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** *Ferdinand Braun Institut, Berlin, Germany*
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, *Ferdinand Braun Institut, Berlin, Germany*
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 *Fraunhofer Heinrich-Hertz-Institut HHI, Germany*
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 *LUMIBIRD PHOTONICS ITALY, Italy*
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 *Ferdinand Braun Institut, Berlin, Germany*
12:50	Lunch break	
Session II chaired by Stephen Sweeney		
13:50	**Invited talk:** Novel high-speed optical sampling technique applied to an optically-injected mode-locked laser diode	**Maria Ana Cataluna** *Heriot Watt University, Edinburgh, UK*
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 *Julius-Maximilians-Universität Würzburg, Nanoplus Advanced Photonics, Gerbrunn, nextnano , München, Germany*
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 *III-V Lab, France; CSEM, Switzerland*
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 *CSEM, Switzerland; III-V Lab, France; VivaScope, Germany; Caliber I.D., USA; Brunel University London, UK, FBK Italy*
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 *ETH Zürich, Switzerland*
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** *Consiglio Nazionale delle Ricerche (NCR), IEIIT, Torino, Italy*
16:50	**CT:** VCSELS for chip scale Rubidium based atomic clocks	**Inbal R. Marciano**; Visorian Mikhaelashvili; Amnon Willinger; Lior Gal; Meir Orenstein; Gadi Eisenstein *Technion, Haifa, Israel*
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 Politecnico di Torino, Italy; Cisco Optical Nuremberg, Germany
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 *LTCI Télécom Paris; Institut d'Electronique et des Systèmes, Montpellier, France; Center of High Technology Materials, Albuquerque, USA*
17:50	End of 1st workshop day	
18:00	Travelling to dinner place	
18:30	Short guided tour around "Herkules"	
19:30	Dinner at "Herkules Terassen"	

21.09. (Saturday)		
08:00	Registration starts	
Session IV chaired by Frederic Grillot		
09:00	**Keynote talk:** Si photonics integration technology	**Jonathan Klamkin** *University of California S. Barbara (UCSB), CA, USA*
10:00	**CT:** InP-based QD-laser for O-band telecom applications	**Vinayakrishna Joshi**; Vitalii Sichkovskyi; Florian Schnabel; Johann Peter Reithmaier *Institute of Nanostructure Technologies and Analytics, CINSaT, University of Kassel, Germany*
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 *School of Physics and Astronomy, Cardiff University, UK; Physics Department, University of Jeddah, Saudi Arabia; University College London, UK*
10:40	**CT:** Growth optimization of InP-based InAs quantum dots for high-performance 1.55 µm laser applications	**Vikram Khatri**; Vitalii Sichkovskyi; Johann Peter Reithmaier *Institute of Nanostructure Technologies and Analytics, CINSaT, University of Kassel, Germany*
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** *Almae Technoligies, Marcoussis, France*
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

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		University of Glasgow, UK; National Physical Laboratory, UK; TopGaN Ltd, Poland; Unipress Institute of High Pressure Physics, Poland; Sivers Photonics Ltd, UK
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 AlInGaAs on InP through introduction of electron blocking layers	Grzegorz Sobczak; Steven Kleijn; Peter Thijs *SMART Photonics, Eindhoven, The Netherlands*
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 Klembt *University of Würzburg, Germany*
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 *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*
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

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Poster list:		
(1)	**P:** Design of DBR BRW lasers for parametric fluorescence	**Thomas Tenzler**; Hans Wenzel *Ferdinand-Braun-Institut GmbH, Germany*
(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 *Ferdinand-Braun-Institut Berlin, Germany; Weierstrass Institute, Berlin, Germany*
(3)	**P:** Quasi PT-symmetry as a path towards high-power single-mode lasers	**Babak Olyaeefar**; Enes Şeker; Ramy El-Ganainy; Abdullah Demir *UNAM, Bilkent University, Ankara, Turkey; Dptm of Physics, Michigan Technological University, Houghton, Michigan, USA; Henes Center for Quantum Phenomena, Michigan Technological University, Houghton, Michigan, USA*
(4)	**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
(5)	**P:** Voltage-driven Model for the Dynamical Analysis of Micro-OLEDs and Organic Lasers	**Daan Lenstra**; Alexis Fischer; Alex Chamberlain Chime; Outafat Amine; Luc Maret; Benoit Racine *Institute of Photonics Integration, Eindhoven University of Technology, Eindhoven, The Netherlands; Université Sorbonne Paris Nord, Lab de Physique des Lasers, Villetaneuse, France; Université Sorbonne Paris Nord, Villetaneuse, France; Université de Dschang, Cameroon; Université Grenoble Alpes, CEA, Leti, Grenoble, France*
(6)	**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
(7)	**P:** Enhanced Reliability of High-Power Laser Diodes through Innovative Waveguide Designs	**Abdullah Demir**; Ali Kaan Sünnetçioğlu; Kaveh Ebadi; Babak Olyaeefar *Bilkent University - UNAM, Turkiye*
(8)	**P:** High energy pulsed mode-locked normal dispersion thulium-doped all-fiber laser	**Tianxian Feng** *Charles University, Czech Republic*

Three student awards are financially supported by the following companies and institution:

Best student poster: Russel-Berry Nanotechnology Institute (RBNI), Haifa, Israel

Best student talk: Hübner Photonics, Kassel, Germany

Best student talk: Sacher Lasertechnik, Marburg, Germany