

Wednesday, November 22

9:30 **Plenary Talks 2 (Chair: Hiroshi Inokawa)**

- Invited Talk ① **All-Inorganic Perovskite Quantum Dots Nanocomposites For the Application in Backlighting of Light-emitting Diodes**
Ru-Shi Liu
(National Taiwan University, Taiwan)
- Invited Talk ② **Intrinsic localised Modes in Nano Ferroelectrics**
Arindam Biswas
(Asansol Engineering College, India)

10:50 **Coffee Break**

11:00 **Talks by Young Researcher of RIE (Chair: Daniel Moraru)**

- ① **Frequency-domain analysis in fluorescence lifetime, tissue, and time-of-flight ranging with ultra-high-speed multi-tap charge modulation pixels**
Keiichiro Kagawa
(Research Institute of Electronics, Shizuoka University, Japan)
- ② **Transformation from Plasmon induced transparency to induced absorption through the control of coupling strength in metal-Insulator-metal structure**
Youichiro Neo
(Research Institute of Electronics, Shizuoka University, Japan)
- ③ **Development of a radiation tolerant compact image sensor using CdTe based photodiode and field emitter array**
Tomoaki Masuzawa
(Research Institute of Electronics, Shizuoka University, Japan)

12:15 **Lunch**

13:30 **Lectures by Takayanagi Prize Winners 1 (Chair: Hideki Asai)**

- Invited Talk ① **Almost Instantaneous Fixed-to-Variable Length Codes**
Hirosuke Yamamoto
(The University of Tokyo, Japan)
- Invited Talk ② **Ultra-Low-Noise Wide-Dynamic-Range CMOS Image Sensors for Scientific Applications**
Min-Woong Seo
(Shizuoka University, Japan)

14:40 **Coffee Break**

14:50 **Lectures by Takayanagi Prize Winners 2 (Chair: Wataru Inami)**

- Invited Talk ③ **Fabrication techniques for metallic nanostructures and its applications to surface plasmon enhanced optical devices**
Atsushi Ono
(Shizuoka University, Japan)
- Invited Talk ④ **Development of a Healthcare Monitoring System Combined with Ambulatory and Non-conscious Physiological Measurements and its Application to Medical Care and Rehabilitation**
Kosuke Motoi
(Shizuoka Institute of Science and Technology, Japan)
- Invited Talk ⑤ **A Study toward 3D Micro-Nanomanipulation inside Electron Microscope**
Masahiro Nakajima
(Nakajima Steel Pipe Co. Ltd., Nagoya University, Japan)

16:20 **Closing**
Yukinori Ono
(Symposium Chair)



The 19th Takayanagi Kenjiro Memorial Symposium



Research Institute of Electronics, Shizuoka University
Toward Advanced Imaging Science Creation
– From quantum physics to photonic and medical applications –

DATE November 21 and 22, 2017, **Registration Fee: Free**

Location S-Port, Hamamatsu Campus, Shizuoka University
3-5-1 Johoku, Naka-ku, Hamamatsu 432-8011, Japan

Program

Tuesday, November 21

10:00 **Opening (Chair: Yukinori Ono)**
Kiyoshi Ishii (President of Shizuoka University)
Hidenori Mimura (Director of Research Institute of Electronics, Shizuoka University)

10:15 **Plenary Talks 1 (Chair: Futoshi Iwata)**

Invited Talk ① **Towards Ubiquitous Infrared Imaging**
Achyut Dutta
(Banpil Photonics, USA)

Invited Talk ② **Laser Feedback Interferometry and Its Applications for Profilometry and Tomography**
Yidong Tan
(Tsinghua University, China)

Invited Talk ③ **Spin-Valley Physics of Coupled Two-Dimensional Silicon-Based Systems**
Kei Takashina
(Bath University, UK)

12:15 **Lunch**

13:30 **Poster Presentations by Young Researchers**

① **Structural and Magnetic Properties of Spinodally Decomposed Epitaxial Spinel Ferrite Thin Films**
Nipa Debnath
(Graduate School of Science and Technology, Shizuoka University)

② **Characterization of Room-Temperature Terahertz Antenna-Coupled Bolometers with Different Sensors: MOSFET, PN-Junction Diode and Resistor of Silicon**
Durgadevi Elamaran
(Graduate School of Science and Technology, Shizuoka University)

③ **Entry of antimicrobial peptide LactoferricinB (4-9) into single vesicles and E.coli cells**
Md.Moniruzzaman
(Graduate School of Science and Technology, Shizuoka University)

④ **Construction of p- and n-type Si Wire Array on SOI Wafer for Thermoelectric Generator Devices**
Khotimatul Fauziah
(Graduate School of Science and Technology, Shizuoka University)

⑤ **Optical color filter from visible to near-infrared range based on surface plasmon resonance**
Atsutaka Miyamichi
(Graduate School of Science and Technology, Shizuoka University)

Organized by Research Institute of Electronics, Shizuoka University

Information: <http://www.rie.shizuoka.ac.jp/>

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Poster Presentations by Young Researchers

- ⑥ **Fabrication of Uncooled Antenna-Coupled Terahertz Microbolometer Arrays**
Amit Banerjee
(Research Institute of Electronics, Shizuoka University)
- ⑦ **Demonstration of Surface plasmon enhanced fluorescence by resonant wavelength tuning**
Daichi Hayashi
(Graduate school of Science and Technology, Shizuoka University)
- ⑧ **Observation of Silicon and Silicon Carbide Schottky Barrier Diode Using Scanning Probe Microscopy**
Takashi Uruma
(Graduate School of Science and Technology, Shizuoka university)
- ⑨ **Imaging of charged sample surface using scanning ion conductance microscopy with a theta type nanopipette**
Tatsuru Shirasawa
(Graduate School of Integrated Science and Technology, Shizuoka University)
- ⑩ **Improving accuracy of 3D microfabrication using local electrophoresis deposition assisted with laser trapping controlled by a spatial light modulator**
Toshiki Matsuura
(Graduate School of Integrated Science and Technology, Shizuoka University)
- ⑪ **Synthesis and Characterization of Al Doped ZnO Nano Rod Arrays by Using Advanced Spray Pyrolysis Method of Rotational, Pulsed and Atomized**
A.M.S.L.B. Attanayake
(Graduate School of Science and Technology, Shizuoka University)
- ⑫ **Direct laser writing of photorefractive waveguides in lithium-niobate crystals**
Keita Imaizumi
(Graduate School of Integrated Science and Technology, Shizuoka University)
- ⑬ **Fabrication and properties of 3D photonic crystals with structural color**
Yusuke Sakai
(Graduate School of Integrated Science and Technology, Shizuoka University)
- ⑭ **Fabrication of chirped 3D photonic crystals by Direct Laser Writing technique**
Ryosuke Hommura
(Graduate School of Integrated Science and Technology, Shizuoka University)
- ⑮ **Imaging of latent photoexposure patterns in photoresist using laser-induced photoluminescence quenching**
Edy Yulianto
(Graduate School of Science and Technology, Shizuoka University)
- ⑯ **Determination of change in optical property for surface tissues using photoplethysmography and real-time TOF measurement**
Takuma Kitaura
(Graduate School of Integrated Science and Technology, Shizuoka University)
- ⑰ **Development of nano-imaging system of ion distribution by electron beam detection**
Kiyohisa Nii
(Graduate School of Integrated Science and Technology, Shizuoka University)
- ⑱ **Construction of Simple and Efficient Equipment for Seebeck Coefficient Measurement of Flexible Materials**
Faizan Khan
(Graduate School of Science and Technology, Shizuoka University)
- ⑲ **Simulation of periodic heating for analysis of thermal diffusivity in nanostructured thermoelectric materials**
Naomi Yamashita
(Graduate School of Science and Technology, Shizuoka University)
- ⑳ **Fabrication of Thin SiGe on Insulator Layer for Thermoelectric Applications**
C. P. Goyal
(Graduate School of Science and Technology, Shizuoka University)
- ㉑ **Impregnation of ZnS Quantum dot on mesoporous TiO₂ nanospheres targeting for environmental remediation**
S. Harish
(Graduate School of Science and Technology, Shizuoka University)
- ㉒ **Synthesis of core-shell upconversion NaGdF₄:Yb:TM@Cu nanoparticles for multimodal imaging**
Ibrahim Khaleelullah Mohamed Mathar Sahib
(Graduate School of Science and Technology, Shizuoka University)
- ㉓ **High surface area carbonate-doped mesoporous TiO₂ nanospheres for dye sensitized solar cells applications**
R. Sankar Ganesh
(Graduate School of Science and Technology, Shizuoka University)
- ㉔ **Pileup Compensation Based on Dead-Time Correction**
Katsuyuki Takagi
(Graduate School of Science and Technology, Shizuoka University)
- ㉕ **CsI:TI scintillator detector with Silicon colimeter**
Kento Tabata
(Graduate School of Science and Technology, Shizuoka University)
- ㉖ **Doping of CdTe by laser irradiation from backside**
Junichi Nishizawa
(Graduate School of Science and Technology, Shizuoka University)

- ㉗ **Time-Dependence of Carrier Transport Properties in CdTe Radiation Detector under the polarization condition**
Hisaya Nakagawa
(Graduate School of Science and Technology, Shizuoka University)
- ㉘ **PbTe-Based Thermoelectric Modules**
Sergiy Levitskyi
(V.E. Lashkaryov Institute of Semiconductor Physics of the National Academy of Sciences of Ukraine)
- ㉙ **Enhanced Metal Induced Lateral Solid Phase Crystallization of Ge on SiO₂/Si Substrate with Au Melting-Induced Seeding**
Selvaraj Shanithi
(Graduate School of Science and Technology, Shizuoka University)
- ㉚ **Effect of catalyst on CO detection by using a vibrating microcantilever coated by ZnO nanorods**
Lia Aprilia
(Graduate School of Science and Technology, Shizuoka University)
- ㉛ **Highly Luminescent YAP Thin Films as Nanoscale Optical Source for Ultra-High Resolution Microscopy**
Kolchiba Mykyta
(Graduate School of Science and Technology, Shizuoka University)
- ㉜ **Development of Event-Driven X-ray Detector using Fully-Depleted Silicon-On-Insulator Based Technology for High Energy Imaging**
Sumeet Shrestha
(Research Institute of Electronics, Shizuoka University)
- ㉝ **Enhancement of piezoelectric characteristics in a free-standing close-packed hemispherical shell structure thin film**
Sridevi Meenachisundaram
(Graduate School of Science and Technology, Shizuoka University)
- ㉞ **Label-Free Biomedical Imaging Using High-Speed CMOS Lock-In Pixel Sensor for Stimulated Raman Scattering**
Kamel Mars
(Research Institute of Electronics, Shizuoka University)
- ㉟ **Role of Built-in Electric Field in Inter-band Tunneling via A-few-dopant Clusters in Nanoscale Si Tunnel Diodes**
Gaurang Prabhudesai
(Graduate School of Science and Technology, Shizuoka University)
- ㊱ **Analysis of Low-Temperature Single-Electron Tunneling Transport via Selectively-Doped A-Few-Donor QDs**
Adnan Afiff
(Graduate School of Science and Technology, Shizuoka University)
- ㊲ **A Wide Dynamic Range(WDR) CMOS Image Sensor with Gated Dual Storage Diodes**
Minho Lee
(Graduate School of Science and Technology, Shizuoka University)
- ㊳ **A Highly Time-Resolved Near Infrared Spectroscopy Image Sensor Using a High-Speed CMOS Lock-in Pixel**
De Xing Lioe
(Research Institute of Electronics, Shizuoka University)
- ㊴ **Fabrication Features of Novel Nanophotonic Devices for Imaging Applications: Single-Photon Detector and Thermal Detector**
Yash Sharma
(Graduate School of Science and Technology, Shizuoka University)

15:20 Coffee Break

15:30 Special Talks on Network-Type Joint Research (Chair: Tetsuo Sasaki)

- Invited Talk ① **4H-SiC MOSFETs and Logic Inverters for Harsh Environment Electronics**
Shin-Ichiro Kuroki
(Hiroshima University, Japan)
- Invited Talk ② **Surgical Robot Systems using Pneumatic Actuators**
Kotaro Tadano
(Tokyo Institute of Technology, Japan)
- Invited Talk ③ **Investigation of the Influenza Virus Detection System Using Sialic Acid Receptor**
Yukichi Horiguchi
(Tokyo Medical and Dental University, Japan)

17:20 Reception (Chair: Futoshi Iwata)
North Cafeteria, Hamamatsu Campus, Shizuoka University