### **Optical MEMS and Nanophotonics 2017** - 13th to 17th August 2017



Sunday, 13th August			Ultra-low power wavelength conversion in a silicon microring resonator » Hongjun Liu (Xi'an Institute of Optics and Precision Mechanics,
18:00	Welcome Reception Atrium, Marriott Hotel	09:30	Chinese Academy of Science), Zhaolu Wang (Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Science), and Nan Huang (Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Science)
Monday, 14th August			Fabrication of PbS Quantum dots and Silicon Device for Near-Infrared
07:30	Continental breakfast Atrium	09:45	detection » Akio Higo (VDEC, The Univ. of Tokyo), Hai-bin Wang (RCAST, The Univ. of Tokyo), Takaya Kubo (RCAST, The Univ. of Tokyo), Naoto Usami (Dep
08:20	08:20 Welcome and opening remarks Sierra/Cumbre/Vista		of EEIS, The Univ. of Tokyo), Yuki Okamoto (Dep. of EEIS, The Univ. of Tokyo), Kentaro Yamada (Dep. of EEIS, The Univ. of Tokyo), Hiroshi Segawa (RCAST, The Univ. of Tokyo), Masakazu Sugiyama (RCAST, The Univ. of Tokyo), and Yoshio Mita (Dep. of EEIS, The Univ. of Tokyo)
08:30	Mo-K KEYNOTE: Prof. Michal Lipson Sierra/Cumbre/Vista	10:00	Coffee Break
09:15	Mo-1       Silicon Photonics         09:15       Sierra/Cumbre/Vista         Chair:       Dan Marom		<b>Mo-21 INVITED: Photonic materials and devices</b> <i>Sierra/Cumbre/Vista</i> Chair: Yves-Alain Peter
	Analog Silicon Photonic MEMS Phase-Shifter with Double-Step Electrostatic Actuation » Hamed Sattari (École Polytechnique Fédérale de Lausanne (EPFL)), Teodoro Graziosi (École Polytechnique Fédérale de Lausanne (EPFL)),	10:30	Ultra-thin plasmonic metal nitrides: tailoring optical properties to photonic applications » Alexandra Boltasseva (Purdue), Harsha Reddy (Purdue), Deesha Shah (Purdue), Nathaniel Kinsey (VCU), and Vladimir Shalaev (Purdue)
09:15	Marcell Kiss (École Polytechnique Fédérale de Lausanne (EPFL)), Tae Joon Seok (Gwangju Institute of Science and Technology), Sangyoon Han (Korea Advanced Institute of Science and Technology), Ming C. Wu (Department of Electrical Engineering and Computer Sciences, University of California, Berkeley), and Niels Quack (École Polytechnique Fédérale de Lausanne (EPFL))	11:00	Vacuum radiometry of an infrared nanoantenna-coupled tunnel diode rectenna » Paul Davids (Sandia National Labs)
		11:30	<b>Mo-2 Photonic materials and devices</b> Sierra/Cumbre/Vista Chair: Yves-Alain Peter



11:30	Third Order Nonlinear Waveguide with CdSe Quantum Dots in PFCB Nanocomposite Core » Moran Bin Nun (The Hebrew University of Jerusalem), Yedidya Lior (The Hebrew University of Jerusalem), and Dan Marom (The Hebrew University of Jerusalem)		15:30	<b>Deep Silicon Etching for X-Ray Diffraction Devices Fabrication</b> » Houxun Miao (NIH), Mona Mirzaeimoghri (University of Maryland, College Park/NIH), Lei Chen (NIST CNST), and Han Wen (NIH)	
11:45	<b>Tunable Room-Temperature Single-Photon Emission at Telecom</b> <b>Wavelengths from Carbon Nanotube Quantum Defects</b> » Xiaowei He (Los Alamos National Lab), Htoon Han (Los Alamos National Lab), and Stephen K. Doorn (Los Alamos National Lab)		15:45	Cryogenic testing of MOEMS deformable mirror for future optical instrumentation » Frederic Zamkotsian (Lab. Astrophysique Marseille (LAM)), Patrick Lanzoni (Lab. Astrophysique Marseille (LAM)), Rudy Barette (Lab. Astrophysique Marseille (LAM)), Michael Helmbrecht (Iris-AO), Franck Marchis (Iris-AO), and Alex Teichman (Iris-AO)	
12:00	<b>Broadband Mid-Infrared Silicon-on-Insulator Waveguide Devices</b> » Bowei DONG (National University of Singapore), Chengkuo Lee (National University of Singapore), Hong Wang (Nanyang Technological University), Xianshu Luo (Institute of Microelectronics (IME)), and Patrick Guo-qiang Lo (Institute of Microelectronics (IME))		16:00	Aperture Arrays for Subnanometer Calibration of Optical Microscopes » Craig Copeland (NIST CNST), Craig Mcgray (NIST PML), Jon Geist (NIST PML), J. Alexander Liddle (NIST CNST), B. Robert Ilic (NIST CNST), and Samuel Stavis (NIST CNST)	
12:30	Lunch Atrium				
14:00	<b>Mo-31 INVITED: MEMS Applications</b> <i>Sierra/Cumbre/Vista</i> Chair: Frederic Zamkotsian		l	16:15	<b>Q-switched tunable solid-state laser using a MOEMS mirror</b> » Alan Paterson (University of Strathclyde), Ralf Bauer (University of Strathclyde), Walter Lubeigt (University of Strathclyde), and Deepak Uttamchandani (University of Strathclyde)
14:00	<b>Enabling Trapped Ion Quantum Computing with MEMS Technology</b> » Jungsang Kim (Duke University), Stephen Crain (Duke University), Chao Fang (Duke University), James Joseph (Duke University), and Peter Maunz (Sandia National Laboratories)		Tuesday,	15th August	
14:30	Developing X-ray photonic microsystems for Synchrotron Applications		07:30	Continental breakfast Atrium	
15:00	» Jin Wang (Argonne National Laboratory) Coffee break		08:30	<b>Tu-K KEYNOTE: Prof. Juerg Leuthold</b> Sierra/Cumbre/Vista	
15:30	<b>Mo-3 Systems and applications</b> <i>Sierra/Cumbre/Vista</i> Chair: Andreas Seifert		09:15	<b>Tu-1 Tunable Plasmonics</b> <i>Sierra/Cumbre/Vista</i> Chair: Niels Quack	



09:15	Tunable Optical Response and Purcell Enhancement of Gated Plasmonic Structures » Ruzan Sokhoyan (California Institute of Technology), Ghazaleh Kafaie Shirmanesh (California Institute of Technology), Yu-jung Lu (California Institute of Technology), Krishnan Thyagarajan (California Institute of Technology), Ragip Pala (California Institute of Technology), and Harry Atwater (California Institute of Technology)		11:45	Improved Infrared Detection Using Nanoantennas » David Peters (Sandia National Laboratories), Michael B Sinclair (Sandia National Laboratories), Michael Goldflam (Sandia National Laboratories), Larry Warne (Sandia National Laboratories), Salvator Campione (Sandia National Labs), Jin Kim (Sandia National Laboratories), Paul Davids (Sandia National Labs), Anna Tauke-ped	
09:30	Active electromechanical resonance tuning of localized gap plasmons » Brian Roxworthy (NIST CNST) and Vladimir Aksyuk (NIST CNST)			(Sandia National Laboratories), Joel Wendt (Sandia National Laboratories), John Klem (Sandia National Laboratories), Samuel Hawkins (Sandia National Laboratories), S. Parameswaran (Sandia	
09:45	Femtosecond Switching of Infrared Light using a Plasmonic Cadmium Oxide Perfect Absorber » Yuanmu Yang (Sandia National Labs), Kyle Kelley (North Carolina State University), Edward Sachet (North Carolina State University),			National Laboratories), Wesley Coon (Sandia National Laboratories), Gordon Keeler (Sandia National Laboratories), and Torben Fortune (Sandia National Laboratories)	
03.43	Salvatore Campione (Sandia National Labs), T.S. Luk (Sandia National Labs), Jon-paul Maria (Sandia National Labs), Michael Sinclair (Sandia National Labs), and Igal Brener (Sandia National Labs)		12:00	Fabrication of Large-area Optical Slot Antenna ArraysFor Studying Spontaneous Emission Enhancement Of Transition Metal Dichalcogenide	
10:00	Coffee break			» Meng-chieh Yang (National Tsing Hua University), Cheng-Ting Liao (National Tsing Hua University), Cheng Yue (National Tsing Hua University), Ming-Chang M. Lee (National Tsing Hua University), and Yi- hsian Lee (National Tsing Hua University)	
10:30	<b>Tu-2I INVITED: Plasmonic devices</b> Sierra/Cumbre/Vista Chair: Igal Brener				
10:30	Large-scale plasmonic pixels and combinatorial colors » Maiken Mikkelsen (Duke University)			<b>Dual-band Tunable Graphene-Based Filter</b> » Michael Goldflam (Sandia National Laboratories), Isaac Ruiz (Sandia	
11:00	Electromagnetic Coupling Mechanisms in Vertically Oriented Metallic Plasmonic Inclusions » Bruce Burckel (Sandia National Laboratories)		12:15	National Laboratories), Stephen Howell (Sandia National Laborator and Thomas Beechem (Sandia National Laboratories)	
11:30	Tu-2 Plasmonic Devices Chair: Igal Brener		12:30	Lunch Atrium	
	Fabrication of plasmonic color filter by freestanding Metal-Insulator-		12:30	Steering committee working lunch	
11:30	Metal gratings for MEMS tunable filter » Masato Mitsudome (Toyohashi University of Technology), Kazuaki Sawada (Toyohashi University of Technology), and Kazuhiro Takahashi (Toyohashi University of Technology)		14:00	<b>Tu-3I INVITED: Dielectric metasurfaces</b> <i>Sierra/Cumbre/Vista</i> Chair: Ming-Chang M. Lee	



14:00	Flat and Conformal Optics With Dielectric Metasurfaces » Andrei Faraon (California Institute of Technology), Amir Arbabi (University of Massachusetts Amherst), Seyedeh Mahsa Kamali (California Institute of Technology), Ehsan Arbabi (California Institute of Technology), and Yu Horie (California Institute of Technology)		16:00	<b>Mode-group mixing device via complex phase masks printed on fiber tip</b> » Miri Blau (The Hebrew University of Jerusalem), Moriya Rosenfeld (The Hebrew University of Jerusalem), Juan Carlos Alvarado Zacarias (College of Optics and Photonics, University of Central Florida), Rodrigo Amezcua Correa (The College of Optics and Photonics, University of Central Florida), and Dan Marom (The Hebrew University of Jerusalem)
	Phase control through Huygens' metasurfaces » David Czaplewski (Argonne National Laboratory), Haogang Cai (Argonne National Laboratory), Tapashree Roy (Argonne National Laboratory), Karim Ogando (Argonne National Laboratory), Liliana Stan (Argonne National Laboratory), and Daniel Lopez (Argonne National Laboratory)		17:00	PS-1 Posters and Reception Chair:
14:30				Picosecond pulse pumped wavelength conversion in silicon nanowaveguides » Zhaolu Wang (Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Science), Hongjun Liu (Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Science), and Nan Huang
15:00	Cofee break			(Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Science)
Tu-3 Dielectric metasurfaces and structures15:30Sierra/Cumbre/Vista Chair: Ming-Chang M. Lee			<b>GaN Microring Waveguide Bonded to Si substrate by Polymer</b> » Ryohei Hashida (Tohoku University), Takashi Sasaki (Tohoku University), and Kazuhiro Hane (Tohoku University)	
15:30	High-efficiency, low-aspect-ratio planar lens based on Huygens resonators » Haogang Cai (Argonne National Laboratory), David Czaplewski (Argonne National Laboratory), Liliana Stan (Argonne National Laboratory), and Daniel Lopez (Argonne National Laboratory)			Nanoscale Silicon Truncated Conical Photodetector at Subwavelength Aperture for NSOM Applications » Matityahu Karelits (Jerusalem College of Technology - Lev Academic Center), Gilad Hirshfeld (Jerusalem College of Technology - Lev Academic Center), Yaakov Mandelbaum (Jerusalem College of Technology - Lev Academic Center), Avraham Chelly (Bar-Ilan University
	Frequency-mixing in GaAs dielectric metasurfaces » Polina Vabishchevich (Sandia National Laboratories), Sheng Liu (Sandia National Laboratories), Aleksandr Vaskin (Institute of Applied Physics, Abbe Center of Photonics, Friedrich Schiller University Jena), John L Reno (Center for Integrated Nanotechnologies, Sandia National Laboratories), Gordon Keeler (Sandia National Laboratories), Michael B Sinclair (Sandia National Laboratories), Isabelle Philippa Staude (Institute of Applied Physics, Abbe Center of Photonics, Friedrich Schiller University Jena), and Igal Brener (Sandia National Labs)			(BIU)), and Avi Karsenty (Jerusalem College of Technology - Lev Academic Center)
15:45				Two-axis MEMS scanner in a resonance operation for diagnosis of middle ear diseases » Jaekwon Lee (Gwangju Institute of Science and Technology (GIST)), Sang-Jin Lee (Gwangju Institute of Science and Technology (GIST)), Seunghwan Moon (Gwangju Institute of Science and Technology), Yangkyu Park (Gwangju Institute of Science and Technology (GIST)), Kwanghyun Kim (Gwangju Institute of Science and Technology), and Jong-Hyun Lee (Gwangju Institute of Science and Technology (GIST))



Portable Multispectra Tunable Forensic Lens for Jadeite Analysis » Kai-Wei Liao (National Tsing Hua University), Ru-chian Luo (National Tsing Hua University), and J. Andrew Yeh (National Tsing Hua University)

# Polarization Insensitive Metamaterial Perfect Absorber at Visible Frequencies

» Guoqiang Chen (National University of Singapore) and Guangya Zhou (National University of Singapore)

Black Silicon Based Iris with Reduced Light Scattering and Reflection » Yousuf Almoallem (University of Wisconsin - Madison), Mohammad Moghimi (University of Wisconsin - Madison), and Hongrui Jiang (University of Wisconsin - Madison)

Development of Selective Pattering Method of Biomolecules Using Photothermal Effect on Engineering Plastic Micro Wells

» Takehiro Nagashima (Keio University), Kan Yamada (Kyodo International Inc.), Yuta Chonan (Keio University), Ryo Sudo (Keio University), and Yoshihiro Taguchi (Keio University)

#### Design of Tunable SPR on MEMS for Displays

» Yu-Tang Hu (National Tsing Hua University), Shih-chun Lo (National Tsing Hua University), Jason Pan (National Tsing Hua University), and Cheng-Yao Lo (National Tsing Hua University)

Tunable Corner Cube Retroreflector (CCR) Fabricated with 3D Printing and Origami

» Yen-Hung Wang (National Taiwan University), Yu-Fan Chen (National Taiwan University), and Jui-che Tsai (National Taiwan University)

#### Solid Non-Mechanical Discretely-Tunable Hard-Aperture Diaphragm

» Shun-Hao Yu (National Taiwan University), Chih-chieh Chang (National Taiwan University), Jheng-hong Gu (National Taiwan University), and Jui-che Tsai (National Taiwan University)

# Mouse tissue imaging using real-time Lissajous confocal endomicroscopic system

» Kyungmin Hwang (KAIST), Yeong-Hyeon Seo (KAIST), Daniel Kim (KAIST), Jinhyo Ahn (KAIST), Soyoung Lee (KAIST), Sangyong Jon (KAIST), Pilhan Kim (KAIST), and Ki-Hun Jeong (Korea Advanced Institute of Science and Technology/Department of Bio and Brain Engineering)

#### Effectively Anticancer Drug Concentration Gradients by Using 3D Microfluidic Chip

» Yu-Sheng Lin (Sun Yat-Sen University)

#### **CD-Like Centrifugal Microfluidic Device for Organophosphorus Pesticides (OPP) Sensing** » Yu-Sheng Lin (Sun Yat-Sen University)

Temperature and distance dependence of plasmon enhanced InAs/InGaAs/GaAs dot-in-a-well near IR emission » Sharmin Haq (University of New Mexico)

# An Ultra-Fast Electrothermal Micromirror with Bimorph Actuators Made of Copper/Tungsten

» Dingkang Wang (University of Florida), Xiaoyang Zhang (University of Florida), Liang Zhou (University of Florida), Mengyue Liang (University of Florida, Tianjin University), Daihua Zhang (Tianjin University), and Huikai Xie (University of Florida)

#### Dynamical Range and Stability Enhancement in Electrically Fused Microknot Optical Resonators

» Alexandra Logvinova (Tel Aviv University), Gal Gottlieb (Tel Aviv University), Shir Shahal (Bar Ilan University), Moti Fridman (Bar-Ilan University (BIU)), and Yoav Linzon (Tel Aviv University)

#### Tunable Terahertz Bandpass Filter using MEMS Reconfigurable Metamaterial

» Kazuhide Ichikawa (The University of Tokyo), Zhengli Han (RIKEN), and Hiroshi Toshiyoshi (The University of Tokyo)



Feasibility Study of the OCT Probe using MEMS Optical Scanner Array for High Speed Inspection » Kwanghyun Kim (Gwangju Institute of Science and Technology),	
Seunghwan Moon (Gwangju Institute of Science and Technology), Jaekwon Lee (Gwangju Institute of Science and Technology (GIST)), Yangkyu Park (Gwangju Institute of Science and Technology (GIST)),	
Sang-Jin Lee (Gwangju Institute of Science and Technology (GIST)), and Jong-Hyun Lee (Gwangju Institute of Science and Technology (GIST))	
A Refractive Index Sensor Based on a Packaged Microfiber Coil Resonator	
» Xuan Yi Lu (National Taiwan University) and Lon (Alex) Wang (National Taiwan University)	
High-throughput Fabrication of Surface Plasmon Resonance Fiber Probes Using Nanotransfer Printing Method » CHIEN-FU LO (Graduate Institute of Photonics and Optoelectronics,	
and Department of Electrical Engineering National Taiwan University), Nien-tsu Huang (National Taiwan University), Chien-Lin Wu (National Taiwan University), and Lon (Alex) Wang (National Taiwan University)	
Sub-10-Nanometer-Scale Laser Ablation on Hard Materials From Dielectric Near-Field Nanophotonics	
» Yong Ho Kwon (University of Wisconsin-Madison), Hewei Liu (University of Wisconsin-Madison), Soongyu Yi (University of Wisconsin-	
Madison), Hao Bian (Xi'an Jiaotong University), Feng Chen (Xi'an Jiaotong University), Zongfu Yu (University of Wisconsin-Madison), and Hongrui Jiang (University of Wisconsin - Madison)	
Selectively Controlling Plasmon-Driven Photochemical Reactions	
» Bijesh kafle (University of New Mexico), Terefe Habteyes (University of New Mexico), and Marisa Poveda (University of New Mexico)	
Micromachined Drilling of Dielectric Substrates of Varying Bandgap using Laser Accelerated Particles	
» Tirtha Mitra (University of Minnesota) and Joseph Talghader (University of Minnesota)	

### Wednesday, 16th August

07:30	Continental breakfast Atrium
08:30	We-K KEYNOTE: Prof. John A. Rogers Sierra/Cumbre/Vista
09:15	We-1 Flexible structures and devices Sierra/Cumbre/Vista Chair: Daniel Lopez
09:15	<b>Tunable Gold Nano-Disks Array on Flexible Substrates</b> » Ibrahim Misbah (Univ. of Houston), Fusheng Zhao (Univ. of Houston), and Wei Chuan Shih (Univ. of Houston)
09:30	Antireflective Structures for Tunable Liquid-filled Lens » SANGIN BAE (Korea Advanced Institute of Science and Technology/Department of Bio and Brain Engineering), Youngseop Lee (Korea Advanced Institute of Science and Technology/Department of Bio and Brain Engineering), and Ki-Hun Jeong (Korea Advanced Institute of Science and Technology/Department of Bio and Brain Engineering)
09:45	Characteristics of ultra-thin MEMS mirror device on flexibe substrate » Toshihiro Takeshita (AIST), Takahiro Yamashita (AIST), Natsumi Makimoto (AIST), and Takeshi Kobayashi (AIST)
10:00	Coffee break
10:30	<b>We-2I INVITED: Sensing systems</b> <i>Sierra/Cumbre/Vista</i> Chair: Wibool Piyawattanametha
10:30	A Photonic MEMS Accelerometer with a Low-Finesse Hemispherical Microcavity Readout » Yiliang Bao (NIST), Feng Zhou (NIST), Thomas Lebrun (NIST), and Jason Gorman (NIST)



11:00	Fourier Reconstruction of the Force Signal using a Microelectromechanical Oscillator in the Casimir Regime » Ricardo Decca (Indiana University Purdue University Indianapolis)		14:00	<b>Reconfigurable MEMS Metamaterials</b> » Chengkuo Lee (National University of Singapore) and Chong Pei Ho (The University of Tokyo)	
11:30	<b>We-2 Optical sensing and imaging systems</b> <i>Sierra/Cumbre/Vista</i> Chair: Wibool Piyawattanametha		14:30	<b>We-3 Bio sensing and applications</b> <i>Sierra/Cumbre/Vista</i> Chair: Somin Lee	
11:30	Uncooled Infrared Sensor Using Torsional Resonator and Electrostatic Detection » Minoru Sasaki (Toyota Technological Institute)	tor and Electrostatic		A New Extremely Small Sensor for Measuring a Blood Flow and a Contact Pressure Simultaneously	
11:45	Selective in-plane Fabry-Pérot gas sensor functionalized with polymer » Philippe Jubinville (Polytechnique Montréal), Régis Guertin (Polytechnique Montréal), Levin Erbilgin (Polytechnique Montréal),		14:30	» Ryo Inoue (Kyushu University), Hirofumi Nogami (Kyushu University Eiji Higurashi (The University of Tokyo), and Renshi Sawada (Kyushu University)	
	William Skene (University of Montréal), and Yves-Alain Peter (Polytechnique Montréal)			Development of Electrothermal Lens Actuator for Endoscopic Blood Flow Sensor	
12:00	Forward-looking OCT endomicroscope based on a compact Fourier- plane piezo fiber scanner » Sergio Vilches (University of Freiburg), Simon Kretschmer (University		14:45	» MASAAKI HASHIMOTO (Keio University) and Yoshihiro Taguchi (Keio University)	
	of Freiburg), Caglar Ataman (University of Freiburg), and Hans Zappe (University of Freiburg)		15:00	MEMS micromirror based light sheet generator for biomedical imaging » Ralf Bauer (University of Strathclyde) and Deepak Uttamchandani	
	ENDOSCOPE ZOOM OPTICS USING ALVAREZ LENSES » Yongchao Zou (National University of Singapore), Fook Siong Chau		15.00	(University of Strathclyde)	
12:15	(National University of Singapore), and Guangya Zhou (National University of Singapore)			Batch production of silicon fiber-top cantilever devices » Jan Rector (VU University Amsterdam), Steven Beekmans (VU	
12:30	OMN 2018 Announcement Sierra/Cumbre/Vista		15:15	University Amsterdam), Martin Slaman (VU University Amsterdam), Remco Verdoold (Philips Electronics Nederland B.V.), and Davide Iannuzzi (VU University Amsterdam)	
12:45	Lunch Atrium		15:30	Coffee break	
14:00	We-31 INVITED: Reconfigurable MEMS metamaterials Sierra/Cumbre/Vista Chair: Wei-Chuan Shih		16:00	<b>We-4 Micromirror Scanners</b> Sierra/Cumbre/Vista Chair: Caglar Ataman	

-

-



	16:00	An electromagnetic two-axis micro scanner with dual radial magnetic fields » Yangkyu Park (Gwangju Institute of Science and Technology (GIST)), Seunghwan Moon (Gwangju Institute of Science and Technology (GIST)), Jaekwon Lee (Gwangju Institute of Science and Technology (GIST)), Kwanghyun Kim (Gwangju Institute of Science and Technology), Sang-Jin Lee (Gwangju Institute of Science and Technology (GIST)), and Jong-Hyun Lee (Gwangju Institute of Science and Technology (GIST))		17:15	Fab leng » Ke Uni Ltd) Sas (Pa (To
		Two-axis quasistatic gimbal-less microscanner with concentrically tilted stationary comb electrodes		Thursday,	, 17tl
	16:15	» Seunghwan Moon (Gwangju Institute of Science and Technology (GIST)), Jaekwon Lee (Gwangju Institute of Science and Technology (GIST)), Yangkyu Park (Gwangju Institute of Science and Technology		07:30	<b>Cor</b> Atri
		(GIST)), Kwanghyun Kim (Gwangju Institute of Science and Technology (GIST)), Sang-Jin Lee (Gwangju Institute of Science and Technology (GIST)), and Jong-Hyun Lee (Gwangju Institute of Science and		08:30	<b>Th-</b> Sier
		Technology (GIST)) A Compact MEMS-Based Wide-Angle Optical Scanner		09:15	<b>Th-</b> <i>Sier</i> Cha
	16:30	» Bruce Yang (University of Florida), Liang Zhou (University of Florida), Xiaoyang Zhang (University of Florida), Dingkang Wang (Dingkang Wang), Sanjeev Koppal (University of Florida), and Huikai Xie (University of Florida)		09:15	<b>Inje</b> » Ke (Un
	16:45	<b>MEMS 3-Dimensional Scanner for Handheld Confocal Microscope</b> » Tianbo Liu (Montana State University) and David Dickensheets (Montana State University)			Inte me » Za Hei (Eir
	17:00	Characterization and Reliability Study of a MEMS Mirror Based on Electrothermal Bimorph Actuation » Haoran Wang (University of Florida, Tianjin University), Huikai Xie (University of Florida), Daihua Zhang (Tianjin University), Xiaoyang Zhang (University of Florida), and Liang Zhou (University of Florida)		09:30	Uni Tec Mic (Eir Uni Tec

# abrication of Varifocal Scanner Integrated with Piezoresistive Focal ength and Angle Sensors

čenta Nakazawa (Tohoku University), Takashi Sasaki (Tohoku

University), Hiromasa Furuta (Panasonic Industrial Devices SUNX Co., Ltd), Jiro Kamiya (Panasonic Industrial Devices SUNX Co., Ltd), Hideki Sasaki (Panasonic Industrial Devices SUNX Co., Ltd), Toshikazu Kamiya (Panasonic Industrial Devices SUNX Co., Ltd), and Kazuhiro Hane (Tohoku University)

	Thursday	, 17th August
	07:30	Continental breakfast Atrium
у	08:30	<b>Th-K KEYNOTE: Prof. Oskar Painter</b> Sierra/Cumbre/Vista
	09:15	Th-1 Cavity optomechanical devices Sierra/Cumbre/Vista Chair: Vladimir Aksyuk
ty	09:15	Injection Locking of Optomechanical Oscillators via Acoustic Waves » Ke Huang (University of New Mexico) and Mani Hossein-Zadeh (University of New Mexico)
	09:30	Integrated spectrometer and displacement sensor based on mechanically tunable photonic crystals » Zarko Zobenica (Eindhoven University of Technology), Rob W. Van Der Heijden (Eindhoven University of Technology), Maurangelo Petruzzella (Eindhoven University of Technology), Francesco Pagliano (Eindhoven University of Technology), Tian Xia (Eindhoven University of Technology), Leonardo Midolo (Eindhoven University of Technology), Michele Cotrufo (Eindhoven University of Technology), Yongjin Cho (Eindhoven University of Technology), Frank W.m. Van Otten (Eindhoven University of Technology), and Andrea Fiore (Eindhoven University of Technology)



	Optomechanical Spring Effect Readout in Resonant Micro-Optical Sagnac Gyroscopes: Design And Scaling Analysis » Alejandro Grine (Sandia National Laboratories), Aleem Siddiqui (Sandia National Laboratories), Darwin Serkland (Sandia National Laboratories), Matt Eichenfield (Sandia National Laboratories), Michael	11:15		A Novel Silicon Microsphere Based Optical Fiber Probe for Refractive Index Sensing Applications » Shih-Shin Chang (National Taiwan University), Jian-Hong Chen (National Taiwan University), Guan-Hung chen (National Taiwan University), and Lon (Alex) Wang (National Taiwan University)
09:45	Shaw (Sandia National Laboratories), Michael Wood (Sandia National Laboratories), Daryl Dagel (Sandia National Laboratories), Erica Douglas (Sandia National Laboratories), Thomas Friedman (Sandia National Laboratories), Lawrence Koch (Sandia National Laboratories), Christopher Hains (Sandia National Laboratories), Gordon Keeler (Sandia National Laboratories), and Christopher Nordquist (Sandia National Laboratories)	11:30		Photothermal Intracellular Delivery with Self-Aligned Cell Seeding » Tianxing Man (University of California, Los Angeles), Xiongfeng Zhu (University of California, Los Angeles), Yu Ting Chow (University of California, Los Angeles), Tingyi Liu (University of California, Los Angeles), Ximiao Wen (University of California, Los Angeles), Michael Teitell (University of California, Los Angeles), and Pei-Yu Chiou (University of California, Los Angeles)
10:00	Coffee break	11:45	5	<b>Closing remarks</b> Sierra/Cumbre/Vista
10:30	Th-21 INVITED: Opto-fluidic manipulation Sierra/Cumbre/Vista Chair: Eric Pei-Yu Chiou	12:00	)	Lunch Atrium
10:30	<b>On-chip manipulation of local heating and nanoparticle motion</b> » Roshni Biswas (University of Southern California), Ningfeng Huang (University of Southern California), Aravind Krishnan (University of Southern California), Ahmed Morsy (University of Southern California), Luis Rodriguez (University of Southern California), Shao-hua Wu (University of Southern California), and Michelle Povinelli (University of Southern California)			
11:00	<b>Th-2 Opto-fluidic manipulation and sensing</b> <i>Sierra/Cumbre/Vista</i> Chair: Eric Pei-Yu Chiou			
11:00	<b>Optoelectro Microfluidic Chip for Sequential Sensing of Mass Diffusion</b> <b>Coefficient</b> » Makoto Kamata (Keio University), Yoshihiro Taguchi (Keio University), and Yuji Nagasaka (Keio University)			