

Workshop “Nonlinear Dynamics in Semiconductor Lasers”

Berlin, November 19 - 21, 2007

PROGRAM

Monday, November 19th, 2007

- 8:00 - 8:50 **Registration**
- 8:50 - 9:00 **Opening**
- 9:00 - 9:40 E. SCHÖLL (TU Berlin, Germany)
Dynamics of directly modulated quantum dot lasers
- 9:40 - 10:20 D. RACHINSKII (Cork, Ireland)
Excitability of an injected quantum dot laser
- 10:20 - 11:00 J. HOULIHAN (Waterford, Ireland)
Carrier dynamics of InAs/GaAs quantum dot semiconductor optical amplifiers
- 11:00 - 11:30 **Coffee break**
- 11:30 - 12:10 N. ROSANOV (St. Petersburg, Russia)
Dynamics of solitons in transversely inhomogeneous broad-area lasers with saturable absorption
- 12:10 - 12:50 M. TLIDI (Brussels, Belgium)
Localized structures in low-dispersion all fiber ring-cavity
- 12:50 - 14:20 **Lunch break**
- 14:20 - 15:00 B. KRAUSKOPF (Bristol, UK)
Laser dynamics due to filtered feedback
- 15:00 - 15:40 S. SCHIKORA (HU Berlin, Germany)
All-optical chaos control of multisection lasers
- 15:40 - 16:10 K. GREEN (Amsterdam, NL)
Bifurcation analysis of a multi-mode, spatially extended semiconductor laser subject to optical feedback
- 16:10 - 16:40 **Coffee break**
- 16:40 - 17:20 E. AVRUTIN (York, UK)
External effects in monolithic mode-locked laser dynamics
- 17:20 - 18:00 G. FIOL (TU Berlin, Germany)
Low Jitter Two-section Quantum Dot Mode Locked Laser Module
- 18:00 - 18:40 E.U. RAFAILOV (Dundee, UK)
Ultrashort pulse generation from quantum dot lasers

Tuesday, November 20th, 2007

- 9:00 - 9:40 T. ERNEUX (Brussels, Belgium)
Asymmetric square-waves in polarisation rotated coupled semiconductor lasers
- 9:40 - 10:20 C.R. MIRASSO (Palma de Mallorca, Spain)
Dynamics and synchronization of N delay coupled semiconductor lasers in a ring configuration
- 10:20 - 10:50 V.Z. TRONCIU (Palma de Mallorca, Spain))
Chaos based communication using multi-section semiconductor lasers
- 10:50 - 11:20 **Coffee break**
- 11:20 - 12:00 S. MIKROULIS (Athens, Greece)
Nonlinear dynamics of microring lasers: From single-mode operation to multimode chaos generation
- 12:00 - 12:30 M. RADZIUNAS (WIAS Berlin, Germany)
Traveling wave modeling of semiconductor ring lasers
- 12:30 - 14:00 **Lunch break**
- 14:00 - 14:40 E. LARKINS (Nottingham, UK)
Nonequilibrium carrier dynamics and nonlinear optical response of QWs
- 14:40 - 15:10 M. SPREEMANN (FBH Berlin, Germany)
Nonlinear effects in DFB-lasers with monolithically integrated tapered power amplifier
- 15:10 - 15:40 M. LICHTNER (WIAS Berlin, Germany)
Modelling and simulation of high power laser diodes
- 15:40 - 16:10 B. HEUBECK (Erlangen, Germany)
A new Simulation Technique for the Optical Wave in Distributed Feedback Lasers
- 16:10 - 16:40 **Coffee break**
- 16:40 - 17:20 K. STALIUNAS (Barcelona, Spain)
"Rocking" of lasers (in order to make them bistable)
- 17:20 - 17:50 U. BANDELOW (WIAS Berlin, Germany)
40 Gbit/s Direct Modulation in DFB Lasers with Integrated Feedback
- 18:30 **Workshop Dinner**

Wednesday, November 21st, 2007

- 09:00 - 09:40 A. SCIRÉ (Palma de Mallorca, Spain)
Semiconductor Ring Laser Modelling
- 09:40 - 10:20 G. GIULIANI (Pavia, Italy)
Semiconductor ring lasers for application as digital all-optical memories: technology and non-linear dynamics experiments
- 10:20 - 10:50 L. GELENS (Brussels, Belgium))
A reduced phase space description for deterministic and stochastic features in the dynamical behaviour of a semiconductor ring laser
- 10:50 - 11:20 **Coffee break**
- 11:20 - 12:00 B. HÜTTL (HHI Berlin, Germany)
40GHz monolithically integrated semiconductor mode-locked laser based on InP for application in high speed transmission systems
- 12:00 - 12:40 E. BENTE (Eindhoven, The Netherlands)
Observation of modelocking and selfpulsations in 1540nm In-As/InP(100) two section quantum dot lasers
- 12:40 - 13:10 S. SCHWERTFEGER (FBH Berlin, Germany)
High power ps pulse generation due to modelocking with a monolithic 10 mm long 4 Section DBR Laser at 920 nm
- 13:10 - 13:40 A. VLADIMIROV (WIAS Berlin, Germany)
Numerical bifurcation analysis of a mode-locked semiconductor laser
- 13:40 **Closing**