

## **Session Program**

**2-7 Jul 2023**

# **Searching for New Physics at the Quantum Technology Frontier**

## ***Atoms and Exotic Atoms II***

Congressi Stefano Francini (CSF), Ascona (Ticino), Switzerland  
Monte Verità Strada Collina 84 CH-6612 Ascona (Ticino)

## Friday 7 July

08:25

### Atoms and Exotic Atoms II

**Session** |

**Location:** Congressi Stefano Franscini (CSF), Ascona (Ticino), Switzerland, Monte Verità Strada Collina 84 CH-6612 Ascona (Ticino) |

**Convener:** Eberhard Widmann

08:25–08:30 **Session's intro**

**Speaker**

Eberhard Widmann

08:30–09:05

**Hydrogen, at MIT and UFRJ, and Antihydrogen Laser Spectroscopy, at the ALPHA collaboration at CERN**

**Speaker**

Claudio Lenz Cesar

09:05–09:30 **1S-3S CW spectroscopy of Deuterium atoms**

**Speaker**

Pauline Yzombard

09:30–09:55

**Precision spectroscopy of transitions from the metastable  $2\ ^3S_{1/2}$  state of  $^4\text{He}$  to high- $n$  Rydberg states**

**Speaker**

Gloria Clausen

09:55–10:25 **Coffee break**

10:25–11:00

**Fundamental Interactions and Beyond with X-ray Spectroscopy of Exotic Atoms**

**Speaker**

Dr Nancy Paul

11:00–11:25

**Theory of light muonic atoms --- Two-photon-exchange contributions to muonic hydrogen and deuterium**

**Speaker**

Franziska Hagelstein

11:25–11:50

**Probing Nuclear Sizes through Precision Spectroscopy of Ultracold Bosonic and Fermionic Helium**

**Speaker**

Yuri van der Werf

11:50–12:25

**Searching for ultralight scalar dark matter with muonium and muonic atoms**

12:25

**Speaker**  
Dr Yevgeny Stadnik