



Solvay Workshop on "Dissipative solitons, turbulence and extreme events in nonlinear photonics"

Brussels, September 6-8 2023, ULB - Campus Plaine - Salle Solvay

WEDNESDAY 6 SEPTEMBER

- 09:00 - 09:15 Registration
- 09:15 - 09:30 Marc Henneaux: *Opening and welcome speech*
- 09:30 - 10:10 Luigi Lugiato: *The cavity Kerr medium model and the surprising history around it*
- 10:10 - 10:50 Stefan Wabnitz: *Wave turbulence, thermalization and multimode locking in optical fibers*
- 10:50 - 11:30 COFFEE BREAK**
- 11:30 - 12:10 Dmitry Skryabin: *Moulding light on a ring*
- 12:10 - 12:50 Andrey Matsko: *Time crystals as regenerative frequency dividers*
- 12:50 - 14:20 LUNCH BREAK**
- 14:20 - 15:00 Nikolay Rosanov: *Dissipative optical solitons: From 1D- scalar to 2D- and 3D-, topological and vector solitons*
- 15:00 - 15:40 Boris Malomed: *Multidimensional dissipative solitons - a survey*
- 15:40 - 16:10 COFFEE BREAK**
- 16:10 - 16:50 Amin Chabchoub: *Extreme waves in the presence of wave reflection*

THURSDAY 7 SEPTEMBER

- 09:00 - 09:40 Stefano Boccaletti: *The transition to synchronization of networked systems*
- 09:40 - 10:20 Guy Van der Sande: *Opto-electronic Ising machines*
- 10:20 - 10:50 COFFEE BREAK**
- 10:50 - 11:30 Stefania Residori: *Optically addressed liquid crystal light valves for the generation of nonlinear optical structures and control of their dynamics*
- 11:30 - 12:10 Marcel Clerc: *Optical turbulence in liquid crystal*
- 12:10 - 12:20 Group photo**
- 12:20 - 14:00 LUNCH BREAK**
- 14:00 - 14:35 Kestutis Staliunas: *Fano resonances at the edge of a continuum: fundamentals and applications in microlasers*
- 14:35 - 15:10 Lina Grineviciute: *Nanostructured dielectric coatings for anisotropy and Fano-like resonances*

- 15:10 - 15:50 Uwe Bandelow: *Unusual scenarios in the context of the modulation instability*
- 15:50 - 16:20 COFFEE BREAK**
- 16:20 - 17:00 Ziad Musslimani: *PT symmetry, nonlocal integrable models and physical applications*
- 17:00 - 17:40 Marco Piccardo: *A journey in ring quantum cascade lasers: From phase turbulence to driven solitons on a laser chip*
- 19:30 Conference dinner**
Petits Oignons, Rue de la Régence 25, 1000 Bruxelles

FRIDAY 8 SEPTEMBER

- 09:30 - 10:10 Nathalie Picqué: *Interferometry with soliton frequency combs and microcombs*
- 10:10 - 10:50 Andrei Vladimirov: *Neutral delay differential equation Kerr cavity model*
- 10:50-11:30 COFFEE BREAK**
- 11:30 - 12:10 Arnaud Mussot: *Recent results on fiber Fabry Perot resonators for frequency comb generation*
- 12:10 - 12:50 Nail Akhmediev: *Passive mode-locking and self-Q-switching in terms of the cubic-quintic Ginzburg-Landau equation*
- 12:50 - 14:20 LUNCH BREAK**