

JCK MEMS/NEMS 2018 Conference Program

1. 13 July, 2018, Friday (10:00-22:00): Registration & Putting up Posters
2. 14 July, 2018, Saturday (7:30-8:00): Registration
3. 15 July, 2018, Sunday (7:30-8:00): Registration

Agenda on 13 July, 2018

<u>Session 1: Design, Manufacture & Systems</u> Venue: DUT International Convention Center Session A Chair: Prof. Dazhi Wang, Dalian University of Technology, China Session A Co-Chair: Prof. Lijun Yang, Harbin Institute of Technology, China			
Time	Talk	Speaker	Presentation Title
13:45 - 14:00	Opening	Prof. Junshan Liu	Session Opening
14:00 - 14:15	Oral - A01	Jinshan Li	A gyro-free three-dimensional attitude determination system
14:15 - 14:30	Oral - A02	Prof. Yong Hu	Dynamic modeling and simulation of six cable driven parallel robot
14:30 - 14:45	Oral - A03	Chaojian Hou	Multilayer black phosphorus near-infrared photodetectors
14:45 - 15:00	Oral - A04	Zhi-wu Han	2D numerical simulation of contact problem for spur gears
Coffee Break & Viewing Posters (15:00 - 15:15)			
15:15 - 15:30	Oral - A05	Prof. Guojun Liu	Effects of two kinds of surface acoustic wave disturbance systems on the synthesis of gold nanoparticles
15:30 - 15:45	Oral - A06	Ping Zhu	Study on transferred volume and shape-control in contact dispensing of high-viscosity adhesive
15:45 - 16:00	Oral - A07	Kai Li	Resultant of thermal and electrohydrodynamic three-dimensional printing high molecular weight biopolymer
16:00 - 16:15	Oral - A08	Ke Zhai	A high frequency sono-electrochemical technique for fabrication of metal micro pit array

Agenda on 14 July, 2018

<u>Opening Session</u> Venue: DUT International Convention Center Moderator for Opening: Prof. Xueyong Wei, Xi'an Jiao Tong University, China Moderator for Plenary Speech: Prof. Junshan Liu, Dalian University of Technology, China Moderator for Keynote Speech: Prof. Toshihiro Itoh, The University of Tokyo, Japan			
Time	Talk	Speaker	Presentation Title
08:00 - 08:10	Opening	Prof. Liding Wang Member of the CAE	Welcome Address
08:10 - 08:15	Opening	Prof. Ryutaro Maeda	Conference Opening
08:15 - 08:30	Opening	Prof. Dong F. Wang	Opening Remark On JCK MEMS/NEMS 2018
08:30 - 09:00	Plenary	Prof. Qing-An Huang	A Micromachined Wind Sensor: From Prototypes To Products
09:00 - 09:30	Keynote	Prof. Renshi Sawada	MEMS Laser Based Sensors And Its Applications
<u>Session B: Physical & Chemical Sensors</u> Venue: DUT International Convention Center Session B Chair: Prof. Haisheng San, Xiamen University, China Session B Co-Chair: Dr. Atsushi Takei, National Institute of Advanced Industrial Science & Technology, Japan			
Time	Talk	Speaker	Presentation Title
09:30 - 09:45	Oral - B01	Cun Li	A micro-machined differential resonant accelerometer using quartz on silicon method
09:45 - 10:00	Oral - B02	Peng Zhou	Pressure sensor based on surface acoustic wave resonator and 3D printed chamber
10:00 - 10:15	Oral - B03	Shenglai Wan	An effective design and optimizing methodology for cantilever-based current sensors using neural network
Coffee Break & Viewing Posters (10:15 - 10:30)			
Time	Talk	Speaker	Presentation Title
10:30 - 10:45	Oral - B04	Dr. Chenzhong Shao	Analysis of event-driven operation of serial bus network type multi-sensor platform based on configurable interface LSI
10:45 - 11:00	Oral - B05	Wen-Jun Deng	Flexible passive wireless pressure and moisture dual-parameter sensor for wound Monitoring

11:00 - 11:15	Oral - B06	Kun-Peng Gao	Novel reusable self-adhesive ECG dry sensor based on carbon nanotube and adhesive PDMS
11:15 - 11:30	Oral - B07	Liu Xu	Effect of joule heating on the performance of a piezoresistive micromechanical oscillator
11:30 - 11:45	Oral - B08	Xing Wang	Influences of the 'spring structure' on the performance of the piezoelectric vibrating plate

Lunch Break
Poster Session
(11:45 - 13:00)

Poster Session Chair: Dr. Nak Kyu Lee, Korea Institute of Industrial Technology, Korea
Session Co-Chair: Prof. Tie Li, Chinese Academy of Sciences, China
Session Co-Chair: Prof. Junbo Wang, Chinese Academy of Sciences, China
Session Co-Chair: Prof. Yan Xu, Osaka Prefecture University, Japan
Session Co-Chair: Dr. Jian Lu, National Institute of Advanced Industrial Science & Technology, Japan

Poster	Presenter	Presentation Title
Poster - 01	Dr. Anran Gao	Ultra-sensitive and selective detection of mercury ion (Hg ²⁺)
Poster - 02	Xueting Zhang	Research on electrothermally driven bistable mems switch
Poster - 03	Baofa Hu	Optimizing technologies of L-BAND SAW resonator fabrication based on \electron beam lithography
Poster - 04	Shaobo Jin	A novel generator and control method of droplet based on surface acoustic waves
Poster - 05	Xing Yan	Mechanical properties of graphene-enhanced nickelphosphorus composite synthesized by ultrasonic-assisted electroless plating
Poster - 06	Xuesong Shang	Developing Cantilever-based Passive DC Current Sensors with High Measurement Accuracy
Poster - 07	Guansong Shan	A spring-assisted adaptive bistable energy harvester for high output under harmonic excitation
Poster - 08	Jie Song	Micro/Nano manufacturing and its applications under one roof report- part VI
Poster - 09	Dr. Zhifu Yin	Polydimethylsiloxane nanochannels fabrication based on spincoating
Poster - 10	Mingbo Chi	Hadamard transform spectrometer with coded apertures
Poster - 11	Masaya Takeuchi	Characteristics of new deep X-ray lithography beamline (BL11) at new SUBARU

Poster - 12	Dr. Lan Zhang	Temperature calibration of solid-state pH sensor for considering the industrial applications
Poster - 13	Dr. Sung-Won Youn	Fabrication of flexible replica mold with 2D and 2.5D structures designed by stamp program
Poster - 14	Dr. Sunao Murakami	Microfabrication of arrays of the convex microstructures of silicon using the combined etching process
Poster - 15	Hongtao Feng	An integrated microfluidic spectrometer with curved grating design
Poster - 16	Xiangnan Qiao	Research on the diffractive mechanism of the metallic grating
Poster - 17	Xiaojun Zhao	Nanostructure fabrication using coaxial focused electrohydrodynamic jet printing technique
Poster - 18	Yang Li	A novel mazelike microvalve integrated in microfluidic devices
Poster - 19	Dr. Yan Cui	Study of acetic acid addition on properties of PZT films prepared by sol-gel method
Poster - 20	Shiya Jin	Shape forming and stress relief for fine metal wire bonding
Poster - 21	Chen Jia	Influence of the surface energy for thermal performance of micro heat pipe
Poster - 22	Dr. Ye Hu	Research on technology of reproducing instantaneous dynamic load for motorized spindle based on fourier transform
Poster - 23	Dr. Kun Bo	Numerical models and finite element analysis of interference fit between drill teeth and body for DHT hammer
Poster - 24	Fu Wei	Regional selective hydrophilic modification method for capillary-driven point-of-care testing (POCT) device
Poster - 25	Dr. Hyub Lee	Femtosecond laser direct writing method for micro devices using grapheme oxide
Poster - 26	Zeyang Liu	A multi-state variable friction model based on saturation function
Poster - 27	Ze Liu	A Dynamic Adaptive Algorithm for Array Polarization Navigation Sensor under Varying Lighting Conditions

<u>Session C: Flow & Fluid Devices</u> Venue: DUT International Convention Center Moderator for Plenary Speech: Prof. Ryutaro Maeda, AIST / XJTU, Japan / China Session C Chair: Prof. Sang-Seok Lee, Tottori University, Japan Session C Co-Chair: Prof. Yonggang Jiang, Beihang University, China			
Time	Talk	Speaker	Presentation Title
13:00 - 13:30	Plenary	Prof. Tatsuo Arai	Micro Robotics Advances Bio Science
13:30 - 13:45	Oral - C01	Juan Wei	Microfluidic device with multi-layer pillars for building stable cell culture microenvironment and generating regionalized concentrations
13:45 - 14:00	Oral - C02	Satoshi Shiratori	Design of noninvasive fluid flow rate sensor utilizing strain distribution on curved tube
14:00 - 14:15	Oral - C03	Di Zhou	Sensing and identification of multiple analytes based on mode localization
14:15 - 14:30	Oral - C04	Tomoaki Kageyama	A novel flow speed sensor based on Pt electrodes and ISFET for water quality monitoring system
14:30 - 14:45	Oral - C05	Xing Yan	High-surface-area nickel electrodes for piezoelectric nanofibers
14:45 - 15:00	Oral - C06	Thanh-Vinh Nguyen	Effect of substrate motion on the contact time of impacting droplets
15:00 - 15:15	Oral - C07	Dr. Yuqing Lin	Si Nanoparticle transport through capillary nanopore
Coffee Break & Viewing Posters (15:15 - 15:30)			
<u>Session D: Bio-Sensing & Applications</u> Venue: DUT International Convention Center Session D Chair: Prof. Renshi Sawada, Kyushu University, Japan Session D Co-Chair: Prof. Zhengchun Peng, Shenzhen University, China			
Time	Talk	Speaker	Presentation Title
15:30 - 15:45	Oral - D01	Shixing Chen	Target recycling signal amplification for ultrasensitive multiplexing DNA biosensing
15:45 - 16:00	Oral - D02	YipLoon Seow	Finger's joint angle measurement with flexible conductive fabric sensor
16:00 - 16:15	Oral - D03	Wenlou Yuan	A shuttle roller coaster design for three-dimensional imaging with high spatial resolution applicable to vein recognition

16:15 - 16:30	Oral - D04	Dr. Young Won Kim	Fabrication of customized devices mimicking human body shapes using 3D scanning and 3D printing
16:30 - 16:45	Oral - D05	Hui'an Liu	MXene-based humidity sensor for non-contact hand gesture recognition
16:45 - 17:00	Oral - D06	Tomoki Hirata	Development and application of a MEMS blood flow sensor with a built-in pressure sensor, capable of highly reproducible measurement of blood flow
17:00 - 17:15	Oral - D07	Dr. Jian Lu	High-resolution location tracking by magnetic sensor nodes for surgical navigation
<u>Poster Session</u> <u>(17:15 – 18:30)</u>			
<u>Banquet & Award Ceremony</u> <u>(18:30 - 21:00)</u> Venue: DUT International Convention Center Moderator: Prof. Max Zenghui Wang, University of Electronic Science and Technology of China, China Best Presentation Award Best Paper Award for Young Scientists Outstanding Contribution to JCK Conference Award (TBD)			

Agenda on 15 July, 2018

<u>Session E: Invited Session</u> Venue: DUT International Convention Center Session E Chair: Prof. Toshihiro Itoh, The University of Tokyo, Japan Session E Co-Chair: Prof. Jing-quan Liu, Shanghai Jiao Tong University, China			
Time	Talk	Speaker	Presentation Title
08:00 - 08:25	Invited – 01	Prof. Max Zenghui Wang	A Vibrant New World—Exploring New Physics And Materials With Nanoelectromechanical Systems (NEMS)
08:25 - 08:50	Invited – 02	Prof. Yonggang Jiang	Biomimetic Flow And Pressure Sensors And Its Biological Basis
08:50 - 09:15	Invited – 03	Prof. Junbo Wang	Micro-Machined Based Electrochemical Seismic Sensors
09:15 - 09:40	Invited – 04	Prof. Xueyong Wei	Exploring Nonlinear Phenomena In Micromechanical Resonators
Coffee Break & Viewing Posters (09:40 - 09:55)			
09:55 - 10:20	Invited – 05	Prof. Tie Li	High Performance Sensors By Using Silicon Nanowire Array
10:20 - 10:45	Invited – 06	Prof. Yan Xu	Beyond Phenomena: Pioneering Applications Of Nanofluidics Through Nano-In-Nano Integration
10:45 - 11:10	Invited – 07	Dr. Atsushi Takei	Film / Elastomer Bilayer Systems For Functional Surfaces And Stretchable Electronics
11:10 - 11:35	Invited – 08	Prof. Dazhi Wang	Electrohydrodynamic Jet Nanoprinting And Nanodevices
Taking Group Photos To Mark JCK MEMS/NEMS 2018 (11:35 - 11:50)			
Introduction to JCK MEMS/NEMS 2019 & Closing Remark (11:50 - 12:00)			
Lunch Break (12:00 - 13:30)			
<u>DUT Technical Tour</u> <u>(13:30 - 15:30)</u> Moderator for Optional Social Event: Prof. Junshan Liu, Dalian University of Technology, China			