**International Conference on BioSensors, BioElectronics, BioMedical Devices, BioMEMS/NEMS and Applications**

**Bio4Apps 2014----Shanghai, China**

**November 17, 2014---** **November 19, 2014**

**“Bio4Apps 2014”将于2014年11月17-19日在上海交通大学举办。此次国际会议旨在邀请来自世界各地著名的科学家和青年学者讨论在BioSensors, BioElectronics, BioMedical Devices, BioMEMS/NEMS领域的进步与发展。我们真诚地邀请您参加本次大会，并组织贵单位的老师和学生投稿和参加本次大会。也请您将大会的通知转给贵单位的老师和学生。详细信息请参看本次大会的官方网站：**[**http://bio4apps2014.sjtu.edu.cn/**](http://bio4apps2014.sjtu.edu.cn/)

**这次会议将安排主题演讲、邀请报告、口头报告和墙报等形式展示BioSensors, BioElectronics, BioMedical Devices, BioMEMS/NEMS领域的最新研究进展。此外，挑选的好论文将发表在SCI期刊“Nano-Micro Letters”（**[**www.nmletters.org**](http://www.nmletters.org/)**）或者Sensors and Materials上。**

**一、会议地点**

**上海交通大学学术活动中心，上海市闵行区东川路800号。**

**二、会议日程**

**Bio4Apps 2014 Conference Agenda – Day 1**

**Monday, November 17, 2014**

|  |  |  |
| --- | --- | --- |
| **Opening Ceremony**  **(Academic Exchange Center, 1stFloor)**  **9:00-9:20** | | |
| **Opening Address** | | |
| **Chair** | **Prof.** **Zhongqin Lin (Deputy President, Academician of the Chinese Engineering Academy)**  **Shanghai Jiao Tong University** | |
| **Prof. Jingquan Liu**  **Department of Micro/Nano electronics, Shanghai Jiao Tong University** | |
| **Plenary Talk ⅠandⅡ**  **9:20-10:40**  **Chairs: Prof. Darrin J. Young and Prof. Ryutaro Maeda** | | **Page** |
| **09:20-10:00** | **MEMS applications to minimal invasive medicine**  **Prof. Masayoshi Esashi, Tohoku University, Japan** | **1** |
| **10:00-10:40** | **Micro-systems and Nanotechnologies in Biomedical Applications —**  **Biochips from an Engineering Perspective**  **Prof. Yu-Cheng Lin, National Cheng Kung University, Taiwan** | **2** |
| Conference Photo-taking | | |
| **10.40-11:00** | **Place: Square of Jing Jing Tang** | |
| **Coffee Break & Poster**  **11:00-11:15** | | |
| **Session-A: BioSensors**  **11:15-12:00**  **(Chair: Prof. Keiji Iramina and Prof. Yafei Zhang)** | | |
| **Keynote** | | **Page** |
| **11:15-11:40** | **In Vitro Fertilization on a Chip**  **Prof. Da-Jeng Yao, Institute of NanoEngineering and MicroSystems, National Tsing Hua University** | **3** |
| **Invited Talk** | |  |
| **11:40-12:00** | **Bisphenol A Sensing in Rat Serum on a Microfluidic Device Based on ELISA**  **Prof. Izumi Kubo, Department of Bioinformatics, Faculty of Engineering, SOKA University, Japan** | **4** |
| **Lunch (& Poster)**  **(Da Zhi Ju, 1st Floor)**  **12:00-13:30** | | |
| **Session-A: BioSensors**  **13:30-15:10**  **(Chair: Prof. Yucheng Lin and Prof. Toshihiro Itoh)** | | |
| **Invited Talk** | | **Page** |
| **13:30-13:50** | **Evaluation of pronation and supination: comparison between typically developing children and children with AD/HD**  **Prof. Keiji Iramina, Kyushu University, Japan** | **5** |
| **13:50-14:10** | **Applications of Nanoparticles as Biomedical Theranostic Agents and Rapid Detection Agents**  **Prof. Aiguo Wu, Ningbo Institute of Materials Technology & Engineering (NIMTE), Chinese Academy of Sciences (CAS), Ningbo 315201, China.** | **6** |
| **14:10-14:30** | **Combined sensor of micro-shearing sensor and micro-slip sensor**  **Prof. Hirofumi Nogami and Renshi Sawada, Kyushu University, Japan** | **7** |
| **Keynote Talk** | |  |
| **14:30-14:55** | **1D materials based high performance nanosensor for detection of molecule trace**  **Prof. Yafei Zhang, Shanghai Jiao Tong University, China** | **8** |
| **Oral Talk** | |  |
| **14:55-15:10** | **Gaseous ethanol imaging systemfrom human breath and skin for evaluation of alcohol metabolism**  **Prof. Takahiro Arakawa, Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Japan** | **9** |
| **Poster Session & Coffee Break**  **15:10-16:00** | | |
| **Session-B: Green MEMS**  **16:00-18:10**  **(Chair: Prof. Izumi Kubo and Prof. Da Jeng Yao)** | | |
| **Keynote Talk** | |  |
| **16:00-16:25** | **Wireless Monitoring for Green &Life**  **Prof. Ryutaro MAEDA, UMEMSME/AIST, Japan** | **10** |
| **16:25-16:50** | **Piezoelectric thin films based acoustic wave sensors and lab-on-chip**  **Prof. Jack Luo, Inst. of Renewable Energy & Environ. Technol., University of Bolton, UK** | **11** |
| **Invited Talk** | |  |
| **16:50-17:10** | **Implantable Nanodevices for in-vivo Energy Harvest**  **Prof. Li Zhou,Beijing Institute of Nanoenergy and Nanosystem, CAS, Beijing, China** | **12** |
| **17:10-17:30** | **Skin-Coupled Personal Wearable Ambulatory Health Monitoring System Using MEMS Sensors**  **Prof. Darrin J. Young, Electrical and Computer Engineering Department, University of Utah, Salt Lake City, Utah, USA** | **13** |
| **17:30-17:50** | **Application of Wireless Sensor Nodes to Livestock Health Monitoring**  **Prof. Toshihiro Itoh, National Institute for Advanced Industrial Science and Technology, Japan** | **14** |
| **17:50-18:10** | **Fiber MEMS technology and Its Application**  **Prof. Yi Zhang, National Institute of Advanced Industrial Science and Technology, Japan** | **15** |
| **18:10-Banquet**  **(Shanghai Huhua International Hotel 4th floor)** | | |

**Bio4Apps 2014 Conference Agenda – Day 2**

**Tuesday, November 18, 2014**

|  |  |  |
| --- | --- | --- |
| **Session-C: BioElectronics**  **9:00-11:00**  **(Chair: Prof. Jack Luo and Prof. Chaoyong Yang)** | | |
| **Keynote** | | **Page** |
| **9:00-9:25** | **Novel approaches of biosensor techniques for diabetes**  **Prof. Kohji Mitsubayashi, Tokyo Medical and Dental University, Japan** | **16** |
| **Invited Talk** | |  |
| **9:25-9:45** | **Multiplexed proteolytic activity assay through a pico-injector array**  **Prof. Chia-Hung Chen, National University of Singapore, Singapore** | **17** |
| **9:45-10:05** | **Restoring Eyesight for the Blinds by Integrating Electronics together with Mechanics**  **Prof. Guoxing Wang, Shanghai Jiao Tong University, Shanghai China** | **18** |
| **Keynote** | |  |
| **10:05-10:30** | **Smart electrode devices with CMOS microchips for retinal prosthesis**  **Prof. Toshihiko Noda, Nara Institute of Science and Technology, Japan** | **19** |
| **Oral Talk** | |  |
| **10:30-10:45** | **Visualization of Human Body Odors by Fluorescence Imaging Sensor**  **Dr. Chuanjun Liu, Kyushu University, Japan** | **20** |
| **10:45-11:00** | **Development of Hydraulic Transformable Endoscopic Hood**  **Ms. Miyuki Matsuo, Tohoku University, Japan** | **21** |
| **Coffee Break & Poster**  **11:00-11:20** | | |
| **Session-D: BioMEMS/NEMS**  **11:20-12:15**  **(Chair: Prof. Chengkuo Lee and Prof. Aiguo Wu)** | | |
| **Invited Talk** | |  |
| **11:20-11:40** | **Hydrogel Microfluidics for Single-Molecule Detection, Single-Cell Analysis, and Point-of-Care Testing Applications**  **Prof. Chaoyong James Yang, Department of Chemical Biology, College of Chemistry and Chemical Engineering, Xiamen University, China** | **22** |
| **Oral Talk** | |  |
| **11:40-11:55** | **Label-free investigation of cell-electrode interface with surface plasmon microscopy**  **Koji Toma, ForschungszentrumJülich, Germany; Tokyo Medical and Dental University, Japan** | **23** |
| **Invited Talk** | | **Page** |
| **11:55-12:15** | **Electroformation of lipid vesicles/nanotubes using interdigitated microelectrodes**  **Prof. Xiaojun Han, Harbin Institute of Technology, China** | **24** |
| **Lunch (& Poster)**  **(Da Zhi Ju, 1st Floor)**  **12:15-13:30** | | |
| **Session-D: BioMEMS/NEMS**  **13:30-15:40**  **(Chair: Prof. Lun-De Liao and Prof. Li Zhou )** | | |
| **Invited Talk** | |  |
| **13:30-13:50** | **Monolithic CMOS-MEMS Clock Generators for Sensor SoC**  **Prof. Sheng-Shian Li, Institute of NanoEngineering and MicroSystems, National Tsing Hua University, Taiwan** | **25** |
| **13:50-14:10** | **MEMS in-plane accelerometer on SOI substrate with refilled isolation trenches**  **Prof. Jin Xie, Department of Mechanical Engineering, Zhejiang University, China** | **26** |
| **14:10-14:30** | **Novel Compliant Force Controllable Actuator Design for Safe Human Robot Interaction**  **Prof. Haoyong Yu, National University of Singapore, Singapore** | **27** |
| **Oral Talk** | |  |
| **14:30-14:45** | **Development of Thin Film Based Current Sensor for Electricity Monitoring**  **Takahiro Yamashita, NMEMS Technology Research Organization,**  **National Institute of Advanced Industrial Science and Technology, Japan** | **28** |
| **14:45-15:00** | **Highly sensitive fiber-optic formaldehyde gas sensor (bio-sniffer) for food-sample detection**  **Mr. Po Jen Chien, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Japan** | **29** |
| **Invited Talk** | |  |
| **15:00-15:20** | **Surface acoustic wave (SAW)-based cell lysis in Microfluidic channel**  **Prof. Xueyong Wei, State Key Laboratory of Manufacturing Systems Engineering, Xi’An Jiaotong University** | **30** |
| **15:20-15:40** | **The frequency broadening strategy for vibration-based energy harvesting**  **Prof. Huicong Liu, Jiangsu Provincial Key Labratory of Advanced Robotics & Collaborative Innovation Center of Suzhou Nano Science and Technology, Soochow University, Suzhou 215123, China** | **31** |
| **Coffee Break & Poster**  **15:40-16:00** | | |
| **Session-E: BioMedical Devices**  **16:00-18:15**  **(Chair: Prof.Zhiyu Hu and Prof. Toshihiko Noda)** | | |
| **Invited Talk** | |  |
| **16:00-16:20** | **Electrically controlled polymer-based actuators for biomedical applications**  **Prof. Guo-Hua Feng, National Chung Cheng University, Taiwan** | **32** |
| **16:20-16:40** | **Electrochemical detection of DNA by direct conjugation of Fc onto its backbone**  **Prof. Jinming Kong, School of Environmental and Biological Engineering, Nanjing University of Science & Technology, Nanjing, P. R. China 210094** | **33** |
| **Oral Talk** | |  |
| **16:40-16:55** | **Fiber-optic Immunosensing device for house dust mite allergen in air**  **Ms. Kumiko Miyajima, Research Fellow of Japan Society for the Promotion of Science, Japan** | **34** |
| **16:55-17:10** | **Flexible Ultrathin Polyimide Neural Probes with Enhanced Stiffness Using Maltose-Coated Dissolvable Layer**  **Zhuolin Xiang, Department of Electrical & Computer Engineering, National University of Singapore; Singapore Institute for Neurotechnology (SiNAPSE), National University of Singapore** | **35** |
| **Invited Talk** | |  |
| **17:10-17:30** | **Rational Design of Electrocatalytic Interfaces for Nitrate Reduction**  **Prof. Minghua Huang, Institute of Materials Science and Engineering, Ocean University of China, Qingdao** | **36** |
| **Oral Talk** | |  |
| **17:30-17:45** | **Effect of the incident light angle in the laser Doppler blood flowmeter**  **Tatsuya Miyazak, Kyushu University, Japan** | **37** |
| **17:45-18:00** | **Sensor array chips for label-free gene detection based on ferrocene-terminated probes**  **Dr. Hiroshi AOKI, National Institute of Advanced Industrial Science and Technology (AIST), Japan** | **38** |
| **18:00-18:15** | **Bifunctional electro-optical nano-manipulation system to real-time detect local biochemical processes in single cells**  **Dr. Xu Ting, Jiangsu Rayme Biotechnology CO., LTD.** | **39** |
| **18:15-Dinner**  **(Academic Exchange Center, 1stFloor)** | | |

**Bio4Apps 2014 Conference Agenda – Day 3**

**Wednesday, November19, 2014**

|  |  |  |
| --- | --- | --- |
| **Plenary Talk Ⅲ**  **9:00-09:40**  **Chairs: Prof. Haoyong Yu** | | **Page** |
| **09:00-09:40** | **Biosensing in Nanoscales to in situ study biological science**  **Prof. Changming Li, Southwest University, China** | **40** |
| **Session-E: Biomedical devices**  **09:40-10:40**  **(Chair: Prof. Yuji Murakami and Prof. Xiaojun Han)** | | |
| **Invited Talk** | |  |
| **09:40-10:00** | **Visualization of odor space and quality**  **Prof. Kenshi Hayashi, Graduate School of Information Science and Electrical Engineering, Kyushu University, Japan** | **41** |
| **10:00-10:20** | **A Study of Transient Ischemic Attack Using μECoG-fPAM:Integration of a Micro-electrocorticography Electrode Array with Functional Photoacoustic Microscopy**  **Prof. Lun-De Liao, National University of Singapore** | **42** |
| **10:20-10:40** | **Fabrication of blood capillary from endothelial cells in the coaxial double layered gel fiber produced by the 3D sheath flow microfluidic device**  **Prof. Naoya Takeda, Dept. of Life Sci. and Med. Biosci., Waseda University, Japan** | **43** |
| **Coffee Break**  **10:40-11:00** | | |
| **Session-E: Biomedical devices**  **11:00-12:15**  **(Chair: Prof. Kenshi Hayashi and Prof. Jinming Kong)** | | |
| **Invited Talk** | |  |
| **11:00-11:20** | **Design and Synthesis of Metal Nanocatalysts for Biosensing Applications**  **Prof. Jiaqiang Xu, Department of Chemistry, Shanghai University, China** | **44** |
| **11:20-11:40** | **Hole sensor array LSI on skin towards non-invasive and continuous blood glucose monitoring**  **Prof. Yuji Murakami, Toyohashi University of Technology, Japan** | **45** |
| **Oral Talk** | |  |
| **11:40-11:55** | **Intraluminal MRI Probe with Variable Capacitors and Protection Circuit**  **Masayoshi Nakazono, Graduate School of Biomedical Engineering, Tohoku University, Japan** | **46** |
| **Invited Talk** | |  |
| **11:55-12:15** | **Development of piezoresistive NEMS for biomedical applications**  **Prof. Chengkuo Lee, Department of Electrical & Computer Engineering, National University of Singapore** | **47** |
| **Lunch**  **(Da Zhi Ju, 1st Floor)**  **12:15-13:30** | | |
| **Closing Ceremony**  **13:30-14:00** | | |

**三、联系方式**

**有关会议的进一步信息，请参考会议网站http://bio4apps2014.sjtu.edu.cn/和联系会议事务组：binyang@sjtu.edu.cn**