



NANO RESEARCH GROUP

UNIVERSITY OF
Southampton

**LEPLER
INSTITUTE**



2015 UK-Japan Silicon Nanoelectronics and Nanotechnology (UK-Japan Si NANO²) Symposium in Southampton

9-10 July, 2015

Garden Court and Shackleton Lecture Theatre, University of Southampton

Thursday 9th July

- 9:00-9:30 Registration and Arrival
- 9:30 -9:35 Welcome remark 1: Prof Hywel Morgan, University of Southampton
- 9:35-9:40 Welcome remark 2: Professor Kunio Takeyasu, Director of JSPS London

Session 1 Plenary session

9:40-10:10 "Silicon device technology for intelligent communications"
Prof Shunri Oda, Tokyo Institute of Technology (**invited**)

10:10-10:40 *Coffee*

Session 2 Silicon nanoelectronics and beyond (I)

- 10:40-11:00 "Single electron manipulation in silicon nanodevices"
Dr Akira Fujiwara, NTT Basic Research Laboratory (**invited**)
- 11:00-11:20 "Spin Monte Carlo transport simulations in nanoscale Si/InGaAs MOSFETs"
Dr Karol Kalna, Swansea University (**invited**)
- 11:20-11:40 "Nano-Electro-Mechanical Integration and Computation"
Dr Dinesh Pamunuwa, University of Bristol (**invited**)
- 11:40-12:00 "New definition of SI unit by quantum metrology using single electron pump"
Dr Jon Fletcher, NPL (**invited**)
- 12:00-12:10 "An overview of JSPS activities" Ms Chigusa Ogaya
- 12:10-12:20 "JSPS fellowships" Mr Takeshi Kamezawa.
- 12:20-2:00 *Photo session and Lunch*

Session 3 Silicon nanoelectronics and beyond (II)

- 2:00-2:20 "Zinc oxide based FBAR devices for bio-sensing applications"
Prof Bill Milne, University of Cambridge (**invited**)
- 2:20-2:40 "ZnO nanowire transistors"
Dr Harold Chong, University of Southampton
- 2:40-3:00 "Gas field ion source lithography"
Dr Marek Schmidt, JAIST (**invited**)
- 3:00-3:30 *Coffee*



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Session 4 Silicon nanoelectronics and beyond (III)

- 3:30-3:50 “Diamond electronics”
Dr Takayuki Iwasaki, Tokyo Institute of Technology **(invited)**
- 3:50-4:10 “MEMS for Space”
Dr Hanna Sykulska-Lawrence, University of Oxford **(invited)**
- 4:10-4:30 “Theoretical approach towards practical quantum computing”
Prof Kae Nemoto, National Institute of Informatics **(invited)**
- 4:30-4:50 “Thermoelectric effects in Si nanowires”
Dr Zahid Durrani, Imperial College London **(invited)**

Friday 10th July

Session 5 Plenary session

- 9:00-9:30 “Device Applications of Silicon Nanocrystals and Nanostructures”
Prof Nobuyoshi Koshida, Tokyo University of Agriculture and Technology **(invited)**
- 9:30-9:50 “Silicon quantum devices towards new innovation for computing”
Dr David Williams, Hitachi Cambridge Laboratory **(invited)**
- 9:50-10:10 “Scanning probe microscopy of silicon nanodevice structures”
Dr Yoshi Tsuchiya, University of Southampton

10:10 - 10:40 *Coffee*

Session 6 Nanoelectronics and Nanotechnology Research Group Activities (PechaKucha)

- 10:40 Sun Kai, “Silicon Nanoribbon Biosensors”
- 10:50 Liam Boodhoo, “Low power nanoelectromechanical switches”
- 11:00 Ruomeng Huang, “Selective growth of chalcogenide materials”
- 11:10 Swe Zin Oo, “Disposable plastic SERS sensor”
- 11:20 Katrina Morgan, “Radiation hardness resistive memory”
- 11:30 Graham Wood, “Electrostatically coupled MEMS resonators”
- 11:40 Kapil Debnath, “Atomically flat patterning of Si waveguide”
- 11:50 Taha Ben Masaud, “Hot-wire poly-Si photonics”
- 12:00 Alex Serb, “RRAM process development and applications”
- 12:10 Dan Spencer, “Single cell microfluidic impedance cytometry”

12:20- 2:00 *Lunch*

Session 7 Networking and poster session

- 2:00-4:00 Poster sessions and networking
- 4:00 Closing remark

