

# Colloquium Notice

## Misha Sumetsky

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### *Nanophotonics of optical fibres*

Nanoscale effects in photonic structures fabricated from pure optical fibres are reviewed. In contrast to those in plasmonics, these structures do not contain metal particles, wires, or films with nanoscale dimensions. Nevertheless, a nanoscale perturbation of the fibre radius can significantly alter their performance. I consider slow propagation of whispering gallery modes along the fibre surface. The axial propagation of these modes is so slow that they can be governed by extremely small nanoscale changes of the optical fibre radius. The described phenomenon is exploited in SNAP (Surface Nanoscale Axial Photonics), a new platform for fabrication of miniature super-low-loss photonic integrated circuits with unprecedented sub-angstrom precision. The SNAP theory and applications are reviewed.

Monday

**May 18, 2015**

Starts at 12:15 PM

Coffee at 12:00 PM

Physics Conference Room, SB B326