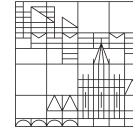




Universität  
Konstanz



# New Frontiers in Ultrafast Quantum Optics

**LAKE COMO SCHOOL  
OF ADVANCED STUDIES**

**July 27-31, 2026**

**Villa del Grumello, Como, Italy**



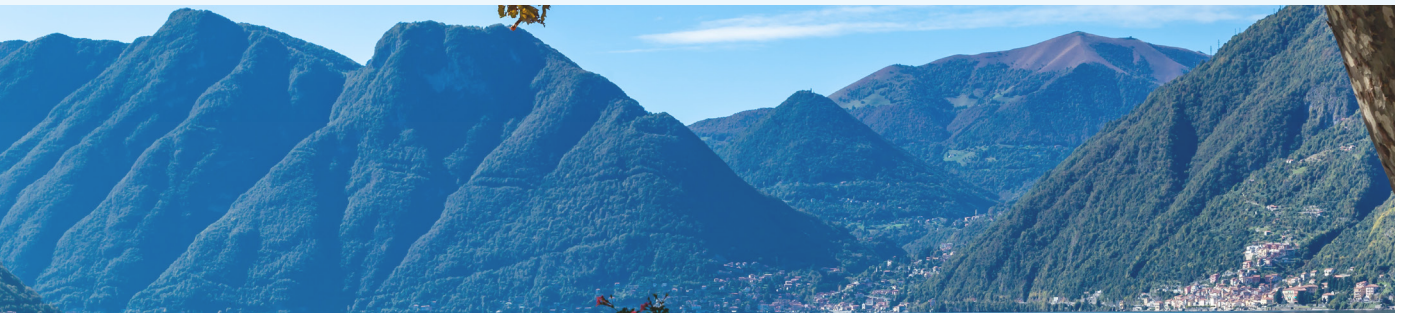
New Frontiers in Ultrafast Quantum Optics is a summer school dedicated to emerging topics at the intersection of ultrafast photonics and quantum science – two rapidly converging fields that are transforming our ability to probe, measure, and control quantum dynamics on electronic time scales. Advances in ultrafast science have enabled electric-field-resolved sensing techniques that provide direct access to the quantum regime, revealing phenomena that lie beyond the reach of conventional quantum optical approaches. At the same time, quantum states of light are opening new avenues for manipulating electronic states down to the attosecond time scale, thereby extending and enriching established applications of ultrafast photonics such as spectroscopy and imaging.

The interplay between these disciplines is giving rise to new research tools and posing fundamental questions, ultimately deepening our understanding of light-matter interactions. We have therefore planned to cover a range of topics at the interface between quantum mechanics and ultrafast optics:

- Sub-Cycle Quantum Electrodynamics and Field-Resolved Spectroscopy
- Ultrafast Quantum Spectroscopy and Imaging
- Attosecond Quantum Phenomena and Free-Electron Quantum Optics
- Ultrafast Quantum Chemistry and Photonics; Fundamental Fluctuations in Condensed Matter

## LECTURERS

- **Jens Biegert** / ICFO
- **Maria Chekhova** / Max-Planck Institute for the Science of Light
- **Daniele Faccio** / University of Glasgow
- **Daniele Fausti** / Friedrich-Alexander-Universität Erlangen-Nürnberg
- **Peter Hommelhoff** / Ludwig-Maximilians-Universität München
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- **Ron Tenne** / Technion



<https://ufqp.lakecomoschool.org>



**APPLICATION  
DEADLINE  
31/05/26**

## SCHOOL DIRECTORS

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