

## 2019 Taiwan International Quantum Computer Workshop Agenda (HsinChu)

2019/01/23 Wed.

Venue: Room107, Engineering Building 1, National Tsing Hua University

| Time             | Chair  | Invited Speaker   | Title   |
|------------------|--|---|---|
| 09:00 –<br>09:20 | <b>Registration</b>  |   |   |
| 09:20 –<br>09:30 | Opening – <b>Prof. Shawn Shuo-Hung Hsu</b> , Director General, Department of Engineering and Technologies, Ministry of Science and Technology, Taiwan(R.O.C) |   |   |
| 09:30 –<br>10:30 | <b>Prof. Shawn Shuo-Hung Hsu</b><br>Director General, Department of Engineering and Technologies, Ministry of Science and Technology                         | <b>Prof. Seigo Tarucha (Japan)</b><br>Professor, Department of Applied Physics, University of Tokyo, Japan                            | Versatile Spin Control for Spin-based Quantum Computing with Quantum Dots |
| 10:30 –<br>10:50 | <b>Break</b>   |   |   |
| 10:50 –<br>11:50 | <b>Prof. Hoi, Io Chun</b><br>Department of Physics and Institute of Astronomy, National Tsing Hua University   | <b>Prof. Andreas Wallraff (Europe)</b><br>Professor, Department of Physics, ETH Zurich, Switzerland                                   | Quantum Information Processing with Superconducting Circuits              |
| 11:50 –<br>13:30 | Lunch  |   |   |
| 13:30 –<br>14:30 | <b>Prof. Yueh-Nan Chen</b><br>Department of Physics, National Cheng Kung University  | <b>Prof. William D. Oliver (USA)</b><br>Physics Professor of the Practice<br>Lincoln Laboratory Fellow RLE<br>Associate Director, USA | Quantum Engineering of Superconducting Qubits                             |
| 14:30 –<br>15:10 | <b>Prof. Chung-Yu Mou</b><br>Distinguished professor,<br>National Tsing Hua University   | <b>Prof. Yueh-Nan Chen (Taiwan, R.O.C)</b><br>Department of Physics, National Cheng Kung University,<br>R.O.C(Taiwan)                 | Hierarchy in temporal quantum correlations                                |
| 15:10 –<br>15:30 | <b>Break</b>   |   |   |

| Time             | Chair   | Invited Speaker  | Title   |
|------------------|---|--|---|
| 15:30 –<br>16:00 | <b>Prof. Chen, Tse-Ming</b><br>Professor, Department of<br>Physics, National Cheng Kung<br>University | <b>Dr. Joel I.J. Wang (USA)</b><br>Postdoctoral Associate,<br>Research Laboratory of<br>Electronics, MIT, USA  | Quantum coherent control in<br>graphene-based van der Waals<br>heterostructures |
| 16:00 –<br>16:40 | <b>Prof. Chung-Yu Mou</b><br>Distinguished professor,<br>National Tsing Hua University                | <b>Prof. Hoi, Io Chun (Taiwan,<br/>           R.O.C)</b><br>Department of Physics and<br>Institute of Astronomy,<br>National Tsing Hua University,<br>Hsinchu, R.O.C(Taiwan) | Quantum optics with<br>superconducting artificial atoms                         |

2019/01/24 Thu.

Venue: Room107, Engineering Building 1, National Tsing Hua University

| Time          | Chair  | Invited Speaker  | Title   |
|---------------|--|--|---|
| 09:00 – 09:20 | <b>Registration</b>  |  |   |
| 09:20 – 10:20 | <b>Prof. Hsi-Sheng Goan</b><br>Department of Physics, National Taiwan University             | <b>Prof. Andrew Dzurak (Australia)</b><br>Program Leader, ARC Centre of Excellence for Quantum Computing and Communication Technology, UNSW, Australia | Quantum Computing based on Silicon-CMOS Technology  |
| 10:20 – 11:00 | <b>Prof. Chung-Yu Mou</b><br>Distinguished professor, National Tsing Hua University          | <b>Prof. Ray-Kuang Lee (Taiwan, R.O.C)</b><br>Institute of Photonics Technologies, National Tsing-Hua University, R.O.C(Taiwan)                        | 10dB vacuum noise squeezing at 1064 nm in Taiwan and its implementation on quantum photonic chips   |
| 11:00 – 11:10 | <b>Break</b>   |  |   |
| 11:10 – 11:50 | <b>Prof. Chung-Yu Mou</b><br>Distinguished professor, National Tsing Hua University          | <b>Prof. Hsi-Sheng Goan (Taiwan, R.O.C)</b><br>Department of Physics, National Taiwan University, R.O.C(Taiwan)  | High-fidelity and robust quantum gate operations for quantum computing  |
| 11:50 – 12:20 | <b>Dr. Joel I.J. Wang</b><br>Postdoctoral Associate, Research Laboratory of Electronics, MIT | <b>Dr. Chien-Yuan Ted Chang (Japan)</b><br>Postdoctoral Research Fellow, Department of Applied Physics, University of Tokyo, Japan                     | Experimental verification entanglement-preserving transformation between SPDC photons and electron spin in a gate-defined lateral quantum dot |