

## Program of the Inauguration Ceremony

Max Planck Harvard Research Center for Quantum Optics (MPHQ)

11<sup>th</sup> and 12<sup>th</sup> of January 2018

January 11<sup>th</sup>:      **Location:** Institute for Advanced Study (IAS)  
Lichtenbergstr. 2a, 85748 Garching

### **Young Scientist/PostDoc Day**

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|-----------------|--|
| 14:00h – 14:05h | short welcoming / opening of the program   |
| 14:05h – 14:30h | <b>Dr. Fabian Grusdt (Harvard)</b><br><i>Meson theory of magnetic polarons in hole-doped anti-ferromagnets</i>                 |
| 14:30h – 14:55h | <b>Dr. Johannes Zeiher (MPQ)</b><br><i>Coherent dynamics in Rydberg-dressed spin systems</i>                                   |
| 14:55h – 15:20h | <b>Dr. Daniel Greif (Harvard)</b><br><i>New frontiers in fermionic quantum gas microscopy</i>                                  |
| 15:20h – 15:55h | <b>Dr. Erez Zohar (MPQ)</b><br><i>Quantum Methods for Lattice Gauge Theories - Quantum Simulation and Gauge Invariant PEPS</i> |
| 15:55h – 16:30h | Coffee Break   |
| 16:30h – 16:55h | <b>Dr. Ephraim Shahmoon (Harvard)</b><br><i>Optomechanical response of a two-dimensional atomic array</i>                      |
| 16:55h – 17:20h | <b>Dr. Olivier Morin (MPQ)</b><br><i>Coherence protection of a photonic-qubit memory</i>                                       |
| 17:20h – 17:45h | <b>Dr. Lawrence Cheuk (Harvard)</b><br><i>Laser Cooling and Optical Trapping of CaF Molecules</i>                              |
| 17:45h – 18:10h | <b>Dr. Renate Landig (Harvard)</b><br><i>Time crystals in strongly interacting dipolar spin systems</i>                        |
| 18:10h – 20:00h | Poster session & finger food buffet  |

**January 12<sup>th</sup>**      **Location: Deutsches Museum, Museumsinsel 1, Munich**

### **Official Inauguration Day**

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| 09:00h - 09:30h | Registration  |
| 09:30h – 09:40h | Opening, Welcome speech by <b>Prof. Gerhard Rempe</b> and <b>Prof. Wolfgang Heckl</b>   |
| 09:40h – 10:20h | talk by <b>Prof. Mikhail Lukin (Harvard)</b><br><i>“Exploring new frontiers of quantum science with past, present and future Harvard-MPQ collaboration”</i>   |
| 10:20h – 11:00h | talk by <b>Prof. Immanuel Bloch (MPQ)</b><br><i>“Large Scale Quantum Simulations Using Ultracold Atoms in Optical Lattices”</i>   |
| 11:00h – 11:20h | Coffee break  |
| 11:20h – 12:00h | talk by <b>Prof. Kang-Kuen Ni (Harvard)</b><br><i>“Fun with two atoms – a tale of collisions and reactions”</i>   |
| 12:00h – 12:40h | talk by <b>Prof. Ignacio Cirac (MPQ)</b><br><i>“Theoretical frontiers in quantum optics and quantum information”</i>  |
| 12:40h – 13:10h | talk by <b>Prof. Rainer Blatt (member of the MPHQ Scientific Advisory Board)</b><br><i>“Quantum Computations and Quantum Simulations with trapped ions”</i>   |
| 13:10h – 14:00h | Lunch   |
| 14:00h – 14:45h | talk by <b>Prof. Wolfgang Ketterle (Massachusetts Institute of Technology (Nobel laureate))</b><br><i>“New forms of matter with ultracold atoms: superfluids and supersolids”</i>   |
| 14:45h – 15:15h | <b>Official Opening Ceremony</b><br><b>Prof. Gerhard Rempe (MPQ, Director of the MPHQ)</b><br><b>Prof. Martin Stratmann (President of the Max Planck Society (MPG))</b><br><b>Prof. Jeremy Bloxham (Dean of Science at Harvard)</b> |
| 15:15h – 16:00h | talk by <b>Prof. John Doyle (Harvard)</b><br><i>“Probing the frontiers of particle physics using quantum sensors”</i>   |
| 16:00h – 16:30h | Coffee break  |
| 16:30h – 16:45h | talk by <b>Dr. Johannes-Geert Hagmann (Deutsches Museum)</b><br><i>“Optics and Quantum Optics at the Deutsche Museum”</i>   |
| 16:45h – 17:45h | talk by <b>Prof. Markus Greiner (Harvard, Director of the MPHQ)</b><br><i>“Quantum Lego: from single atoms to quantum computing”</i>  |
| 17:45h – 18:00h | Closing remarks & Scientific wrap-up by <b>Prof. Gerhard Rempe</b>  |