

# NEXT GENERATION QUANTUM COMPUTING

29th and 30th of August 2022, Yokohama, Japan

## Monday, 29th of August

### *Ion-Trap related Quantum Computing*

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|-------|---|---|
| 9:00  | Opening by <b>Dr. Lothar Mennicken</b> , German Embassy Tokyo   | Opening by <b>Axel Karpenstein</b> , DWIH Tokyo   |
| 9:30  | <b>Silpa Muralidharan</b> , Osaka University<br><i>The quantum phase transition between MOTT insulator and superfluid in JCH system using trapped ion</i>                 | <b>Prof. Kenji Toyoda</b> , Osaka University<br><i>Quantum simulations using trapped ions and technical aspects concerning them</i>               |
| 11:00 | Coffee break  |   |
| 11:30 | <b>Peter Toth</b> , TU Braunschweig<br><i>Integrated microwave source for ion-trap based qubit controll</i>   | <b>Prof. Vadim Issakov</b> , TU Braunschweig<br><i>A high speed bit-pattern generator for Josephson Arbitrary Waveform Synthesizer (JAWS)</i>     |
| 13:00 | Lunch   |   |
| 14:30 | <b>Dr. Celeste Torkzaban</b> , LUH<br><i>Quantum Valley Lower Saxony: Collaborative development of a trapped-ion quantum computer and additional quantum technologies</i> | <b>Niklas Orłowski</b> , LUH<br><i>Vibrationally-decoupled cryogenic surface-electrode ion trap for scalable quantum computing and simulation</i> |
| 16:00 | Coffee break  |   |
| 16:30 | <b>Dr. Sebastian Lubner</b> , Infineon Technologies AG<br><i>A semiconductor corporation view on quantum</i>  | <b>Wolfgang Furtner</b> , Infineon Technologies AG<br><i>System architecture for trapped ion quantum computing</i>                                |
| 18:30 | Dinner  |   |

## Tuesday, 30th of August

### *Superconductivity related Quantum Computing*

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|-------|--|---|
| 9:00  | <b>Prof. Naoki Yamamoto</b> , Keio University<br><i>Application of quantum computer</i>  | <b>Prof. Joseph Bardin</b> , Google Ai Quantum Team<br><i>State of the art and challenges in control and measurement of superconducting quantum computers</i> |
| 10:30 | Coffee break   |   |
| 11:00 | <b>Prof. Hiroki Ishikuro</b> , Keio University<br><i>Device characterization/ Device modelling cryogenic PDK</i>                         | <b>Masayuki Ichikawa</b> , Keio University<br><i>Monitoring technique of self-heating in bulk MOSFETs at cryogenic temperatures</i>                           |
| 12:30 | Lunch  |   |
| 14:00 | <b>Prof. Ken Uchida</b> , University of Tokyo<br><i>Device characterization for cryogenic CMOS, investigating self heating phenomena</i> | <b>Prof. Atsushi Noguchi</b> , University of Tokyo<br><i>Hybrid quantum systems with trapped electrons via superconducting circuits</i>                       |
| 15:30 | Coffee break   |   |
| 16:00 | <b>Dr. Munehiro Tada</b> , NBS, Inc.<br><i>Cryogenic FPGA</i>  |   |