

47th European Semiconductor Laser Workshop 2024 in Kassel

Program

20.09. (Friday)		
9:30	Registration starts	
9:30	Come together (beverages)	
Session I chaired by J.P. Reithmaier		
10:20	Welcome Note and Remarks	Workshop chair
10:30	Keynote talk: Breakthroughs in the applications of III-V laser sources: past & future	Günther Tränkle <i>Ferdinand Braun Institut, Berlin, Germany</i>
11:30	CT: 364 W high pulse power laser with multiple epitaxially stacked active regions for LiDAR applications	Nor Ammouri; Heike Christopher; Jörg Fricke; Andre Maaßdorf; Sonja Nozinic; Armin Liero; Hans Wenzel; Andrea Knigge, <i>Ferdinand Braun Institut, Berlin, Germany</i>
11:50	CT: Large optical cavity 1550nm Laser with 4.9 W optical output power from a 100 µm wide single emitter	Niklas Kanold; Martin Möhrle; Falco Ehrensack; Martin Schell <i>Fraunhofer Heinrich-Hertz-Institut HHI, Germany</i>
12:10	CT: Monolithic wavelength-stabilized high-power semiconductor laser	Alberto Maina; Fulvio Gaziano; Alessandro Di Maggio; Valentina Massetti; Fabio Pozzi; Ezio Riva; Claudio Coriasso <i>LUMIBIRD PHOTONICS ITALY, Italy</i>
12:30	CT: Scaling towards 80% conversion efficiency at 25°C in GaAs-based Broad Area Lasers	Paul Crump; A. Boni; M Elattar; S.K. Khamari; I.P. Marko; S. J. Sweeney; S. Arslan; B. King; M.J. Miah; D. Martin; A. Knigge, P. Della Casa; G. Tränkle <i>Ferdinand Braun Institut, Berlin, Germany</i>
12:50	Lunch break	
Session II chaired by Stephen Sweeney		
13:50	Invited talk: Dynamic Optical Injection of Mode-Locked Quantum-Dot Lasers for High-Speed Optical Sampling	Maria Ana Cataluna <i>Heriot Watt University, Edinburgh, UK</i>
14:30	CT: 5.2 µm GaSb-based interband cascade laser with hybrid superlattice plasmon-enhanced claddings	Borislav Petrović; Andreas Bader; Josephine Nauschütz; Takuma Sato; Stefan Birner; Robert Weih; Fabian Hartmann; Sven Höfling <i>Julius-Maximilians-Universität Würzburg, Nanoplus Advanced Photonics, Gerbrunn, nextnano, München, Germany</i>
14:50	CT: New versatile and compact laser source for short pulse trains at 900 nm for 2ph-FLIM	Sylvain Boust; Maxime Meghnagi; Guillaume Daccord; Francois Duport; Eva Izquierdo; Jean-Pierre Legoec; Michel Garcia; Olivier Parillaud; Dimitri Boiko; Michel Krakowski <i>III-V Lab, France; CSEM, Switzerland</i>
15:10	CT: How to build a monolithically mode-locked 200 pJ laser enabling two photon excitation time-resolved fluorescence imaging at 8 Megapixels per second?	Dimitri Boiko; Severin Oeschger; Nicolas Torcheboeuf; Sylvain Boust; François Duport; Michel Garcia; Nadja Böhm; Zachary Baltzer; Alessandro Esposito; Alessandro Tontini; Leonardo Gasparini; Patrick Flückiger; Andreas Rauschmayr; Philipp Andre; Michel Krakowski <i>CSEM, Switzerland; III-V Lab, France; VivaScope, Germany; Caliber I.D., USA; Brunel University London, UK, FBK Italy</i>
15:30	CT: Spectral Control in Quantum Walk Frequency Combs from Quantum Cascade Lasers	Diego Piciocchi; Ina Heckelmann; Alexander Dikopoltsev; Mathieu Bertrand; Mattias Beck; Giacomo Scalari; Jérôme Faist <i>ETH Zürich, Switzerland</i>
15:50	Coffee break	

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Session III chaired by Wolfgang Elsaesser		
16:10	Invited talk: Modeling VCSEL modes: from the beginnings to new geometries and future applications.	Pierluigi Debernardi <i>Consiglio Nazionale delle Ricerche (NCR), IEIIT, Torino, Italy</i>
16:50	CT: VCSELS for chip scale Rubidium based atomic clocks	Inbal R. Marciano; Visorian Mikhaelashvili; Amnon Willinger; Lior Gal; Meir Orenstein; Gadi Eisenstein <i>Technion, Haifa</i>
17:10	CT: Relative Intensity Noise and Four Wave Mixing in elliptical oxide aperture multi-mode VCSELS	Marco Novarese; Cristina Rimoldi; Lorenzo Columbo; Sebastian Romero-Garcia; Christian Raabe; Mariangela Gioannini <i>Politecnico di Torino, Italy; Cisco Optical Nuremberg, Germany</i>
17:30	CT: Dynamical behaviour from short to long feedback delay regime in mid-infrared ICL	Thomas Poletti; Hyunah Kim; Heming Huang; Daniel A. Diaz Thomas; Maëva Fagot; Alexei N. Baranov; Laurent Cerutti; Frédéric Grillot <i>LTCI Télécom Paris; Institut d'Electronique et des Systèmes, Montpellier, France; Center of High Technology Materials, Albuquerque, USA</i>
17:50	End of 1 st workshop day	
18:00	Travelling to dinner place	
18:30	Short guided tour around "Herkules"	
19:30	Dinner at "Herkules Terrassen"	

21.09. (Saturday)		
08:00	Registration starts	
Session IV chaired by Frederic Grillot		
09:00	Keynote talk: Heterogeneous Integration for Silicon Photonics: Techniques and Perspectives	Jonathan Klamkin <i>University of California S. Barbara (UCSB), CA, USA</i>
10:00	CT: InP-based QD-laser for O-band telecom applications	Vinayakrishna Joshi; Vitalii Sichkovskiy; Florian Schnabel; Johann Peter Reithmaier <i>Institute of Nanostructure Technologies and Analytics, CINSaT, University of Kassel, Germany</i>
10:20	CT: InAs Quantum Dot O-band Laser for ultra-high Temperature Operation	Pawan Mishra; Lydia Jarvis; Chris Hodges; Abigail Enderson; Fwoziah Albeladi; Sara-Jayne Gillgrass; Richard Forrest; Craig P. Allford; Huiwen Deng; Mingchu Tang; Huiyun Liu; Samuel Shutts; Peter M. Smowton <i>School of Physics and Astronomy, Cardiff University, UK; Physics Department, University of Jeddah, Saudi Arabia; University College London, UK</i>
10:40	CT: Growth optimization of InP-based InAs quantum dots for high-performance 1.55 μm laser applications	Vikram Khatri; Vitalii Sichkovskiy; Johann Peter Reithmaier <i>Institute of Nanostructure Technologies and Analytics, CINSaT, University of Kassel, Germany</i>
11:00	Coffee break	
Session V chaired by Mariangela Gioannini		
11:20	Invited talk: Very high-power SOAs laser modulator for access networks	Ngoc-Linh Tran <i>Almae Technologies, Marcoussis, France</i>
12:00	CT: Gallium nitride lasers for optical communications and quantum applications	Scott Watson; Finlay Walton; Shuqiao Cai; Daehyun Kim; Sean Mulholland; Stephen P. Najda; Piotr Perlin; Tadek Suski; Lucja Marona; Mike Leszczynski; Szymon Stanczyk; Thomas Slight; Patrick Gill; Anthony Kelly <i>University of Glasgow, UK; National Physical Laboratory, UK; TopGaN Ltd, Poland; Unipress</i>

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		<i>Institute of High Pressure Physics, Poland; Sivers Photonics Ltd, UK</i>
12:20	CT: Effect of direct modulation on the spatial and temporal coherence of a semiconductor laser with optical feedback	María Duque Gijón; Jordi Tiana Alsina; Cristina Masoller Universitat Politècnica de Catalunya, Spain; Universidad de Barcelona, Spain
12:40	CT: Performance improvement of 1.55 μm AllnGaAs on InP through introduction of electron blocking layers	Grzegorz Sobczak; Steven Kleijn; Peter Thijs <i>SMART Photonics, Eindhoven, The Netherlands</i>
13:00	Lunch break	
Poster Session chaired by Johann Peter Reithmaier		
14:00	Short poster presentations (2 min each), poster list see below	
14:20	Poster session + beverages	
Session VI chaired by Paul Crump		
15:20	Invited talk: Topological stabilized VCSEL array	Sebastian Klemmt <i>University of Würzburg, Germany</i>
16:00	CT: Room-Temperature Continuous-Wave Operation of a Semiconductor Nanolaser with Extreme Dielectric Confinement	Yi Yu; Meng Xiong; Yury Berdnikov; Simon Klinck Borregaard; Adrian Holm Dubré; Rasmus Ellebæk Christiansen; Elizaveta Semenova; Kresten Yvind; Jesper Mørk <i>Department of Electrical and Photonics Engineering, Technical University of Denmark,; NanoPhoton - Center for Nanophotonics,; Department of Civil and Mechanical Engineering, Technical University of Denmark, Lyngby, Denmark</i>
16:20	CT: Time-dependent simulation of photonic crystal surface emitting lasers	Eduard Kuhn; Mindaugas Radziunas; Hans Wenzel; Ben King; Paul Crump Weierstrass Institute, Berlin, Germany; Ferdinand-Braun-Institut (FBH) Berlin, Germany
16:40	Awards & Workshop closing	Sponsors & J.P. Reithmaier
17:00	End of Workshop	

Possibility to visit Institute of Nanostructure Technologies and Analytics	
17:10	Travelling by tram to Heinrich-Plett-Str. (Uni Campus AVZ)
17:50	Lab visit of INA
18:50	Travelling back to downtown area or train station

Poster list:		
(1)	P: Design of DBR BRW lasers for parametric fluorescence	Thomas Tenzler; Hans Wenzel <i>Ferdinand-Braun-Institut GmbH, Germany</i>
(2)	P: Design of high-power photonic crystal surface emitting lasers with an all-semiconductor photonic crystal	Ben King; Hans Wenzel; Eduard Kuhn; Mindaugas Radziunas; Paul Crump <i>Ferdinand-Braun-Institut Berlin, Germany; Weierstrass Institute, Berlin, Germany</i>
(3)	P: Numerical study of the phase dynamics of mutually coupled lasers in a photonic integrated circuit for quantum random number generation	Berta Martínez-Pàmias; Miquel Rudé; Cristina Masoller Quside Technologies S.L., Castelldefels; Universitat Politècnica de Catalunya, Dptm de Física, Terrassa (Barcelona), Spain
(4)	P: Automated Assembly and Alignment of NIR and MIR External Cavity Diode Laser Systems	Denis Erfle; Christian Assmann; Sebastian Schmidtmann; Martin Honsberg; Joachim Sacher Sacher Lasertechnik GmbH, Germany; Sensor Photonics GmbH, Marburg, Germany