

Technical Program

(March 21-26, 2004)

Sunday, 21 March

8:00 to 22:00

Arrival and Registration

Monday, 22 March Opening Remarks and Plenary Sessions

(3rd Floor Multi-functional Hall, Building No. 8, Academic Exchange Center, HUST)

9:00	Welcome Remarks	Page
Presider	Prof. Dr. Liu Deming	
9:30 to Noon	Plenary Sessions	
9:30	Microwave Photonics - Past, Present and Future	
	<i>Prof. Dr.-Ing. D. Jüger, University of Duisburg, Germany</i>	
10:00	Advance in Optical Technology of China	
	<i>Prof. Liwei Zhou, Academician, Beijing Institute of Technology</i>	
10:30	Coffee Break	
Presider	Prof. Dr. Jaeger	
11:00	<u>Spatially Modulated Photodetector in an Unmodified 0.13 μm CMOS-Process</u>	1
	<i>M. Jutzi, E. Gaugler, M. Berroth, University of Stuttgart</i>	
11:30	Wide bandgap semiconductor spinelectronics	
	<i>Prof. Dr. Rong Zhang, Nanjing University</i>	
11:30		
11:30		
Noon to 14:00	Lunch and Break	
Presider	Prof. Dr. M. Berroth	
14:00	<u>ry Laser Diodes at 1.55 μm</u>	5
	<i>W. Hofmann, N. H. Zhu, M. Ortsiefer, R. Shau, J. Roskopf, G. Böhm, C. Qian, F. Köhler, M. Maute, C. Lauer, and M. -C. Amann, Walter Schottky Institut, Technische Universität München</i>	
14:30	<u>Microelectronic Acquiring, Processing and Rebuilding of Central Neural Signals</u>	7
	<i>Prof. Dr. Zhi-Gong Wang, Xiaoying Lü, Xiao-Song Gu, Yu-Feng Wang, Fei Ding, Hui-Ling Wang: Southeast University</i>	
15:00	<u>InP-Based Waveguide Integrated Photodetectors for High-Speed Optical Communication Systems</u>	11
	<i>A. Beling, H.-G. Bach, D. Schmidt, G. G. Mekonnen, T. Eckhardt, R. Kunkel, W. Ebert, A. Seeger, M. Stollberg, and W. Schlaak, HHI</i>	
15:30	Semiconductor lighting	
	<i>Prof. Dr. Hui Yang, Institute of Semiconductors</i>	
16:00	Coffee Break	
Presider	Prof. Dr. Shum Ping	
16:30	<u>A Novel Single-Ended to Differential Converter in a High Bit Rate Clock and Data Recovery Input Circuit</u>	15
	<i>Norbert Michel, Norbert Weber, Jan Sundermeyer, Harald Humpfer, Ulrich Nowotny, Manfred Lang, Fraunhofer-Institute for Integrated Circuits</i>	

17:00	Fiber Ring Lasers	
	<i>Prof. Dr. Shum Ping, Nanyang University of technology</i>	
17:30	Design of High-Speed CMOS Ics for 10 Gbit/s Optical Communication System	19
	<i>Zheng Gu, Andreas Thiede, Rui Tao, University of Paderborn</i>	
18:00	SOI-based Photodetectors and Optical Waveguide Devices	24
	<i>Prof. Dr. Jinzhong Yu, Institute of Semiconductors</i>	
18:00	Welcome Banquet	

Tuesday, 23 March Plenary Sessions

(3rd Floor Multi-functional Hall, Building No. 8, Academic Exchange Center, HUST)

President	Prof. Dr. Jinzhong Yu	
8:00	Tunnelling Diodes for Compact Very High Speed Circuits	28
	<i>E. Khorenko, W. Prost, and F.-J. Tegude, University Duisburg-Essen</i>	
8:30	High Technology Development Project (863) in China	
	<i>Prof. Jiang Shan, Wuhan Institute of Posts and Telecommunications</i>	
9:00	Simulation, Design and Fabrication of Integrated Optical Devices	33
	<i>Chris Poulton, Jan Brosi, Christian Koos, Felix Glöckler, Jin Wang, Masafumi Fujii, and Wolfgang Freude, University of Karlsruhe, Karlsruhe, Germany</i>	
9:30	Stereoscopic Vision System Using on Sensor Pre-Processing	36
	<i>Falk Roewer, Ulrich Kleine, Otto-von-Guericke University of Magdeburg</i>	
10:00	Coffee Break	
President	Prof. Dr. F.J. Tegude	
10:30	Fiber to the Home (FTTH)	
	<i>Prof. Zhao Zisen, Academician, Wuhan Institute of Posts and telecommunications</i>	
11:00	Improved Method of Image Suppression for Integrated Direct Down Conversion Receivers	40
	<i>T. Bitzer, T. Bohn, F. Endress, A. Pascht, M. Schreiter and G. Schwoerer: Alcatel SEL AG</i>	
11:30	Semiconductor Optical Amplifier and Its Applications	
	<i>Prof. Huang Dexiu, Huazhong University of Science and Technology</i>	
Noon to 14:00	Lunch and Break	
President	Prof. Shan Jiang	
14:00	Coarse Wavelength Division Multiplexing for the Joint Transmission of 622Mbit/s- and CATV Signals in the Optical Network of a City Carrier	43
	<i>Bernhard Enning, Flensburg University of Applied Sciences</i>	
14:30	Adaptive Integrated Optical FIR-filters for Automatic Compensation of Fiber Channel Impairments	46
	<i>Marc Bohn, Werner Rosenkranz, Peter Krummrich, University of Kiel</i>	
15:00	Modelling and Simulation of Multichannel DWDM Transmission Links Including All Relevant FWM Products	51
	<i>Prof. Dr.-Ing. R. Zengerle, University of Kaiserslautern</i>	
15:30	REFLECTION-TYPE EAT FOR FULL DUPLEX WIRELESS/WIRELINE ACCESS NETWORKS	56
	<i>ANDREAS STOEHR, University of Duisburg, Germany</i>	

16:00	Coffee break	
Presider	Prof. Dr. A. Thiede	
16:30	<u>Sources for fibre optic communication networks - recent OEIC developments</u>	59
	<i>H. Venghaus, H. Heidrich, D. Hoffmann, B. Hüttl, M. Möhrle, R. Kaiser, J. Kreißl, S. Staroske, K.O. Velthaus</i>	
17:00	<u>Investigation of the high-frequency performance of monolithic integrated laser modulators</u>	63
	<i>Christian Hanke, Infineon Technologies AG</i>	
17:30	<u>Characteristics of AlGaIn/GaN-HFETs on 111-Silicon</u>	67
	<i>M. Neuburger, T. Zimmermann, I. Daumiller, M. Kunze, A. Dadgar, A. Krost, E. Kohn, University of Ulm</i>	
18:00	<u>PMD/OEP-Technologies for 3D-Imaging and Ultra-fast Analog and Digital OE-Multi-channel Signal Processing</u>	72
	<i>Z. Xu, Z. Zhang, R. Schwarte, PMD Technologies, GmbH</i>	
18:30	Flavor Dish and Evening Travel in Wuhan City	

Wednesday, 24 March Topical Sessions

Session 1 (Room 211, Building No. 1, Academic Exchange Center, HUST)

Presider	Prof. Dexiu Huang	79
8:00	<u>Enhanced Carrier Lifetime for the Tuning Region in Tunable Laser Diodes Based on Type-II Quantum Wells</u>	
	<i>Thomas Jacke, Gerhard Rösel, Markus Grau, Ralf Meyer, and Markus-Christian Amann, Walter Schottky Institut, Technische Universität München</i>	
8:15	<u>CMOS Wideband Amplifier with an Active Shunt Peaking Technique</u>	86
	<i>Zheng Gu, Andreas Thiede, University of Paderborn</i>	
8:30	<u>InP-based HBTs with InGaAs and GaAsSb Base Layers for Ultra High Speed Applications</u>	89
	<i>Z. Jin, S. Neumann, S. Topaloglu, J. Driesen, S. Ehrlich, W. Prost, and F.-J. Tegude, University Duisburg-Essen</i>	
8:45	<u>Monolithically Integrated 10 Gb/s Fully Differential CMOS Transimpedance Preamplifier</u>	90
	<i>Rui Tao, Manfred Berroth, Zheng Gu, ZhiGong Wang, University of Stuttgart</i>	
9:00	<u>Investigation on microstructure evolution of oxidized Ni/Au ohmic contacts to p-GaN by XRD</u>	93
	<i>Chengyu Hu, Z.X. Qin, Q.Wang, Z.Z. Chen, F. Ming, H.B. Lin, Z.J.Yang, T.J. Yu, X.T. Hu, G.Y. Zhang, Peking University</i>	
9:15	<u>Growth and Characterization of Crack-free AlGaIn on AlN Interlayer</u>	100
	<i>Z. X.Qin, Z. Z. Chen, T.J.Yu, Z.J.Yang, X.D. Hu, G. Y. Zhang, Peking University</i>	
9:30	<u>The Study of Deep-level Emission Center in ZnO Films Grown on c-Al₂O₃ Substrates</u>	112
	<i>Guotong Du, Yuantao Zhang, Jilin University</i>	
9:45	<u>Enhanced Electrical Properties of p-type GaN by Mg Delta Doping</u>	125
	<i>Y. B. Pan, Z. J. Yang, Y. Lu, M. Lu, C.Y. Hu, T. J. YU, Z. X. Qin, Y. Z. Tong, X. D. Hu, G. Y.Zhang, Peking University</i>	

10:00	Coffee Break	
Presider	Prof. Dr. R. Schwarte	
10:30	<u>A silicon LED in standard CMOS technology for optical interconnection</u>	129
	<i>H.D. Chen, Institute of Semiconductors</i>	
10:45	<u>Multiple Dose He Ion Implantation into n-GaN for Electrical Isolation</u>	134
	<i>Yu Lu, Zhijian Yang, Yaobo Pan, Pei Zhang, Guoyi Zhang, Peking University</i>	
11:00	<u>Optoelectronic Property of single Semiconductor Quantum Wire</u>	138
	<i>Guanghui Zhou, Xianbo Xiao, and Yuan Li, Hunan Normal University</i>	
11:15	<u>Novel All-optical AND Gate Based on Cascaded Single-port-coupled SOA</u>	142
	<i>Xinliang Zhang, Ying Wang, Dexiu Huang, Huazhong University of Science and Technology</i>	
11:30	<u>Study of a novel deformable mirror based on MEMS technology</u>	148
	<i>Hongbin Yu, Haiqing Chen, Jun Li, Jie Li, Huazhong University of Science and Technology</i>	
11:45	<u>Probabilistic teleportation via rotation operating and computation basis measuring</u>	156
	<i>Libing Chen, Foshan University</i>	

Session 2(Room 212, Building No. 1, Academic Exchange Center, HUST)

Presider	Prof. Dr. W. Freude	
8:00	<u>An Improved Decision Feedback Loop for Optical Communications</u>	165
	<i>Li Wang, Zheng Gu, Andreas Thiede, Gang Wang, Lothar Moeller, University of Paderborn</i>	
8:15	<u>A 16/17 Dual-Modulus Prescaler in SiGe HBT technology</u>	168
	<i>Li Wang, Kai Boris Schad, Hermann Schumacher, University of Paderborn</i>	
8:30	<u>High Power and Low Coherence Fiber-optic Source for Incoherent Photonic Signal Processing</u>	172
	<i>Yuan Li and Robert A. Minasian, University of Sydney</i>	
8:45	<u>Two Simple All-Optical Logic Gates Based on TOAD</u>	177
	<i>Yunfeng Zhou, Yumei Yan, Jian Wu, Jintong Lin, Beijing University of Posts & Telecommunications</i>	
9:00	<u>MBE Growth of Ge/Si Quantum Dots for Long Wavelength RCE (Resonant Cavity Enhanced) Photodetector</u>	27
	<i>Jinzhong YU, Chuanbo Li, Michael Oehme, Gerd Wöhl, Erich Kasper, Institute of Semiconductors</i>	
9:15	<u>Fabrication of SOI Optical Waveguide Devices by Anisotropic Chemical Etching</u>	182
	<i>Jinsong Xia, Jinzhong Yu, Shaowu Chen, Zhongchao Fan, Zhangtao Wang, and Zhongli Liu, Institute of Semiconductors</i>	
9:30	<u>Spin Filtering Application in Open Quantum Dots</u>	187
	<i>J.-F. Song, G.-T. Du, Y. Ochiai, and J. P. Bird, Jilin University</i>	
9:45	<u>30 Gb/s Parallel Optic-Fiber Receiver ICs Design</u>	188
	<i>Zhiqun Li, Zhigong Wang, Yan Hu, Jun Feng, Jie Jin, Southeast University</i>	
10:00	Coffee Break	
Presider	Prof. Dr. Deming Liu	
10:30	<u>Return Loss Analysis and Experimental Study of Semiconductor Optical Amplifiers</u>	192
	<i>Zigang Duan, Shenzhen University</i>	

10:45	<u>Analysis of Signal Integrity on PCB and Design of SFP Optic Transceiver Circuit</u>	195
	<i>Qi Yan, Chen Wei, Wuhan University of Technology</i>	
11:00	<u>Device Simulation of Double Photo-diodes</u>	200
	<i>Yongquan Chen, Luhong Mao, Wei Li, Min Chen, Huilai Liang, Shilin Zhang, Weilian Guo, Tianjin University</i>	
11:15	<u>Analysis on SOI(Silicon-on-Insulator)-based MMICs(Multimode Interference Couplers) with different thickness of upper Silicon layer</u>	205
	<i>Yanping Li, Jinzhong Yu, Jinsong Xia, Shaowu Chen, Institute of Semiconductors</i>	
11:30	<u>Transmission Function of Cascaded Multilayer Medium Thin Film Filter</u>	209
	<i>Haiyan Chen, Yongzhi Liu, Jizhi Dai, Xiaoxia Zhang, Yangtze University</i>	

Session 3(Room 311, Building No. 1, Academic Exchange Center, HUST)

Presider	Prof. Dr. Junqiang Sun	
8:00	Optical Access based on WDM-EPON and Its Applications	
	<i>Deming Liu, Huazhong University of Science and Technology</i>	
8:15	<u>Routing and Wavelength Assignment Based on Variable-Rate Genetic Algorithm</u>	212
	<i>Jun He, Deming Liu, Wei Li, Chunyong Yang, Huazhong University of Science and Technology</i>	
8:30	<u>Application of ACL Technology in the Security of IP DSLAM Network</u>	221
	<i>Liu Li, Wei Zhi, Fiberhome Corp.</i>	
8:45	<u>Blocking Performance Evaluation of a Proposed Wavelength Cross Connect Architecture</u>	225
	<i>Chunyong Yang, Deming Liu, Wei Li, Jun He, Huazhong University of Science and Technology</i>	
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	<i>Wei Li, Deming Liu, Dexiu Huang, Huazhong University of Science and Technology</i>	
9:15	<u>A Portable and Extendable CAD for Microlens Design</u>	244
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9:30	<u>On the Synthesis of Superstructure Fiber Bragg Grating Comb Filter by Ameliorated Layer-peeling Algorithm</u>	248
	<i>Hui Cao, Junqiang Sun, Huazhong University of Science and Technology</i>	
9:45	<u>Behavioral Modeling for Simulation of MOEMS Systems</u>	257
	<i>Jie Li, Haiqing Chen, Hongbin Yu, Jun Li, Huazhong University of Science and Technology</i>	
10:00	<u>Theoretic analysis of all-optical wavelength converter based on single-port-coupled SOA</u>	263
	<i>Jianji DONG, Xinliang ZHANG, Dexiu HUANG, Huazhong University of Science and Technology</i>	
10:15	<u>Properties analysis and solutions of light power equalization for free space communication system using semiconductor laser</u>	268
	<i>Yuan Xiuhua, Huang Dexiu, Wang Jin, Jin Sihua and Cheng Xi, Huazhong University of Science and Technology</i>	
March 24	Sightseeing in <u>Wuhan City</u> (Museum of Hubei Province and Tower of Yellow Crane)	

March 25

Sightseeing in [Great Dam of Three Gorges](#)