

# Quantum Optics and Decision Making Workshop

## Programme

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|-------|---|-------|---------------------------|
| 9:00  | Welcome                                   | 14:00 | Quantum Walk/trajectories |
| 9:10  | Introduction, Grenoble/UTokyo<br>overview | 15:00 | Quantum Dots              |
| 10:00 | Decision making                           | 15:40 | Break                     |
| 10:00 | Experimental approaches                   | 16:10 | Prospects                 |
| 10:40 | Break                                     | 17:00 | Lab Tour                  |
| 11:10 | Theoretical approaches                    |       |                           |
| 12:30 | Lunch                                     |       |                           |

**Institut Néel, Grenoble, February, 28<sup>th</sup>, 2023**

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9:10	Guillaume Bachelier (Néel)	Opening
9:20	Laurence Magaud (Néel)	Welcome message, NEEL presentation
9:25	Ken-ichi Kitayama (JST)	Introductory message
9:40	Makoto Naruse (UTokyo)	Japan-France collaboration overview
10:00	Nicolas Chauvet (Cailabs)	Spatial Division Multiplexing of Light
10:20	Jonathan Laurent (Néel)	OAM ressources for decision making
11:10	Hiroaki Shinkawa(UTokyo)	Asymmetric joint decision by photons
11:30	Honoka Shiratori (UTokyo)	Preference satisfaction by photons
11:50	Pierre Pocreau (LIG)	Improving social welfare in non-cooperative games
12:10	Sergey Skipetrov (LPMMC)	Light in disordered media

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14:00	Tomoki Yamagami (UTokyo)
14:20	Vincent Rosetto (LPMMC)
14:40	Aurelien Drezet (Néel)
15:00	Kouichi Akahane (NICT)
15:20	Francis Granger (Pheliqs)
16:10	Hirokazu Hori (Univ Yamanashi)
16:30	Jochen Fick (Néel)
17:10	Jonathan Laurent (Néel)
17:20	Benjamin Pigeau (Néel)

Quantum walks
Random walks in the classical world
Matter waves and bohmian trajectories
Quantum dot devices
CdSe QD in a taper-shaped ZnSe NW
Photochromic functions and micro- macro duality
Optical Fiber Tweezers
OAM and entangled photon generation
Ultrasensitive Nano-Optomechanical Sensors

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## List of participants

1. Laurence Magaud (Néel)
  2. Guillaume Bachelier (Néel)
  3. Jonathan Laurent (Néel)
  4. Aurelien Drezet (Néel)
  5. Jochen Fick (Néel)
  6. Benjamin Pigeau (Néel)
  7. Nicolas Chauvet (Cailabs)
  8. Arnaud Rigny (Cailabs)
  9. Mehdi Mhalla (LIG)
  10. Alastair Abbott (LIG)
  11. Pierre Pocreau (LIG)
  12. Sergey Skipetrov (LPMMC)
  13. Vincent Rosetto (LPMMC)
  14. Kuntheak Kheng (CEA)
  15. Francis Granger (CEA)
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1. Makoto Naruse (UTokyo)
  2. Tomoki Yamagami (UTokyo)
  3. Hiroaki Shinkawa (UTokyo)
  4. Honoka Shiratori (UTokyo)
  5. Hirokazu Hori (Univ Yamanashi)
  6. Kouichi Akahane (NICT)
  7. Ken-ichi Kitayama (JST/NICT/Hamamatsu)
  8. Yasuhiro Katsumata (JST)

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