



European
Centre for Advanced
Studies

Lower Saxony – Scotland Joint Forum 2021

23 November 2021

Session I – 1 pm CET

From the Physics of Light to Quantum Devices

1. Workshop Organizer

Prof. Dr. Ilja Gerhardt, *Leibniz University Hanover*

Dr. Jörg Götte, *University of Glasgow*

2. Workshop Description

Quantum devices derive their sensitivity from the ability to manipulate and detect superposition of states which are classically exclusive. In this context light can both be used to transmit information to the quantum device, but at the same time it offers a highly controllable system to create high-dimensional state spaces with the potential to enhance the information capacity.

This workshop highlights fundamental research on light and its connection to quantum devices and metrology from researchers in Saxony, Lower Saxony and other regions of Germany.

3. Programme

(The times of the programme items are indicated in CET.)

1:00 pm Welcoming Address

Prof. Dr. Ilja Gerhardt, *Leibniz University Hanover*

Dr. Jörg Götte, *University of Glasgow*

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1:10 pm Part I – Quantum devices and metrology

Prof. Erling Riis, *University of Strathclyde*

Dr. Thomas Middelmann, *Physikalisch Technische Bundesanstalt*

Dr. Arne Wickenbrock, *Helmholtz Zentrum*

1:50 pm Coffee Break

2:00 pm Part II – (Quantum) photonics

Prof. Sonja Franke-Arnold, *University of Glasgow*

Prof. Martin Dawson, *Fraunhofer Centre for Applied Photonics*

Prof. Stefan Kück, *Physikalisch Technische Bundesanstalt*

Prof. Cornelia Denz, *WMU Münster and Physikalisch Technische Bundesanstalt*

2:30 am Discussion

2:55 am Closing

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