

# 2018 Symposium on Engineering, Medicine, and Biology Applications

## 口頭發表場次表

Session 1 : B204

2018/02/03-Saturday 13:30~15:00

Session 1	
Biomedical Imaging and Mobile Health	
Oral-ID	Paper Title
S01-1	<b>Time Domain fNIRS Imaging for Pre-Clinical Results on Detection of Breast Tumours</b> Yao-Hsing Liu, Chia-Wei Sun
S01-2	<b>Radiomic MRI T1W1 Features Used in Predicting Gene Mutations in Brain Tumors</b> Jui-Fu Hung, Shang-Yu Chiang, Chung-Ming Lo, Kevin Li-Chun Hsieh
S01-3	<b>PsyMeasure: Fulfilling Measurement-Based Care with Mobile Technology</b> Chih-Wei Chen, Yuan-Chii Gladys Lee
S01-4	<b>Design and Application of Wearable Reflective Ring-Type Photoplethysmography</b> Wei-Yi Li, Chery C. H. Yang, Terry B. J. Kuo
S01-5	<b>A Graphical User Interface with Automatic Glare Removal and Boundary Tracing for Wound Image Analysis</b> Cheng-Hsuan Lin, Sing-Da Jhan, Wei-Min Liu
S01-6	<b>Using Pan-Genome to Identify and Classify the Antimicrobial Resistant Escherichia Coli Strains</b> Hsuan-Lin Her, Yu-Wei Wu

**Session 2 : B205**  
**2018/02/03-Saturday 13:30~15:00**

Session 2	
<b>Artificial Intelligence and Biosensors</b>	
Oral-ID	Paper Title
So2-1	<p><b>Characterization of Flexible PEDOT:PSS Pressure Sensors on Soft Polysaccharide Agarose Substance for Biomedical Applications</b></p> <p>Yi Fu, Rajat Subhra Karmakar, Pei-Yu Wu, Yu-Jen Lu, Jer-Chyi Wang</p>
So2-2	<p><b>The Design of A 4-Channel Cmos Analog Front-End Acquisition Circuit for Eng (Electroneurogram) Signal Recording in Spinal Cord</b></p> <p>Yung-Chun Chang, Xin-Hong Qian, Chi-Wei Huang and Chung-Yu Wu</p>
So2-3	<p><b>Preliminary Assessment of User-Centered Service Outcomes from Community Telehealth Modalities</b></p> <p>Kayla Kuo, Jasmine Wu, Feng-Yueh Yang, Chung-Yao Hsu, Ching-Kuan. Liu, Por Lai,</p>
So2-4	<p><b>Novel Machine-Learning Algorithm to Automatically Predict Visual Outcomes in Diabetic Macular Edema Patients Treated with Intravitreal Ranibizumab</b></p> <p>Shao-Chun Chen, Hung-Wen Chiu, Chun-Chen Chen, Lin-Chung Woung, Chung-Ming Lo</p>
So2-5	<p><b>Application of Artificial Neural Network to Predict the Severity of Parkinson's Disease by Telemonitoring Speech Tests</b></p> <p>Chen-Chih Chung, Hung-Wen Chiu</p>
So2-6	<p><b>Use Machine Learning to Predict Cancer Risk by Clinical Diagnosis History - A Case Study of Hepatocellular Carcinoma</b></p> <p>Chia-Wei Liang</p>

**Session 3 : B205**  
**2018/02/03-Saturday 15:30~17:00**

Session 3	
<b>Circuits and Systems for Biomedical Applications</b>	
Oral-ID	Paper Title
S03-1	<b>The Design of CMOS 13.56-MHz High Efficiency 1X/3X 1.99V/6.29V Active Rectifier for Implantable Neuromodulation Systems</b> Yueh-Hsuan Lee, Sung-Hao Wang and Chung-Yu Wu
S03-2	<b>An 8-Channel Analog Front-End with Fast-Settling Hybrid DC Servo Loop in 65-nm CMOS for EEG Monitoring</b> Chung-Yu Wu and Pin-Wen Chen
S03-3	<b>Design of Stimulation Blocking Circuit on Analog Front End for Local Field Potential Acquisition</b> Cheng-Ting Jiang, Ke-Wei Chang, and Chung-Chih Hung
S03-4	<b>A Power-Efficient Reconfigurable OTA-C Filter for Low-Frequency Biomedical Applications</b> Sheng-Yu Peng, Member, IEEE, Yu-Hsien Lee, Tzu-Yun Wang, Hui-Chun Huang, Min-Rui Lai, Guan-Chun Fang, Chiang-Hsi Lee, Li-Han Liu
S03-5	<b>A High Power-Efficient Reconfigurable Buffer Amplifier</b> Tzu-Yun Wang, Hui-Chun Huang, Yu-Cheng Lu, Zu-Jia Lo, Sheng-Yu Peng
S03-6	<b>An Optical Platform for Self-Powered Implantable Retinal Prostheses</b> Po-Han Kuo, Ting-Ming Huang, Chin-Fong Chiu, Chung-Yu Wu,

**Session 4 : B204**  
**2018/02/04-Sunday 13:30~15:00**

Session 4	
<b>Invited Paper-Biomedical Circuits and Systems</b>	
Oral-ID	Paper Title
<b>So4-1</b>	<b>Integration of Energy-Recycling Logic and Wireless Power Transfer for Ultra-Low-Power Implantables</b> Hsin-Tzu Lin, Yi-Chung Wu, Ping-Hsuan Hsieh, Chia-Hsiang Yang
<b>So4-2</b>	<b>An Acoustic Hearing Preserved Fully-Integrated Bone-Guided Cochlear Implant CMOS Microsystem</b> Xin-Hong Qian, Yi-Chung Wu , Tzu-Yi Yang, Cheng-Hsiang Cheng, Hsing-Chien Chu , Wan-Hsueh Cheng, Ting-Yang Yen, Tzu-Han Lin , Yung-Jen Lin, Yu-Chi Lee, Jia-Heng Chang, Shih-Ting Lin, Shang-Hsuan Li, Tsung-Chen Wu, Chien-Chang Huang, Chia-Fone Lee , Chia-Hsiang Yang , ChungChih Hung, Tai-Shih Chi , Chien-Hao Liu, Ming-Dou Ker, and Chung-Yu Wu
<b>So4-3</b>	<b>The Real Time Monitoring of Car Driver's Fatigue System</b> Yu-Jin Lin, Chen-Wei Chuang, Chun-Yueh Yen, Sheng-Hsin Huang, Shuenn-Yuh Lee
<b>So4-4</b>	<b>Wireless Neural-Sensing Microsystem Using TSV-Embedded Dissolvable <math>\mu</math>-Needle Array and Flexible Interposer</b> Po-Tsang Huang, Yu-Chieh Huang, Shang-Lin Wu, Yu-Chen Hu, Ming-Wei Lu, Ting-Wei Sheng, Fung-Kai Chang, Chun-Pin Lin , Nien-Shang Chang, Hung-Lieh Chen, Chi-Shi Chen, Tzai-Wen Chiu, Wei Hwang, Kuan-Neng Chen, Ching-Te Chuang, Jin-Chern Chiou
<b>So4-5</b>	<b>An HBC-based Continuous Bio-potential System Monitoring Using 30MHz OOK Modulation</b> Nicolas Fahier, Wai-Chi Fang
<b>So4-6</b>	<b>A Reconfigurable Output-Capacitor-Less Low-Drop-Out Regulator for Low-Power Analog Sensing Front-End</b> Wen-Chi Chen, Pei-Ke Chang, Li-Han Liu, Tzu-Yun Wang, Sheng-Yu Peng

**Session 5 : B205**  
**2018/02/04- Sunday 13:30~15:00**

<b>Session 5</b>	
<b>Clinical Application and Other Related Topics</b>	
<b>Oral-ID</b>	<b>Paper Title</b>
<b>S05-1</b>	<b>Time-Resolved Quantification of the Brain Extracellular Space During Cortical Spreading Depression by A Sinusoidal Iontophoretic Method</b> 董楷, 陳婉珊, Kevin C. Chen
<b>S05-2</b>	<b>The Design and Development of Transcranial Burst Electrostimulator for Clinic Rehabilitation</b> Chih-Wei Peng, Yu-Ting Li , Chun-Ta Feng , Shih-Ching Chen
<b>S05-3</b>	<b>Development and Verification of Sleep Apnea Rapid Screening System</b> Jui-Hsuan Lee, Cheng-Han Wu, Chun-Ting Lai, Cheryl C.H. Yang, Terry B.J. Kuo
<b>S05-4</b>	<b>Real-time Head Position Monitoring and Derived Positional Therapy Strategy for OSAS Patients</b> Wen-Yen Lin, Guang-Ming Shiao M.D., Ming-Yih Lee
<b>S05-5</b>	<b>Chemical Synthesis of Iridium Oxide Nanoparticles as Bio-Ink</b> Han-Yi Wang , Kuang-Chih Tso , Yi-Chieh Hsieh , Chung-Kai Chang , Pu-Wei Wu , Jyh-Fu Lee, Ting-Shan Chan