大學-臨床醫學研究所陳芃潔教授)

Room: **Barry Lam Hall: BL-113**



“A dynamics database housing ~ 11,000 PDB structures whereby mined data reveal dynamics prerequisites for protein functions and interactions”

**Dr. Lee-Wei Yang**

Associate Professor, Institute of Bioinformatics and Structural Biology  
National Tsing-Hua University

(清華大學生物資訊與結構生物研究所楊立威教授)



“Applications of Satellite Remote Sensing Technology for Disease Prediction”

**Dr. Ting-Wu Chuang**

Assistant Professor, Department of Molecular Parasitology and Tropical Diseases  
Taipei Medical University

(臺北醫學大學醫學系分子寄生蟲暨熱帶疾病學科莊定武教授)



“Identification of prognostic and predictive biomarkers for lung adenocarcinoma”

**Dr. Tzu-Pin Lu**

Assistant Professor, Graduate Institute of Epidemiology and Preventive Medicine  
College of Public Health, National Taiwan University

(臺灣大學公共衛生學院流行病學與預防醫學研究所盧子彬教授)



“Stroke Risk Analysis for Early Detection and Aneurysm Assessment”

**Dr. Aichi Chien**

Associate Professor, Division of Interventional Neuroradiology, Department of Radiological Sciences, Biomedical Physics IDP, David Geffen School of Medicine at UCLA, Ronald Reagan UCLA Medical Center

(加州大學洛杉磯分校大衛格芬醫學院簡艾琪教授)

**10/25 (Sun) 3:50 pm – 5:10 pm: Technical Session D2-W2-T4: Medicine and Life Sciences, Biological and Biomedical Sciences**



Chair: **Dr. Hsin-Ling Hsu**, Associate Investigator, Institute of Molecular and Genomic Medicine, National Health Research Institutes (國家衛生研究院分子與基因醫學研究所徐欣伶博士)

Room: **Barry Lam Hall: BL-112**



“p53 negative regulators induce hepatic steatosis in zebrafish”

**Dr. Guor Mour Her**

Professor, Department of Bioscience and Biotechnology  
National Taiwan Ocean University

(臺灣海洋大學生命科學暨生物科技學系何國牟教授)



“Translational bioinformatics: from information integration to in silico discovery”

**Dr. Ueng-Cheng Yang**

Associate Professor, Institute of Biomedical Informatics  
National Yang-Ming University

(陽明大學生物醫學資訊研究所楊永正教授)



“Roles of RBFOX3/NeuN in Epilepsy and Cognitive Impairments”

**Dr. Hsien-Sung Huang**

Assistant Professor, Graduate Institute of Brain and Mind Sciences  
National Taiwan University

(台灣大學腦與心智科學研究所黃憲松教授)



“Integrated systems and synthetic biology for cancer research”

**Dr. Hsueh-Fen Juan**

Professor, Institute of Biomedical Electronics and Bioinformatics, Institute of Molecular and Cellular Biology, and  
Department of Life Science, Center for Systems Biology and Bioinformatics  
National Taiwan University

(台灣大學分子細胞生物學研究所阮雪芬教授)

**10/25 (Sun) 3:50 pm – 5:10 pm: Technical Session D2-W3-T4:  
Biomaterials, Bio-SoC, Bio-Nanotech, Bio-NEMS/Bio-MEMS, and  
Biomedical Engineering and Systems**



Chair: **Dr. Her-Ming Chiueh**, Associate Professor, Institute of Biomedical Engineering, National Chiao-Tung University (交通大學生醫工程研究所關河鳴教授)

Room: **Barry Lam Hall: BL-114**



**Dr. Wen-Yih Chen**

Distinguished Professor, Department of Chemical and Materials Engineering  
Institute of Systems Biology and Bioinformatics  
National Central University

(中央大學化材系及生物與生物資訊研究所陳文逸特聘教授)



**Dr. Yen-Wen Lu**

Associate Professor, Department of Bio-Industrial Mechatronics Engineering  
National Taiwan University

(臺灣大學生物產業機電工程系盧彥文教授)

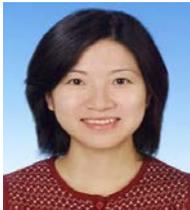


“Impedimetric Monitoring of Cellular Activities in Microfluidic Systems”

**Dr. Thomas Kin Fong Lei**

Associate Professor, Graduate Institute of Medical Mechatronics  
Chang Gung University

(長庚大學醫療機電工程研究所李健峰教授)



**Dr. Chihchen Chen**

Associate Professor, Institute of NanoEngineering and MicroSystems (NEMS)  
National Tsing Hua University

(清華大學奈米工程與微系統研究所陳致真教授)

**10/25 (Sun) 3:50 pm – 5:10 pm: Technical Session D2-W4-T4: Wireless, Multimedia and Virtual Reality Health, Biomedical Devices and Sensing Systems, Cyber Security, and the Internet of Things (IoT) for Health**



Chair: **Dr. Shuenn-Yuh Lee**, Professor, Department of Electrical Engineering  
National Cheng Kung University, (成功大學電機工程學系李順裕教授)

Room: **Barry Lam Hall: BL-103**



“Intelligent Cloud Computing for Biotechnology via Deep Learning using Algorithm/Architecture Co-Design”

**Dr. Gwo Giun (Chris) Lee**

Professor, Department of Electrical Engineering  
National Cheng Kung University

(成功大學電機工程學系李國君教授)



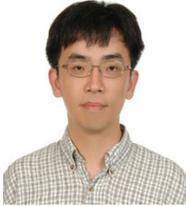
"Facial Status Recognition for Baby Vomit and Drowsy Driver Detections"

**Dr. Chih-Peng Fan**

Professor, Department of Electrical Engineering

National Chung Hsing University

(中興大學電機工程學系范志鵬教授)



"Opportunities and Challenges for Smartphone-based Audiometric Tests and Hearing Aids"

**Dr. Pei-Chun Li**

Assistant Professor, Department of Audiology and Speech Language Pathology

Mackay Medical College

(馬偕醫學院聽力暨語言治療學系李沛群教授)



**Dr. Sao-Jie Chen**

Professor, Graduate Institute of Electronics Engineering and

Electrical Engineering Department

National Taiwan University

(台灣大學電機工程學系陳少傑教授)