



## **Nonlinear Guided Wave Propagation**

**Organizer: Boris Malomed**

Diverse realizations of transmission of beams and pulses in waveguiding conduits may be essentially enhanced in the high-intensity regime. Thus, in turn, makes it necessary to consider various effects of nonlinearity on the guided wave propagation, which become dominant with the increase of the waves' intensity. Among these effects are the formation and interactions of solitons one- and multi-dimensional solitons, photonic domain walls, shocks and rogue waves, higher-harmonic generation, onset of dynamical chaos and wave turbulence, emulation of various nonlinear states which are well known in other areas of physics (Bose-Einstein condensates, solid-state media, etc.) and other remarkable phenomena. The session will aim to put together a set of presentations focused on the interplay of the guided-wave propagation and intrinsic nonlinearity of the transmitted optical and photonic waves.