

## Session Topic 7 -- System Integration (Nano/Micro/Macro), NEMs, and Actuators

Chairs: Stanley Pau, University of Arizona

Ed Kolesar, Texas Christian University

### WEDNESDAY, Room M3

Paper ID	Time	Title	Authors & Affiliations
PID633462	9:00 - 9:45	<i>Optical Power Handling and Thermal Cycling of Optical MEMS</i>	Olga Spahn, Sandia National Laboratories, USA; Leslie Phinney, Sandia National Laboratories, USA; C. Channy Wong, Sandia National Laboratories, USA; William Cowan, Sandia National Laboratories, USA; Grant Grossetete, L&M Technologies, USA; and David Adams, Sandia National Laboratories, USA
	<b>9:45 - 10:00</b>	<b>Break</b>	
PID554424	10:00 - 10:30	<i>Microsensors Arrays Manufacture Using the NanoNabler™</i>	Olga Korostynska, University of Limerick, Irel; Khalil Arshak, University of Limerick, Irel; Edric Gill, University of Limerick, Irel; and Arousian Arshak, University of Limerick, Ireland
PID562118	10:30 - 11:00	<i>Design and Performance Comparison of Single- and Double-Hot Arm Polysilicon Surface Micromachined Electrothermal Actuators and Arrays Applied to Realize a Microengine</i>	Edward Kolesar, Texas Christian University, United States; Thiri Htun, Texas Christian University, United States; Brandon Least, Texas Christian University,
PID595738	11:00 - 11:30	<i>Rotational Control of Tethered Bacterial Flagellar Motor</i>	Steve Tung, University of Arkansas, USA; Jin-Woo Kim, University of Arkansas, USA; and Ryan Pooran, University of Arkansas, USA
PID595776	11:30 - 12:00	<i>Design and Fabrication of Microheaters for Localized Carbon Nanotube Growth</i>	Ying Zhou, University of Florida, USA; Jason Johnson, University of Florida, USA; Lei Wu, University of Florida, USA; Sarah Maley, Air Force Research Laboratory, USA; Ant Ural, University of Florida, USA; and Huikai Xie, University of Florida, USA
	<b>12:00 - 2:00</b>	<b>Lunch</b>	
	2:00 - 2:45	<i>Poster Session</i>	
	<b>2:45 - 3:00</b>	<b>Break</b>	
PID634000	3:00 - 3:45	<i>Putting mechanics into photonics</i>	<b>H.X. Tang, Yale University, USA</b>
PID596100	3:45 - 4:15	<i>Carbon Nanotube Field Emission Devices with Integrated Gate for High Current Applications</i>	Darrell Niemann, NASA Ames Research Center, USA; Jeremy Silan, NASA Ames Research Center, USA; Jessica Killian, NASA Ames Research Center, USA; Kevin Schwanfelder, NASA Ames Research Center, USA; Mahmudur Rahman, Santa Clara University, USA; Meya Meyyappan, NASA Ames Research Center, USA; and Cattien Nguyen, NASA Ames Research Center, USA
<b>Poster Session (Wednesday 2 - 2:45pm)</b>			
PID550281	Poster	<i>Photoplastic NEMS with an Encapsulated Polysilicon Piezoresistor</i>	Nitin Kale, Indian Institute of Technology, India; Sudip Nag, Indian Institute of Technology, India; R. Pinto, Indian Institute of Technology, India; and V. Ramgopal Rao, Indian Institute of Technology, India
PID553674	Poster	<i>Nano-Crossbar Arrays for Nonvolatile Resistive RAM (RRAM) Applications</i>	Christian Nauenheim, Forschungszentrum Jülich GmbH, Germany; Carsten Kügeler, Forschungszentrum Jülich GmbH, Germany; Andreas Rüdiger, Forschungszentrum Jülich GmbH, Germany; Rainer Waser, Forschungszentrum Jülich GmbH, Germany; Alexander Flocke, RWTH Aachen University, Germany; and Tobias Noll, RWTH Aachen University, Germany

PID575672	Poster	<i>Comparison of Sensitivity in Single and Dual Waveguide Coupled Microring Resonator Sensors</i>	Alireza Kargar, Shiraz University, Iran; and Zexuan Qiang, School of Physics and Optoelectronics Technology, Fujian Normal University, Fuzhou, 35007, P. R. China, and Nanofab Center, Department of Electrical Engineering, University of Texas at Arlington, Arlington, TX 75019-0072 USA, China and USA
PID595094	Poster	<i>Qubit control-pulse generator circuits for operation at cryogenic temperatures</i>	S. Ramesh Ekanayake, University of New South Wales, Australia; Torsten Lehmann, University of New South Wales, Australia; Andrew Dzurak, University of New South Wales, Australia; and Robert Clark, University of New South Wales, Australia
PID596315	Poster	<i>Fabrication and characterization of surface-micromachined compact microheater for gas sensing applications</i>	Jaewoo Lee, Electronics and Telecommunications Research Institute, Korea; H.-Y. Lee, Electronics and Telecommunications Research Institute, Korea; S.-E Moon, Electronics and Telecommunications Research Institute, Korea; J.-H. Kwak, Electronics and Telecommunications Research Institute, Korea; S.-J. Park, Electronics and Telecommunications Research Institute, Korea; J.-H. Park, Electronics and Telecommunications Research Institute, Korea; K.-H. Park, Electronics and Telecommunications Research Institute, Korea; and Jongdae Kim, Electronics and Telecommunications Research Institute, Korea
PID596387	Poster	<i>Integration of Single-Walled Carbon Nanotubes on to CMOS Circuitry with Parylene-C Encapsulation</i>	Mehmet R. Dokmeci, Northeastern University, USA; Chia-Ling Chen, Northeastern University, USA; Vinay Agarwal, Tufts University, USA; and Sameer Sonkusale, Tufts University, USA
PID596563	Poster	<i>Study on Large-Scale Arrayed Micro Thruster with Nano Propellants</i>	Dahai Ren, Tsinghua University, China; Gaofei Zhang, Tsinghua University, China; Xiaolu Wang, Tsinghua University, China; and Zheng You, Tsinghua University, China