

## **Optical Cavities and Atmospheric Spectroscopy**

# **Nonlinear Nanophotonics Devices**

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**Time: 12 noon – 1 pm, Friday, March 15, 2013**

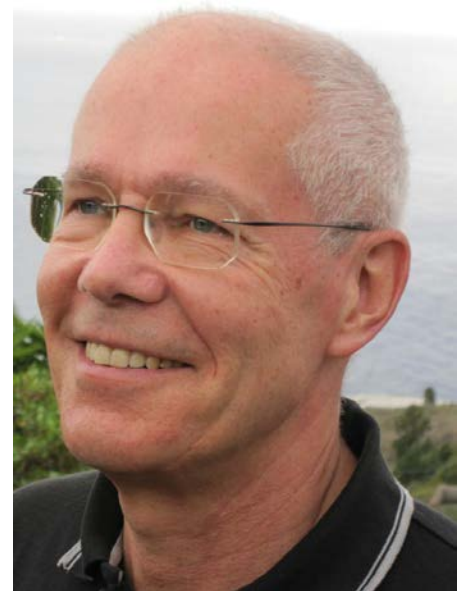
**Location: DLC Collaboratory (Engineering Center)**

***Abstract:***

Switching, phase shifting, modulation, frequency conversion and comb generation are essential for modern optical communication systems. Suitable devices exploit liquid crystals, second and third-order optical nonlinearities, and plasmonics. The talks presents a selection of methods and results.

***Biograph:***

Wolfgang Freude received his Dipl. Ing. (MS), Ph.D. and habilitation degrees from the University of Karlsruhe in 1969, 1975 and 1986, respectively. He has been Professor of Electrical Engineering at the university since that time. He has published 3 books and over 200 papers, and given over 240 lectures in Germany and abroad. In 1999, he was awarded an Honorary Doctorate by the Kharkov National University of Radioelectronics, Kharkov, Ukraine. In 2011, he was elected a Member of the "Network of Excellent Retired Scientists (NES)" at KIT. His research interests over the years have included energy harvesting from photonic signals, high-density integrated optics, photonic crystals, modelling of nonlinear light propagation, modelling and characterization of semiconductor lasers and amplifiers (SOA), and microwave photonics.



Website:

[http://www.ihq.unikarlsruhe.de/staff/Professoren/freude/index\\_en.php](http://www.ihq.unikarlsruhe.de/staff/Professoren/freude/index_en.php), <http://www.ipq.kit.edu/english/index.php>