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Presider: Sun Hyok Chang (ETRI, Korea)


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Presider: Kwanil Lee (KIST, Korea)

16:00 - 17:30

4B4-1	16:00 - 16:15	Generation and Transmission of 10.709-Gbaud RZ-DQPSK Using a Chirp Managed Laser <i>Wei Jia, Zhixin Liu, and Chun-Kit Chan</i> <i>The Chinese Univ. of Hong Kong, Hong Kong</i> 168
4B4-2	16:15 - 16:30	100G High Gain FEC Performance Measurement Using 10Gbps PRBS Signal <i>Shigeki Aisawa, Masahiro Suzuki, Takashi Ono, Takuya Ohara, and Masahito Tomizawa</i> <i>NTT Network Innovation Labs., Japan</i> 170
4B4-3	Invited 16:30 - 17:00	High-capacity Long-haul Transmission Using Ultra-low Loss Optical Fiber <i>John D. Downie</i> <i>Corning Inc., USA</i> 172
4B4-4	Invited 17:00 - 17:30	Fundamental and Practical Limits in Optical Signal Processing and Its Applications <i>S. Radic</i> <i>Univ. of California San Diego, USA</i> 174

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Room C (#103)

[4C1] Fiber Sensors I

Presider: Il-bum Kwon (KRISS, Korea)


08:30 - 10:00

4C1-1	08:30 - 08:45	Novel Measurement Method of Brillouin Optical Correlation Domain Analysis Based on Bidirectional Detection Scheme <i>Ji Ho Jeong^{1,2}, Kwanil Lee¹, Sun Do Lim¹, Kwang Yong Song³, Je-Myung Jeong², and Sang Bae Lee¹</i> <i>¹KIST, Korea, ²Hanyang Univ., Korea, ³Chung-Ang Univ., Korea</i> 176
4C1-2	08:45 - 09:00	A Multiplexed Structure of Intensity Based Fiber Optic Sensor <i>Sang-Jin Choi, Hyeon-Ho Kim, and Jae-Kyung Pan</i> <i>Chonbuk Nat'l Univ., Korea</i> 178
4C1-3	09:00 - 09:15	Performance Analysis of Hybrid-amplification-based Long-distance FBG Sensor Systems <i>Jeong Hyun Huh¹, You Min Chang¹, Lianshan Yan², and Ju Han Lee¹</i> <i>¹Univ. of Seoul, Korea, ²Southwest Jiaotong Univ., China</i> 180
4C1-4	09:15 - 09:30	A FBG Sensing System Based on a Ring Laser Structure for High Frequency Detection <i>Yung-Li Lin², Tsair-Chun Liang², Chiung-Hsuan Huang¹, and Ming Chang Shih¹</i> <i>¹Nat'l Univ' of Kaohsiung, Taiwan, ²Nat'l Kaohsiung First Univ. of Sci. and Tech., Taiwan</i> 182
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[4C2] Fiber Sensors II

President: Bo-Hun Choi (Dong-A Univ., Korea)

10:30 - 12:00

- 4C2-1**  **10:30 - 11:00** **Opto-acoustic Coupling and Brillouin Phenomena in Microstructure Optical Fibers**
Hervé Maillotte¹, Jean-Charles Beugnot¹, Birgit Stiller¹, Min Won Lee¹, Duc Minh Nguyen¹, Michael Delqué¹, Sarah Benchabane¹, Vincent Laude¹, Stella Foaleng Mafang², Luc Thévenaz², Géraud Bouwmans³, Alexandre Kudlinski³, Gilles Mélin⁴, Jérôme Hauden⁵, and Thibaut Sylvestre¹
¹Université. de Franche-Comté, France, ²Swiss Federal Inst. of Tech., Switzerland, ³Université des Sciences et Technologies de Lille, France, ⁴Draka, France, ⁵Photline Technologies, France 186
- 4C2-2** **11:00 - 11:15** **Highly Sensitive Multi-core Holey Fiber Based Plasmonic Sensor**
Binbin Shuai, Li Xia, Yating Zhang, and Deming Liu
Hua Zhong Univ. of Sci. and Tech., China 188
- 4C2-3** **11:15 - 11:30** **A Three-dimension Tilt-meter Based on Fiber Gratings**
Hung-Ying Chang¹, Hao-Jan Sheng¹, Guei-Ru Lin¹, Chu-Yun Chen¹, Yan-Yu Lin¹, Jiang-Chiou Mau¹, Ming-Yue Fu², and Wen-Fung Liu¹
¹Feng-Chia Univ., Taiwan, ²Air Force Academy, Taiwan 190
- 4C2-4** **11:30 - 11:45** **Random-rotational Angle Sensor Based on Fiber Bragg Gratings**
Hao-Jan Sheng¹, Guei-Ru Lin¹, Pei-Tsung Tsai¹, Chen-An Yang¹, Ming-Hao Kuo¹, Hai-Tao Sun¹, Ming-Yue Fu², and Wen-Fung Liu¹
¹Feng-Chia Univ., Taiwan, ²Air Force Academy, Taiwan 192
- 4C2-5** **11:45 - 12:00** **New Optical Fiber Connection Method Using Solid Refractive Index Matching Material**
Masanori Tanaka, Hiroshi Watanabe, Mitsuru Kihara, and Masaaki Takaya
Nippon Telegraph and Telephone East Corp., Japan 194

[4C3] Fiber Lasers I

President: Yoonchan Jeong (Seoul Nat'l Univ., Korea)

14:00 - 15:30

- 4C3-1** **14:00 - 14:15** **Optical Modulation of a Mode-locked Fiber Ring Laser**
P. H. Chen, S. W. Yeh, and M. C. Shih, C. J. Kang
Nat'l Univ. of Kaohsiung, Taiwan 196
- 4C3-2** **14:15 - 14:30** **Direct Amplification of a Wavelength-tunable Picosecond Fiber Laser with a Large Mode Area Erbium-doped Fiber**
Luis Alonso Vazquez-Zuniga^{1,2}, Seung Jong Lee¹, Geunchang Choi¹, Yoonchan Jeong¹
¹Seoul Nat'l Univ., Korea, ²Univ. of Southampton, UK 198
- 4C3-3** **14:30 - 14:45** **Quasi-CW Supercontinuum Generation in a HNLF Pumped by Sub-microsecond Pulse**
Weiqing Gao, Meisong Liao, Xin Yan, Takenobu Suzuki, and Yasutake Ohishi
Toyota Technological Inst., Japan 200
- 4C3-4** **14:45 - 15:00** **Repetition Rate Independent Scheme for the Stabilization of Re-generatively Mode-locked Fiber Lasers**
Kovendhan Vijayan¹, Anish Bekal², and Balaji Srinivasan²
¹St. Joseph's College of Eng., India, ²IIT Madras, India 202

4C3-5	Invited	15:00 - 15:30	Similariton Generation in Optical Fibre Amplifiers <i>J. D. Harvey, V. Kruglov, and C. Arguergaray</i> <i>Univ. of Auckland, New Zealand</i>	204
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[4C4] Fiber Lasers II

Presider: Chang-Seok Kim (Pusan Nat'l Univ., Korea)

16:00 - 17:30

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Room D (#106)

[4D1] Optical Communication Devices I

Presider: Vegas Olmos (Technical Univ. of Denmark, Denmark)

08:30 - 10:00


4D1-1	Invited	08:30 - 09:00	Hybrid-integrated Coherent Receiver Using Silica-based PLC Technology <i>Jong-Hoi Kim, Joong-Seon Choe, Kwang-Seong Choi, Chun-Ju Youn, Duk-Jun Kim, Sun Hyok Chang, Yong-Hwan Kwon, and Eun-Soo Nam</i> <i>ETRI, Korea</i>	216
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4D1-4	09:45 - 10:00	Fiber Transmission of High Power Phase Only Pulse and Its Dispersion Compensation <i>Ken Kashiwagi, Weifan Qiao, Kiyonobu Mozawa, Yosuke Tanaka, and Takashi Kurokawa</i> <i>Tokyo Univ. of Agriculture and Tech., Japan</i>222
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[4D2] Nanophotonics I

Presider: Yong-Won Song (KIST, Korea)

10:30 - 12:00

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4D2-2	11:30 - 11:45	Three Dimensional Confinement in Inverted Quantum Dot Nanopore Lasers <i>J. J. Coleman, N. L. Dias, V. B. Verma, and V. C. Elarde</i> <i>Univ. of Illinois, USA</i>226
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[4D3] Integrated Photonic Devices

Presider: Seok Lee (KIST, Korea)

14:00 - 15:30

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[4D4] Silicon Photonics I

President: Michal Lipson (Cornell Univ., USA)

16:00 - 17:30

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Alexander Gaeta
Cornell Univ., USA 240
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Zhejiang Univ., China 241
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Richard S. Kim¹, Attila Szep¹, Nick G. Usechak¹, Yong-Hwan You², Antao Chen³, and Larry R. Dalton³
¹AFRL/RYPD WPAFB, USA, ²Indiana Univ. East, USA, ³Univ. of Washington, USA P IC
- 4D4-4 17:00 - 17:15 **Enhancement of Quantum Well Intermixing through Sputtered SiO₂ on InGaAs Layer**
Rui-Ren Chen, Jui-Pin Wu, Wei-Zun Ding, Ling-Yu Tseng, and Yi-Jen Chiu
Nat'l Sun Yat-Sen Univ., Taiwan 245



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President: T. Mizumoto (Tokyo Inst. of Tech., Japan)

08:30 - 10:00

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Masa-aki Komatsu, Kunimasa Saitoh, and Masanori Koshiba
Hokkaido Univ., Japan 247
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R. Bruck¹, P. Muellner¹, N. Kataeva¹, A. Koeck¹, R. Hainberger¹, S. Trassl², V. Rinnerbauer², and K. Schmidegg²
¹AIT Austrian Inst. of Tech. GmbH, Austria, ²HUECK FOLIEN GmbH, Austria 249
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Jin Tae Kim, Suntak Park, Seung Koo Park, Min-Su Kim, and Jung Jin Ju
ETRI, Korea 251
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Yutaka Urino^{1,2}, Takahiro Nakamura^{1,2}, and Yasuhiko Arakawa^{1,3}
¹Inst. for Photonics-Electronics Convergence System Tech., Japan, ²Photonics Electronics Tech. Res. Association, Japan, ³The Univ. of Tokyo, Japan 253

[4E2] Passive Si Photonics I

Presider: Koji Yamada (NTT, Japan)

10:30 - 12:00

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[4E3] Polymer Waveguide Devices

Presider: Myung Hyun Lee (Sungkyunkwan Univ., Korea)

14:00 - 15:30

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[4E4] Optical Interconnection

President: Anatoly Zayats (King's College London, UK)

16:00 - 17:30

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- | | | |
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| 4E4-1 | 16:00 - 16:15 | Generation of Optical Short Pulses with Asymmetric Waveforms and Their Imaging with a Time Lens
<i>Azusa Hasegawa, Kiyonobu Mozawa, Ken Kashiwagi, and Takashi Kurokawa</i>
<i>Tokyo Univ. of Agriculture and Tech., Japan</i>273 |
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<i>Hak-Soon Lee, Sang-Shin Lee, and Yung-Sung Son</i>
<i>Kwangwoon Univ., Korea</i>275 |
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<i>Jifeng Liu¹, Rodolfo E. Camacho-Aguilera², Yan Cai², Jonathan T. Bessette², Xiaoxin Wang¹, Lionel C. Kimerling², and Jurgen Michel²</i>
<i>¹Dartmouth College, USA, ²MIT, USA</i>277 |
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<i>Soren Grinderslev</i>
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<i>David Jui-Yang Feng</i>
<i>Nat'l Univ. of Kaohsiung, Taiwan</i>281 |

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Room F (#108)

[4F1] Recent Advancements in Photonic Integration I [Symposium]

President: Jean-Marc Fedeli (CEA-Leti, France)

08:30 - 10:00


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<i>Hiroshi Yamazaki</i>
<i>NTT Corp., Japan</i>283 |
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<i>N. Grote, N. Keil, C. Zawadzki, W. Brinker, D. de Felipe, and Z. Zhang</i>
<i>HHL, Germany</i>285 |
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<i>Shogo Ura¹ and Kenji Kintaka²</i>
<i>¹Kyoto Inst. of Tech., Japan, ²NIAIST, Japan</i>287 |


[4F2] Recent Advancements in Photonic Integration II [Symposium]

President: Yongsoon Baek (ETRI, Korea)

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<i>Meint K. Smit</i>
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JM. Fedeli¹, JM. Hartmann¹, L. Vivien², D. Marris-Morin², G. Rasigade², M. Ziebell², G. H. Duan³, C. Jany³, A. Le Liepvre², F. Lelarge³
¹CEA, LETI, France, ²Univ. Paris-Sud, France, ³Thales Res. and CEA, France291


4F2-3  **11:30 - 12:00** **Impact of Photonic-electronic Integration in Networking and Computing Systems**
S. J. Ben Yoo
 Univ. of California, Davis, USA293

[4F3] Photonic Micro/Nanostructures

President: Nam Kim (Chungbuk Nat'l Univ., Korea)

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Kyungmook Kwon, Jong-Bum You, Jaeho Shim, Wook-Jae Lee, and Kyoungsik Yu
 KAIST, Korea297

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Wan-Shao Tsai¹, Kuang-Li Lee², and Pei-Kuen Wei²
¹Nat'l Chi-Nan Univ., Taiwan, ²Academia Sinica, Taiwan299

[4F4] Plasmonics

President: Jung H. Shin (KAIST, Korea)

16:00 - 17:30

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Anatoly V Zayats
 King's College London, UK301

4F4-2  **16:30 - 17:00** **Plasmonics-based Polarization Beamsplitter, Sensors, and Solar Cells**
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T. Yang¹, L. H. Wang¹, W. Huang¹, and H. P. Ho²
¹Nanjing Univ. of Posts and Telecommunications, China, ²The Chinese Univ. of Hong Kong, Hong Kong305

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P1-16	Experiment Investigation of Nonlinear Distortion in QAM Constellation due to Imbalance in Intradyned Coherent Receiver <i>Guo-Wei Lu¹, Takahide Sakamoto^{1,2}, Akito Chiba³, and Tetsuya Kawanishi¹</i> <i>¹NICT, Japan, ²UC Davis, USA, ³Gunma Univ., Japan</i>	339
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P1-40	Optical True Time-delay for Phased-array Antenna System Using Dispersion Compensating Module and a Multi-wavelength Fiber Laser <i>Hyun-Bin Jeon, Ji Woong Jeong, and Hojoon Lee</i> <i>Hoseo Univ., Korea</i>	387
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P1-44	Strain Response of Mach-Zehnder Interferometer with Asymmetric Two-core Photonic Crystal Fiber <i>Jihee Han, Bongkyun Kim, Khurram Naeem, and Youngjoo Chung</i> <i>GIST, Korea</i>	395
P1-45	Researches on a Fiber Loop Ring-down Acetylene Sensor with Gain-clamped Erbium Doped Fiber Amplifier <i>Kuanglu Yu^{1,2}, Chongqing Wu¹, Chao Lu², and Yao Zhao¹</i> <i>¹Beijing Jiaotong Univ., China, ²The Hong Kong Polytechnic Univ., Hong Kong,</i>	397
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P1-47	Soliton Fiber Laser Mode-locking Using Graphene-filled Hollow Optical Fiber <i>Sun Young Choi¹, Yong-Won Song², Kyunghwan Oh³, Fabian Rotermund¹, and Dong-Il Yeom¹</i> <i>¹Ajou Univ., Korea, ²KIST, Korea, ³Yonsei Univ., Korea</i>	401
P1-48	Sensitivity Enhanced Photonic Crystal Fiber Interferometers with Material Dispersion Engineering <i>Po-Jung Huang, Cheng-Hung Hung, Pang-Yu Tai, and Jui-Ming Hsu</i> <i>Nat'l United Univ., Taiwan</i>	403

Thursday, July 5

Room A (#101)

[5A1] Energy-efficient Networking

President: Akira Hirano (NTT Network Innovation Labs, Japan)

08:30 - 10:00

- 5A1-1 **Invited** 08:30 - 09:00 **Energy-aware Small-scale Optical Networks**
Chang Joon Chae¹ and Efstratios Skafidas^{1,2}
¹Nat'l ICT Australia Ltd., Australia, ²The Univ. of Melbourne, Australia 405
- 5A1-2 09:00 - 09:15 **A Highly Resilient and Power Saving Cut-through-routing Node Based on Multi-standby State Power Saving Transponders**
Kenji Mizutani, Hitoshi Takeshita, and Akio Tajima
NEC Corp., Japan 407
- 5A1-3 09:15 - 09:30 **Traffic Off-balancing Algorithm: Toward Energy Proportional Datacenter Network**
Chankyun Lee and June-Koo Kevin Rhee
KAIST, Korea 409
- 5A1-4 09:30 - 09:45 **OSPF-TE Extensions for Green Routing in Optical Networks**
J. Wang¹, S. Ricciardi², A. V. Manolova¹, S. Ruepp¹, D. Careglio², and L. Dittmann¹
¹Technical Univ. of Denmark, Denmark, ²Technical Univ. of Catalonia, Spain 411
- 5A1-5 09:45 - 10:00 **Survivable Delay-constrained Least Cost Routing**
Qiong Zhang¹, Chengyi Gao², Xi Wang¹, Paparao Palacharla¹, and Motoyoshi Sekiya¹
¹Fujitsu Labs of America, Inc., USA, ²The Univ. of Texas at Dallas, USA 413

[5A2] Next-generation Networks

President: June-Koo Rhee (KAIST, Korea)

10:30 - 12:00

- 5A2-1 **Tutorial** 10:30 - 11:30 **Optical Technologies for Future Networks**
Ken-Ichi Sato
Nagoya Univ., Japan 415
- 5A2-2 11:30 - 11:45 **100-Gb/s (2 x 50-Gb/s) Transmission over 80-km Using 10-Gb/s Class DML**
Tomoo Takahara¹, Toshiki Tanaka¹, Masato Nishihara¹, Lei Li², Zhenning Tao², and Jens C. Rasmussen¹
¹Fujitsu Labs. Ltd., Japan, ²Fujitsu R&D Center, China 417
- 5A2-3 11:45 - 12:00 **Investigation of Flexible Channel Spacing for High Spectral Efficiency Using Real-time 100GbE Transponder**
G. A. Wellbrock¹, T. J. Xia¹, Y. K. Huang², P. Ji², M. Sato³, Y. Yano³, M. Shibutani³, Y. Aono³, and T. Tajima³
¹Verizon, USA, ²NEC Labs. America, Inc., USA, ³NEC Corp., Japan 419

[5A3] TDMA-PON

President: Naoto Yoshimoto (NTT AS Labs, Japan)

14:00 - 15:30

- 5A3-1 **Invited** 14:00 - 14:30 **10G-EPON System Engineering and Deployment Strategy**
Hosung Yoon, Eui-Seung Son, and Hyungjin Park
KT Network R&D Lab., Korea 421

5A3-2	Invited	14:30 - 15:00	Ultra Fast-lock Burst-mode CDR Technology for 10 Gb/s-based PON Systems <i>Naoki Suzuki, Takeshi Suehiro, Masaki Noda, Satoshi Yoshima, Masamichi Nogami, and Junichi Nakagawa</i> <i>Mitsubishi Electric Corp., Japan</i>	423
5A3-3		15:00 - 15:15	Evaluation of Fast Wavelength Switching Sequence for WDM/TDM-EPON System <i>D. Takahashi, Y. Hotta, H. Mukai, K. Sato, and T. Yokotani</i> <i>Mitsubishi Electric Corp., Japan</i>	425
5A3-4		15:15 - 15:30	Dynamic ONU Registration Scheme for TDMA-PON with Ultra-high-split <i>Naoyasu Kamiya, Masayuki Oishi, Takahide Murakami, and Kosuke Nishimura</i> <i>KDDI R&D Labs Inc., Japan</i>	427

[5A4] Optical Networks II

President: Hosung Yoon (KT, Korea) **16:00 - 17:30**

5A4-1		16:00 - 16:15	Optimal Placement of Combined 2R/3R Regenerators in WDM Networks <i>Ankitkumar N. Patel^{1,2}, Philip N. Ji¹, Avishek Nag¹, Yua-Kai Huang¹, Ezra Ip¹, Ramaswami Chandrasekaran², and Jason P. Jue²</i> <i>¹NEC Labs America, USA, ²The Univ. of Texas at Dallas, USA</i>	429
5A4-2		16:15 - 16:30	Monitors Placement for All-optical Networks with Linearly-accumulated Impairments <i>Hon-Tung Luk and Lian-Kuan Chen</i> <i>The Chinese Univ. of Hong Kong, Hong Kong</i>	431
5A4-3		16:30 - 16:45	Spectrum-efficient Optical Drop-add-drop Network with C-MCLS <i>Yueping Cai and Jun Cheng</i> <i>Chongqing Univ., China</i>	433
5A4-4		16:45 - 17:00	Open Flow-based Multicast in IP-over-LOBS Networks: a Proof-of-concept Demonstration <i>Linfeng Hong, Dongxu Zhang, Hongxiang Guo, Xiaobin Hong, and Jian Wu</i> <i>Beijing Univ. of Posts and Telecommunications, China</i>	435
5A4-5	Invited	17:00 - 17:30	Highly Efficient and Reconfigurable Networking Technologies <i>Akira Hirano</i> <i>NTT Network Innovation Labs., Japan</i>	437

Thursday, July 5

Room B (#102)

[5B1] Nonlinearity Compensation

President: Szilárd Zsigmond (Bell Labs, Alcatel-Lucent, China)

08:30 - 10:00

5B1-1		08:30 - 08:45	Mitigation of Intra-channel Nonlinear Distortions Based on PAPR Reduction with CD Pre-compensation in Real-time 50Gbps PM-QPSK Transmission <i>Shinsuke Fujisawa, Daisaku Ogasahara, Emmanuel Le Taillandier de Gabory, Toshiharu Ito, and Kiyoshi Fukuchi</i> <i>NEC Corp., Japan</i>	439
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5B1-2	08:45 - 09:00	Kerr-effect Compensation with Parallel Single Split-steps in Digital Coherent Receivers <i>Yojiro Mori^{1,2}, Chao Zhang^{1,2}, and Kazuro Kikuchi¹</i> ¹ The Univ. of Tokyo, Japan, ² Japan Society for the Promotion of Science, Japan 441
5B1-3	09:00 - 09:30	Digital Signal Processing for Equalization of Fiber Nonlinearity in Coherent Receivers <i>Tsuyoshi Yoshida, Takashi Sugihara, and Takashi Mizuochoi</i> Mitsubishi Electric Corp., Japan 443
5B1-4	09:30 - 09:45	Comparison of Extinction Ratio Enhancement of 10 and 40 Gb/s RZ-OOK Signals Using Pump-modulated Four-wave Mixing in a Silicon Waveguide <i>Y. M. Chen, Gordon K. P. Lei, K. Xu, C. Y. Wong, X. Chen, Z. Z. Cheng, Chester Shu, and H. K. Tsang</i> The Chinese Univ. of Hong Kong, Hong Kong 445
5B1-5	09:45 - 10:00	Measurement of PMD Using the Time-domain Evolution of the Stokes Vector <i>T. Anderson^{1,2}, S. Chen¹, D. Hewitt¹, A. Tran¹, D. Beaman², H. Ferra², and T. Morgan²</i> ¹ NICTA Ltd., Australia, ² Monitoring Division Inc., Australia 447

[5B2] Transmission System Technologies I

President: Timo Pfau (Bell Labs, Alcatel-Lucent, USA)

10:30 - 12:00

5B2-1	10:30 - 10:45	Performance Comparison of 413-Gb/s Multi-band OFDM Transmission with 32/64-QAM <i>Yu Kawaguchi, Hidenori Takahashi, Takehiro Tsuritani, and Itsuro Morita</i> KDDI R&D Labs. Inc., Japan 449
5B2-2	10:45 - 11:00	A Study on Pre-equalization Performance Affected by Imperfection of Driving Waveform <i>Takafumi Fujimori, Takashi Sugihara, Kazuumi Koguchi, and Takashi Mizuochoi</i> Mitsubishi Electric Corp., Japan 451
5B2-3	11:00 - 11:30	Digital Coherent Transmission <i>Kazuro Kikuchi</i> The Univ. of Tokyo, Japan 453
5B2-4	11:30 - 12:00	Ultra-high Capacity Transmission Technologies for Optical Transport Networks beyond 100G <i>Akihide Sano</i> NTT Network Innovation Labs., Japan 455

[5B3] Technologies for Optical Network Evolution

President: Tsuyoshi Yoshida (Mitsubishi Electric Corp., Japan)

14:00 - 15:30



5B3-1	14:00 - 14:30	Optical Network Transformation: The Way to Solve Bandwidth Limitation <i>Szilard Zsigmond¹, Marco Bertolini², Gary Kang¹, and Felipe Leao¹</i> ¹ APAC HQ, Alcatel-Lucent, China, ² Alcatel-Lucent Italy, Italy 457
5B3-2	14:30 - 15:00	Nonlinearity Compensation and Equalization in Access Networks <i>Werner Rosenkranz and Johannes von Hoyningen-Huene</i> Univ. of Kiel, Germany 459

5B3-3	15:00 - 15:15	344-Gb/s Dual-polarization OTDM Transmission of Uncompressed Ultra-high Definition Video Signal <i>T. Kurosui¹, K. Tanizawa¹, S. Namiki¹, T. Nakatogawa², and K. Oyamada²</i> <i>¹Nat'l Inst. of Advanced Industrial Sci. and Tech., ²NHK, Japan</i> 461
5B3-4	15:15 - 15:30	Single Carrier QPSK and 16 QAM System Demonstration Using Frequency Domain Equalization and Training Sequences <i>A. V. Tran¹, C. Zhu¹, C. C. Do¹, S. Chen¹, L. B. Du², T. Anderson¹, D. Hewitt¹, A. J. Lowery², and E. Skafidas¹</i> <i>¹NICTA Ltd., Australia, ²Monash Univ., Australia</i> 463

[5B4] Transmission System Technologies II

Presider: Akihide Sano (NTT Network Innovation Labs, Japan)

16:00 - 17:30

5B4-1	 16:00 - 16:30	Comparison of Bandwidth Expansion Methods for Optical Transmission Systems <i>T. Pfau¹, B. Krongold², S. C. J. Lee¹, and N. Kaneda¹</i> <i>¹Bell Labs, Alcatel-Lucent, USA, ²Univ. of Melbourne, Australia</i> 465
5B4-2	 16:30 - 17:00	Direct Detection Based Optical Transceiver for 100 Gb/s Systems <i>Hwan Seok Chung, Sun Hyok Chang, Jyung Chan Lee, Jong Hyun Lee, and Kwangjoon Kim</i> <i>ETRI, Korea</i> 467
5B4-3	17:00 - 17:15	Evaluation of Filtering Penalty Caused by WSS in Digital Coherent Detection System <i>Y. Sakamaki, T. Kawai, T. Komukai, M. Fukutoku, and T. Kataoka</i> <i>NTT Corp., Japan</i> 469
5B4-4	17:15 - 17:30	Reduced Sampling Rate Frequency Domain CD Equalization for 112 Gb/s PDM-QPSK <i>Muhammad Fawad Panhwar, Mohamed El-Darawy, Kidsanapong Puntstri, and Reinhold Noé</i> <i>Univ. of Paderborn, Germany</i> 471

Thursday, July 5

Room C (#103)

[5C1] Multi-core Fibers

Presider: Y. Awaji (NICT, Japan)

08:30 - 10:00

5C1-1	08:30 - 08:45	7-core 2-mode Fibers with Large Aeff to Simultaneously Realize "3M" <i>Kazunori Mukasa, Katsunori Imamura, and Ryuichi Sugizaki</i> <i>Furukawa Electric Co., Ltd., Japan</i> 473
5C1-2	08:45 - 09:00	Development of Fiber Bundle Type Fan-out for Multicore Fiber <i>Kengo Watanabe, Tsunetoshi Saito, Katsunori Imamura, and Masato Shiino</i> <i>Furukawa Electric Co., Ltd., Japan</i> 475
5C1-3	09:00 - 09:15	Large-effective-area Heterogeneous Trench-assisted Twelve-core Fiber under Bending Condition <i>Jiajing Tu¹, Kunimasa Saitoh¹, Masanori Koshiba¹, Katsuhiro Takenaga², and Shoichiro Matsuo²</i> <i>¹Hokkaido Univ., Japan, ²Fujikura Ltd., Japan</i> 477

5C1-4	09:15 - 09:30	A Highly-efficient Remotely-pumped Multi-core EDFA Transmission System with a Novel Hybrid Wavelength- /Space-division Multiplexing Scheme <i>Y. Yamauchi, H. Masuda, T. Nobukawa, and H. Nagaoka</i> <i>Shimane Univ., Japan</i>479	479
5C1-5	09:30 - 10:00	Recent Progress on Multi-core Fiber <i>Kazuhide Nakajima, Yukihiro Goto, and Shigeru Tomita</i> <i>NTT Corp., Japan</i>481	481

[5C2] Fiber Gratings

President: Kin-Seng Chiang (City Univ. of Hong Kong, Hong Kong)

10:30 - 12:00

5C2-1	10:30 - 11:00	Multicore Erbium-doped Fiber Amplifier <i>Kazi Abedin</i> <i>OFS Labs., USA</i>483	483
5C2-2	11:00 - 11:15	Elliptical Core Multimode Optical Fibers <i>Gaozhu Peng and Ming-Jun Li</i> <i>Corning Inc., USA</i>485	485
5C2-3	11:15 - 11:30	Crosstalk Evaluation with Bi-directional OTDR Measurement on Weakly Coupled Fiber <i>Hiroki Hamaguchi¹, Itaru Ishida¹, Katsuhiro Takenaga¹, Shunichiro Hirafune¹, Shoichiro Matsuo¹, Yukihiro Goto², and Kazuhide Nakajima²</i> <i>¹Fujikura Ltd., Japan, ²NTT Corp., Japan</i>487	487
5C2-4	11:30 - 11:45	Band-separated, Bidirectional Amplifier Based on Erbium-doped Bismuth Fiber for WDM-TDM PONs <i>Minwan Jung, You Min Chang, and Ju Han Lee</i> <i>Univ. of Seoul, Korea</i>489	489
5C2-5	11:45 - 12:00	Development of Low Friction 8-fiber Optical Indoor Cable with Mid-span Branching <i>Masayoshi Tsukamoto, Fumihiko Ishida, and Noboru Okada</i> <i>Furukawa Electric Co., Ltd., Japan</i>491	491

[5C3] Optical Communications/Nonlinear Effects

President: Kwang Yong Song (Chung-Ang Univ., Korea)

14:00 - 15:30

5C3-1	14:00 - 14:30	Hybrid Phase-sensitive and Phase-insensitive Amplifiers for Optical Communication <i>M. E. Marhic</i> <i>Swansea Univ., UK</i>493	493
5C3-2	14:30 - 14:45	Low Delay and Large Effective Area Few-mode Fibers for Mode-division Multiplexing <i>Ming-Jun Li¹, Brett Hoover¹, Shenping Li¹, Scott Bickham¹, Sergey Ten¹, Ezra Ip², Yue-Kai Huang², Eduardo Mateo², Yin Shao², and Ting Wang²</i> <i>¹Corning Inc., USA, ²NEC Labs. America, USA</i>495	495

5C3-3	14:45 - 15:00	Nonlinear Soliton Propagation in a Few Mode Optical Fibre <i>Naoise Mac Suibhne¹, Regan Watts², Stylianos Sygletos¹, Fatima C Garcia Gunning¹, Lars Grüner-Nielsen³, and Andrew D. Ellis¹</i> <i>¹Tyndall Nat'l Inst., Ireland, ²Dublin City Univ., Ireland, ³OFS Denmark, Denmark</i>497
5C3-4	15:00 - 15:15	Real-time Demonstration of Optically Resolution-enhanced ADC System Using NOLMs <i>Y. Miyoshi¹, S. Namiki², K. Kitayama³, and M. Ohashi¹</i> <i>¹Osaka Prefecture Univ., Japan, ²Nat'l Inst. of Advanced Industrial Sci. and Tech., Japan, ³Osaka Univ., Japan</i>499
5C3-5	15:15 - 15:30	A Q-switched Erbium-doped Fiber Laser Using an Ultrafast Silicon-based Variable Optical Attenuator <i>Junsu Lee, You Min Chang, and Ju Han Lee</i> <i>Univ. of Seoul, Korea</i>501

[5C4] Micro-structured Fibers

President: *Kyunghwan Oh (Yonsei Univ., Korea)*

16:00 - 17:30

5C4-1	Tutorial	16:00 - 17:00	Hollow-core Photonic Crystal Fibres <i>P. St. J. Russell</i> <i>Max Planck Inst. for the Sci. of Light, Germany</i>503
5C4-2	Invited	17:00 - 17:30	Micro/Nanofiber Optics, Components and Devices <i>Limin Tong¹, Jingyi Lou², Wei Fang¹, Qing Yang¹, and Lei Zhang¹</i> <i>¹Zhejiang Univ., China, ²Zhejiang Univ. of Sci. and Tech., China</i>P IC

Thursday, July 5

Room D (#106)

[5D1] Silicon Photonics II

President: *Alexander Gaeta (Cornell Univ., USA)*

08:30 - 10:00

5D1-1	Invited	08:30 - 09:00	Nonlinear Silicon Photonics <i>Michal Lipson</i> <i>Cornell Univ., USA</i>506
5D1-2	Invited	09:00 - 09:30	Si Photonics for WDM Implementation <i>Kazumi Wada</i> <i>The Univ. of Tokyo, Japan</i>507
5D1-3		09:30 - 09:45	Characterization of APDs Fabricated by 0.18 μm CMOS Process in Blue Wavelength Region <i>Toshiyuki Shimotori, Kazuaki Maekita, Takeo Maruyama, and Koichi Iiyama</i> <i>Kanazawa Univ., Japan</i>509
5D1-4		09:45 - 10:00	A Visible Light Blinded Si-based IR Detector by Using Multi-layers in MIS Structure <i>Y. Y. Lin, Y. C. Sun, M. C. Shih, and W. H. Lan</i> <i>Nat'l Univ. of Kaohsiung, Taiwan</i>511

[5D2] Nanophotonics II

Prsident: Jungwon Kim (KAIST, Korea)


10:30 - 12:00

-
- 5D2-1** 10:30 - 10:45 **Optical Deposition of Graphene Saturable Absorber Integrated in Fiber Laser Using a Slot Collimator for Pulsed Operation: From Q-switching to Mode-locking**
Wen-Cheng Xu, Wen-Jun Cao, Ai-Ping Luo, and Zhi-Chao Luo
South China Normal Univ., China 513
- 5D2-2** 10:45 - 11:00 **Single-mode Narrow Linewidth Three-section Coupled-cavity Laser**
Youguang Yang, Yin Wang, Lei Wang, Sen Zhang, and Jian-Jun He
Zhejiang Univ., China 515
- 5D2-3**  11:00 - 11:30 **Graphene-based Passive Mode-lockers for Ultra-fast Pulse Lasers**
Yong-Won Song
KIST, Korea 517
- 5D2-4**  11:30 - 12:00 **Advances in Quantum Dot Lasers for Telecom and Silicon Photonics Applications**
Yasuhiko Arakawa
The Univ. of Tokyo, Japan 519

[5D3] Semiconductor Lasers

Prsident: Yasuhiko Arakawa (Univ. of Tokyo, Japan)

14:00 - 15:30

-
- 5D3-1**  14:00 - 14:30 **Tunable Semiconductor Lasers for Optical Communications**
Hiromi Oohashi, Nobuhiro Nunoya, and Hiroyuki Ishii
NTT Corp., Japan 521
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¹Fraunhofer Inst. for Telecommunications, Germany, ²opTricon GmbH, Germany, ³AEMtec GmbH, Germany, ⁴ix-cad GmbH, Germany 523
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President: Yi-Jen Chiu (Natl.Sun Yat-sen Univ., Taiwan)

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President: Han-Young Lee (KETI, Korea)

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P. Suresh^{1,3}, C. Mariyal^{1,3}, K. B. Rajesh², T. V. S. Pillai³
¹Nat'l College of Eng., India, ²Gov. Arts College, India, ³Anna Univ. of Tech. Tirunelveli, India
P IC

[5E2] Progresses in Spatial Multiplexing Technology I [Symposium]

President: Kwangjoon Kim (ETRI, Korea)




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President: Henning Buelow (Bell Labs, Alcatel-Lucent, Germany)



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Masanori Koshiba¹, Kunimasa Saitoh¹, Katsuhiko Takenaga², and Shoichiro Matsuo²
¹Hokkaido Univ., Japan, ²Fujikura Ltd., Japan 557
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Katsunori Imamura and Ryuichi Sugizaki
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Ajoy Kumar Kar
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President: Robert Tkach (Bell Labs, Alcatel-Lucent, USA)



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H. Bülow¹, H. Al-Hashimi^{2,3}, and B. Schmauss^{2,3}
¹Alcatel-Lucent, Bell Labs, Germany, ²Univ. Erlangen-Nuernberg, Germany, ³Erlangen Graduate School in Advanced Optical Technologies, Germany 562
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President: Fabian Rotermund (Ajou Univ., Korea)



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<i>Le Thanh Bang¹, Sang-Keun Gil², Jae-Kyung Pan³, Kwon-Yeon Lee⁴, and Nam Kim¹</i>
<i>¹Chungbuk Nat'l Univ., Korea, ²Univ. of Suwon, Korea, ³Chonbuk Nat'l Univ., Korea, ⁴Sunchon Nat'l Univ., Korea</i>566 |
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[5F2] High-power Lasers

President: Valdas Pasiskevicius (Royal Inst. of Tech., Sweden)



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President: Myoungsik Cha (Pusan Nat'l Univ., Korea)

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Seung Hoon Lee¹, Muhan Cho², Teun-Teun Kim¹, Seungwoo Lee¹, Ming Liu³, Xiaobo Yin³, Hong Kyw Cho², Seung S. Lee¹, Choon-Gi Cho², Sung-Yool Choi¹, Xiang Zhang³, and Bumki Min¹
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President: Jeong Weon Wu (Ewha Womans Univ., Korea)

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P2-50	Fabrication of Black Silicon by Using RIE Texturing Process as Metal Mesh <i>Daeyoung Kong¹, Junghwa Oh¹, Seongchan Jeon¹, Bonghwan Kim², Chanseob Cho¹, and Jonghyun Lee¹</i> <i>¹Kyungpook Nat'l Univ., Korea, ²Catholic Univ. of Daegu, Korea</i> 697
P2-51	Optical Properties with the Dependency on the Coherence Length of Light in Multilayer Structures <i>Wooyoung Lee¹, Seung-Yeol Lee¹, Jungho Kim², Sung Chul Kim³, and ByoungHo Lee¹</i> <i>¹Seoul Nat'l Univ., Korea, ²Kyung Hee Univ., Korea, ³Myongji Univ., Korea</i> 699
P2-52	Photocurrent of MOS-Si Photovoltaic Device Enhanced by an Auxiliary Biasing Solar Cell <i>Q. R. Lai, W. J. Ho, J. J. Liu, Y. Y. Lee, C. C. Liao, J. Y. Wu, and Y. C. Chiu</i> <i>Nat'l Taipei Univ. of Tech., Taiwan</i> 701
P2-53	Thermal Switching of Terahertz Surface Plasmon Polaritons in Semiconductors <i>T. Yang¹, X. A. Li¹, W. Huang¹, and H. P. Ho²</i> <i>¹Nanjing Univ. of Posts and Telecommunications, China, ²The Chinese Univ. of Hong Kong, Hong Kong</i> 703
P2-54	Solving Nonlinear Plasmonic Waveguides by Pseudospectral Method <i>Chia-Chien Huang</i> <i>Nat'l Chung Hsing Univ., Taiwan</i> 705
P2-55	Mode-size Converters for Nano Plasmonic Integrated Circuits <i>Dong Hun Lee¹ Jung-Han Son¹ Hae-Ryeong Park^{1,2} Min-su Kim³, and Myung-Hyun Lee¹</i> <i>¹Sungkyunkwan Univ., Korea, ²Samsung Electronics Co. Ltd., Korea, ³ETRI, Korea</i> 707

Friday, July 6

Room A (#101)

[6A1] Next-generation Access Applications

President: Sung-Un Kim (Pukyong Nat'l Univ., Korea)

08:30 - 10:00


6A1-1	08:30 - 09:00	Next-generation Access for Mobile Backhaul Application <i>Naoto Yoshimoto</i> <i>NTT AS Labs, Japan</i> 709
6A1-2	09:00 - 09:15	Seamless Handover Scheme in Energy-efficient Long Reach WDM/TDM PON Systems <i>Hao Feng, Chang-Joon Chae, and A. Nirmalathas</i> <i>The Univ. of Melbourne, Australia</i> 711

6A1-3	09:15 - 09:30	A Broadcast-overlaid Full-duplex WDM-PON Based on Offset Polarization Multiplexing <i>Fei Xiong¹, Wen-De Zhong¹, and Hoon Kim²</i> <i>¹Nanyang Technological Univ., Singapore, ²Nat'l Univ. of Singapore, Singapore</i> 713
6A1-4	09:30 - 09:45	4.5-dB Gain Simply and Cost-effectively Configured Radio on Fiber Link without any RF Amplifier <i>Junji Higashiyama¹, Yoshiaki Tarusawa¹, and Masafumi Koga²</i> <i>¹NTT Docomo, Inc., Japan, ²OITA Univ., Japan</i> 715
6A1-5	09:45 - 10:00	Photonic Generation of UWB Doublet Pulse Based on XPM in an SOA-based NOLM <i>Bowen Luo, Jianji Dong, and Xinliang Zhang</i> <i>Huazhong Univ. of Sci. and Tech., China</i> 717

[6A2] WDM-PON II

President: June-Koo Rhee (KAIST, Korea)



10:30 - 12:00

6A2-1	 10:30 - 11:00	RSOA-based Long-reach WDM PON Using Digital Coherent Receivers <i>Akira Agata</i> <i>KDDI R&D Labs. Inc., Japan</i> 719
6A2-2	11:00 - 11:15	Mitigation of Filtering Effect in an Injection Seeded WDM-PON <i>Joon-Young Kim, Sang-Rok Moon, Sang-Hwa Yoo, and Chang-Hee Lee</i> <i>KAIST, Korea</i> 721
6A2-3	11:15 - 11:30	Broadcast Signal Transmission for WDM-PON with Mutually Injected Fabry-Perot Laser Diode <i>Sang-Hwa Yoo, Joon-Young Kim, and Chang-Hee Lee</i> <i>KAIST, Korea</i> 723
6A2-4	11:30 - 11:45	Multi-ring Architecture for Survivable WDM PON <i>U. H. Hong, K. Y. Cho, and Y. C. Chung</i> <i>KAIST, Korea</i> 725
6A2-5	11:45 - 12:00	High Efficient Optical Code Label Generation by NRZ Modulation Using LiNbO₃ Modulators <i>T. Umeda, H. Watanabe, M. Mieno, S. Shinada, N. Wada, and H. Nakajima</i> <i>¹Waseda Univ., Japan, ²NICT, Japan</i> 727

[6A3] Optical Home Network

President: Akira Agata (KDDI R&D Labs Inc., Japan)

13:30 - 15:00

6A3-1	 13:30 - 14:00	Recent Progress in Photonic In-building Networks <i>A. M. J. Koonen, Y. Shi, S. Zou, C. M. Okonkwo, H. P. A. van den Boom, and E. Tangdiongga</i> <i>Eindhoven Univ. of Tech., Netherlands</i> 729
6A3-2	 14:00 - 14:30	UWB over WDM-PON <i>Jianping Yao¹ and Shilong Pan^{1,2}</i> <i>¹Univ. of Ottawa, Canada, ²Nanjing Univ. of Aeronautics and Astronautics, China</i> 731

6A3-3	14:30 - 14:45	Indoor WDM Optical Wireless Communication System with Single Channel Imaging Receiver <i>Ke Wang^{1,2}, Ampalavanapillai Nirmalathas^{1,2}, Christina Lim² and Efstratios Skafidas^{1,2}</i> <i>¹Nat'l ICT Australia - Victoria Research Lab., Australia, ²The Univ. of Melbourne, Australia</i> 733
6A3-4	14:45 - 15:00	20-Gbaud QPSK RoF and Millimeter-wave Radio Transmission <i>Atsushi Kanno¹, Toshiaki Kuri¹, Iwao Hosako¹, Tetsuya Kawanishi¹, Yoshihiro Yasumura², Yuki Yoshida², and Ken-ichi Kitayama²</i> <i>¹NICT, Japan, ²Osaka Univ., Japan</i> 735

Friday, July 6

Room B (#102)

[6B1] Quantum & Free-space Communications

President: Sung-Man Kim (Kyungsoong Univ., Korea)

08:30 - 10:00

6B1-1	08:30 - 08:45	Field Demonstration of High-speed Wavelength-division Multiplexing Quantum Key Distribution System and its Stabilized Operation <i>Ken-Ichiro Yoshino¹, Mikio Fujiwara², Akihiro Tanaka¹, Seigo Takahashi¹, Yoshihiro Nambu¹, Akihisa Tomita³, Shigehito Miki², Taro Yamashita², Zhen Wang², Masahide Sasaki², and Akio Tajima¹</i> <i>¹NEC Corp., Japan, ²NICT, Japan, ³Hokkaido Univ., Japan</i> 737
6B1-2	08:45 - 09:00	Y-00 Cipher Transmitter Using Directly Modulated DFB Laser for Secure Optical Fiber Communications <i>Fumio Futami and Osamu Hirota</i> <i>Tamagawa Univ., Japan</i> 739
6B1-3	09:00 - 09:15	Performance of Variable M-QAM OFDM Visible Light Communication System with Dimming Control <i>Zixiong Wang¹, Changyuan Yu^{2,3}, Wen-De Zhong¹, Jian Chen⁴, and Wei Chen³</i> <i>¹Nanyang Technological Univ., Singapore, ²Nat'l Univ. of Singapore, Singapore, ³A*STAR Inst. of Infocomm Res., Singapore, Nanjing Univ. of Posts and Telecommunications, China</i> ... 741
6B1-4	09:15 - 09:30	Transmission Performance Variation by Dimming Control in Carrier Allocation Based Visible Light Communication <i>Hyun-Seung Kim, Deok-Rae Kim, Se-Hoon Yang, Yong-Hwan Son, and Sang-Kook Han</i> <i>Yonsei Univ., Korea</i> 743
6B1-5	09:30 - 09:45	Experimental Demonstration of Visible Light Communication Based on Sub-carrier Multiplexing of Multiple-input-single-output OFDM <i>Yiguang Wang¹, Minglun Zhang², Yuanquan Wang¹, Wuliang Fang¹, Li Tao¹, and Nan Chi¹</i> <i>¹Fudan Univ., China, ²Beijing Univ. of Posts and Telecommunications, China</i> 745
6B1-6	09:45 - 10:00	Moments-based OSNR Monitoring for QPSK and QAM Coherent Optical Systems <i>C. Zhu¹, A. V. Tran¹, S. Chen¹, L. B. Du², C. Do¹, T. Anderson¹, A. J. Lowery², and E. Skafidas¹</i> <i>¹NICTA Ltd., Australia, ²Monash Univ., Australia</i> 747

[6B2] Spatial Division Multiplexing

Presider: Eiji Yoshida (NTT, Japan)

10:30 - 12:00

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- 6B2-1** **10:30 - 10:45** **20Gbit/s Two LP₁₁ Modes Transmission over 10km Two-moded Fiber without Crosstalk Compensation**
H. -S. Chen¹, A. M. J. Koonen¹, B. Corbett², R. Winfield², and H. P. A. van den Boom¹
¹Eindhoven Univ. of Tech., Netherlands, ²Univ. College Cork, Ireland 749
- 6B2-2** **10:45 - 11:00** **Impact of Using Multi-level Modulation Format in Multi-core Fiber**
J. H. Chang, H. G. Choi, and Y. C. Chung
KAIST, Korea 751
- 6B2-3** **Invited** **11:00 - 11:30** **Orbital Angular Momentum Modulation for Fiber-optics Communication**
Ivan B. Djordjevic
Univ. of Arizona, USA 753
- 6B2-4** **11:30 - 11:45** **On the Computational Complexity of MIMO Processing in Mode Division Multiplexing Transmission over 2-mode Fiber**
Masaya Nakazawa, Yuki Yoshida, Akihiro Maruta, and Ken-Ichi Kitayama
Osaka Univ., Japan 755
- 6B2-5** **11:45 - 12:00** **Optical Diversity Transmission and Maximum-ratio Combine in Multi-core Fiber to Mitigate Fiber Non-linear Distortion**
Tadashi Iida, Akira Mizutori, and Masafumi Koga
Oita Univ., Japan 757

[6B3] Performance Monitoring

Presider: Dirk van den Borne (Nokia Siemens Networks, Germany)



13:30 - 15:00

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- 6B3-1** **Invited** **13:30 - 14:00** **Challenges and Potential of OPM in Digital Coherent Receivers**
F.N. Hauske and P.J. Stassar
Huawei Technologies Duesseldorf GmbH, Germany 759
- 6B3-2** **14:00 - 14:15** **A High Accuracy Channel Power Extraction Method in Optical Filter-less Coherent Detection for Flexible ROADM**
Tatsuya Uchikata, Yasuyuki Suzuki, and Arihide Noda
NEC Corp., Japan 761
- 6B3-3** **14:15 - 14:30** **OSNR Monitoring for PM-QPSK Systems in Presence of Fiber Nonlinearities for Digital Coherent Receivers**
Zhenhua Dong, Alan Pak Tao Lau, and Chao Lu
The Hong Kong Polytechnic Univ., Hong Kong 763
- 6B3-4** **14:30 - 14:45** **A Simple OSNR Monitoring Technique Based on RF Spectrum Analysis for PDM-QPSK Signals**
H. G. Choi¹, K. Y. Cho¹, H. K. Shim¹, Y. Wei², and Y. C. Chung¹
¹KAIST, Korea, ²Huawei Technologies Co., Ltd., China 765
- 6B3-5** **14:45 - 15:00** **PMD Monitoring in 16QAM Coherent Optical System Using Golay Sequences**
C. C. Do¹, A. V. Tran¹, C. Zhu¹, S. Chen¹, L. B. Du², T. Anderson¹, A. J. Lowery², and E. Skafidas¹
¹NICTA Ltd., Australia, ²CUDOS, Australia 767

[6B4] Flexible Modulation

Presider: Takashi Sugihara (Mitsubishi Electric, Japan)

15:30 - 17:00

- 6B4-1**  **15:30 - 16:00** **Dynamic Capacity Optimization Using Flexi-rate Transceiver Technology**
Dirk van den Borne¹ and Sander Lars Jansen²
¹Juniper Networks GmbH, Germany, ²Nokia Siemens Networks GbmH & Co. KG, Germany
..... 769
- 6B4-2**  **16:00 - 16:30** **Programmable Modulation for High-capacity Networks**
Michael H. Eiselt¹, Helmut Griesser¹, Achim Autenrieth¹, Brian T. Teipen², and Jörg-Peter Elbers¹
¹ADVA AG Optical Networking, Germany, ²ADVA Optical Networking Inc., USA 771
- 6B4-3** **16:30 - 16:45** **Multi-format and Multi-rate Transmitter for Flexible and Elastic Optical Networks**
H. Y. Choi, T. Tsuritani, and I. Morita
KDDI R&D Labs. Inc., Japan 773
- 6B4-4** **16:45 - 17:00** **Coherent OTD Mux and ETD Demux (OMED) Systems with Transmitter Imperfections**
Wei-Ren Peng, Takehiro Tsuritani, and Itsuro Morita
KDDI R&D Labs. Inc., Japan 775


Friday, July 6

Room C (#103)

[6C1] Specialty Optical Fibers

Presider: Swook Hann (KOPTI, Korea)

08:30 - 10:00

- 6C1-1**  **08:30 - 09:00** **Long-period Gratings Based on Specially Fibers, Regardless of Photo-sensitivity**
Young-Geun Han
Hanyang Univ., Korea 777
- 6C1-2** **09:00 - 09:15** **Sensitivity Characteristics of Micro-tapered Long-period Fiber Grating Written in Tapered Fiber with Different Diameters**
Min-Seok Yoon, Sung-Jae Kim, Hyun-Joo Kim, and Young-Guen Han
Hanyang Univ., Korea 779
- 6C1-3** **09:15 - 09:30** **Effective Measurement of Refractive Index Sensitivity of LPG for Biological Solution Monitoring**
Osanori Koyama, Tsubasa Kanamori, Katsunori Kawanishi, and Yutaka Katsuyama
Osaka Prefecture Univ., Japan 781
- 6C1-4** **09:30 - 09:45** **Transmission Characteristics of a Micro-ridge Long-period Fiber Gratings Inscribed on a Polarization-maintaining Fiber**
Oh-Jang Kwon, Myungjun Shin, and Young-Guen Han
Hangyang Univ., Korea 783

6C1-5	09:45 - 10:00	Discrimination between Refractive Index and Temperature by Two Cascaded Cladding-mode Type Fiber Sensors <i>Meng Jiang^{1,2}, Perry Ping Shum^{1,2}, Zhi Fang Wu³, Xuan Quyen Dinh^{2,4}, Dora Juan Juan Hu⁵, and Jun Long Lim⁵</i> ¹ Nanyang Technological Univ., Singapore, ² CINTRA, Singapore, ³ Nankai Univ., China, ⁴ Thales Solutions Asia Pte Ltd., Singapore, ⁵ Inst. for Infocomm Res., Agency for Sci., Tech. and Res., Singapore.....	785
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[6C2] Specialty Fibers

President: Min Yong Jeon (Chungnam Nat'l Univ., Korea)

10:30 - 12:00

6C2-1	10:30 - 10:45	Optically Tunable Fiber Attenuators Based on Photonic Liquid Crystal Fibers <i>Jia-Hong Liou and Chin-Ping Yu</i> Nat'l Sun Yat-Sen Univ., Taiwan.....	787
6C2-2	10:45 - 11:00	Enlargement of Effective Area of Effectively Single-mode All-solid Photonic Bandgap Fiber with Low Bending Loss <i>T. Ichige¹, K. Saitoh², M. Kashiwagi¹, K. Takenaga¹, S. Tanigawa¹, S. Matsuo¹, and M. Fujimaki¹</i> ¹ Fujikura Ltd., Japan, ² Hokkaido Univ., Japan.....	789
6C2-3	11:00 - 11:15	Polarization-dependent Photonic Crystal Fiber Interferometer for Simultaneous Measurement of Chemical Vapor and Temperature <i>Naram Jun¹, Hyun-Joo Kim¹, Sang Bae Lee², and Young-Guen Han¹</i> ¹ Hanyang Univ., Korea, ² KIST, Korea.....	791
6C2-4	11:15 - 11:30	Detection of Chemical Vapor with Twin-core Photonic Crystal Fiber Based In-reflection Interferometer <i>Bongkyun Kim, Khurram Naeem, Jihee Han, and Youngjoo Chung</i> GIST, Korea.....	793
6C2-5	Invited 11:30 - 12:00	Metamaterials in Fibers <i>Simon C. Fleming, Alessandro Tuniz, Alexander Argyros, and Boris T. Kuhlmeiy</i> Univ. of Sydney, Australia.....	795

[6C3] Fiber Devices I

President: Joeeun Im (KRISS, Korea)

13:30 - 15:00

6C3-1	13:30 - 13:45	Fabrication of Cr-doped Fibers Using Powder-in-tube with Redrawing Technique <i>Chun-Nien Liu¹, Yi-Chung Huang¹, Fang-Yen Lo¹, Chih-Wei Chuang¹, Wei-Lun Wang¹, Pi-Ling Huang¹, Jau-Sheng Wang¹, Sheng-Lung Huang², and Wood-Hi Cheng¹</i> ¹ Nat'l Sun Yat-Sen Univ., Taiwan, ² Nat'l Taiwan Univ., Taiwan.....	797
6C3-2	13:45 - 14:00	Evaluation of the Fuse Effect Propagation Velocity in Bend Loss Insensitive Fibers <i>Fátima Domingues, Ana Rocha, Paulo Antunes, Ana R. Frias, Rute A. S. Ferreira, and Paulo S. André</i> Univ. of Aveiro, Portugal.....	799
6C3-3	14:00 - 14:15	Sagnac Interferometer Based on a Tapered Polarization-maintaining Fiber for Measurement of Ambient Index <i>Cheol-Ju Kang and Young-Guen Han</i> Hanyang Univ., Korea.....	801

6C3-4	Invited	14:15 - 14:45	Electrically Controlled Fibers <i>W. Margulis^{1,2}, O. Tarasenko¹, M. Malmström², P. Rugeland^{1,2} and Zhangwei Yu²</i> ¹ Acreo, Sweden, ² Royal Inst. of Tech., Sweden.....	803
6C3-5		14:45 - 15:00	Superfluorescent 1.44-μm Bismuth-doped Fiber Source <i>Konstantin E. Riumkin, Mikhail A. Melkumov, Igor A. Bufetov, Alexey V. Shubin, Sergey V. Firstov, Vladimir F. Khopin, Aleksey N. Guryanov, and Evgeny M. Dianov</i> <i>Russian Academy of Sciences, Russia.....</i>	805

[6C4] Fiber Devices II

Presider: Tae-Sik Cho (KRISS, Korea)

15:30 - 17:00

6C4-1	Invited	15:30 - 16:00	History and Progress of the Fiber Fuse <i>Raman Kashyap</i> <i>École Polytechnique de Montréal, Canada.....</i>	807
6C4-2		16:00 - 16:15	Fiber Mode Adapter Based on Double-cladding Fiber for Multimode Fiber Access Networks <i>Qianwu Zhang, Yingxiong Song, Xianglong Zeng, Min Wang, and Tingyun Wang</i> <i>Shanghai Univ., China.....</i>	809
6C4-3		16:15 - 16:30	Comparing the Effect of a Spot-size Converter for Kilometer-length of GI-MMF with and without Connector-splicing <i>Masahiro Abe¹, Ayumu Kawamura¹, Kouhei Takahashi¹, Yutarou Hatanaka¹, Toshihiro Suda², Yusuke Fujii², Soichi Kobayashi¹, and Yoshiaki Yamabayashi¹</i> ¹ Chitose Inst. of Sci. and Tech., Japan, ² Photonic Sci. Tech. Inc., Japan.....	811
6C4-4		16:30 - 16:45	Low Bending-loss Fiber Using Cladding Diameter Optimization <i>Yukihiro Goto, Kazuhide Nakajima, and Toshio Kurashima</i> <i>NTT Corp., Japan.....</i>	813
6C4-5		16:45 - 17:00	Fiber-optic Interferometry Strain Sensor with Optical Ruler Assisted Stepper Motor <i>Chih-Yuan Tsou¹, Jung-Chen Hsu¹, Sheng-Chieh Tseng², and Shih-Hsiang Hsu¹</i> ¹ Nat'l Taiwan Univ. of Sci. and Tech., Taiwan, ² Compeq Manufacturing Co., Ltd., Taiwan	815

Friday, July 6

Room D (#106)

[6D1] Semiconductor Optical Amplifiers

Presider: Yong-Hee Lee (KAIST, Korea)

08:30 - 10:00

6D1-1		08:30 - 08:45	Hybrid Integrated Semiconductor Optical Amplifier-Mach Zehnder Interferometer (SOA-MZI)-type All-optical Wavelength Converter with a Selectable Delay Time Push-pull Configuration <i>Hirofumi Uenohara and Yohei Aikawa</i> <i>Tokyo Inst. of Tech., Japan</i>	817
6D1-2		08:45 - 09:00	Analytical Investigation of Possibility of a Phase Sensitive Amplifier Based on Four Wave Mixing in a Semiconductor Optical Amplifier <i>K. Saito and H. Uenohara</i> <i>Tokyo Inst. of Tech., Japan</i>	819

6D1-3	09:00 - 09:15	Simulation on High-speed All-optical Pattern Recognition Using SOA-MZIs <i>Cen Wu, Xuelin Yang, Qiwei Weng, and Weisheng Hu</i> <i>Shanghai Jiao Tong Univ., China</i>	821
6D1-4	09:15 - 09:30	Low-pattern-dependence Chirp Compensation Using Integration of EAM and SOA <i>Jui-Pin Wu, Wei-Zun Ding, and Yi-Jen Chiu</i> <i>Nat'l Sun Yat-Sen Univ., Taiwan</i>	823
6D1-5	Invited 09:30 - 10:00	Applications of Semiconductor Optical Amplifiers <i>R. P. Webb, J. M. Dailey, and R. J. Manning</i> <i>Univ. College Cork, Ireland</i>	825

[6D2] Optical Communication Devices II

President: Sang-Kook Han (Yonsei Univ., Korea)

10:30 - 12:00

6D2-1	Invited 10:30 - 11:00	Unidirectional Micropillar Lasers for On-chip Optical Interconnects <i>Yong-Zhen Huang, Jiang-Dong Lin, Xiao-Meng Lv, Qi-Feng Yao, Jin-Long Xiao, Yue-De Yang, and Yun Du</i> <i>Chinese Academy of Sciences, China</i>	827
6D2-2	11:00 - 11:15	High-performance Ge Photoreceivers Operating in the Wavelength Range of 850nm-1550nm <i>Ki-Seok Jang, Sanghoon Kim, In Gyoo Kim, Jiho Joo, and Gyungock Kim</i> <i>ETRI, Korea</i>	829
6D2-3	11:15 - 11:30	Channel Selection by Optical Injection Locking in Frequency-comb Based DWDM Transmission <i>Naoki Koda, Shunsuke Hohchido, Ken Kashiwagi, Yosuke Tanaka, and Takashi Kurokawa</i> <i>Tokyo Univ. of Agriculture and Tech., Japan</i>	831
6D2-4	11:30 - 11:45	Optical Amplifier Trends for CDC Node Network Architectures <i>Gregory J. Cowle, and Maxim Bolshtyansky</i> <i>JDSU, USA</i>	833
6D2-5	11:45 - 12:00	Chirp Characteristics of Optical Combs in MZM-based Flat Comb Generator with Optical Feedback Loop <i>Isao Morohashi, Takahide Sakamoto, Tetsuya Kawanishi, and Iwao Hosako</i> <i>NICT, Japan</i>	835

[6D3] Semiconductors for Light Generation

President: Hiromi Oohashi (NTT Photonics Labs, Japan)

13:30 - 15:00

6D3-1	Invited 13:30 - 14:00	GaN Blue VCSELs and Photonic Crystal Lasers <i>Shing-Chung Wang, Tien-Chang Lu, Hao-Chung Kuo, Bo-Shiao Cheng, Tzeng-Tsong Wu, and Ying-Yu Lai</i> <i>Nat'l Chiao Tung Univ., Taiwan</i>	837
6D3-2	14:00 - 14:15	Enhanced Si Quantum Dot Luminescence in Si-rich SiC Thin-film Light Emitting Diode <i>Ling-Hsuan Tsai, Hung-yu Tai, Chung-Lun Wu, and Gong-Ru Lin</i> <i>Nat'l Taiwan Univ., Taiwan</i>	839

6D3-3	14:15 - 14:30	A Wavelength Monitor Using Unequally Spaced Back-emitting Light for Tunable LD Array <i>Keita Mochizuki, Keisuke Matsuda, and Hiroshi Aruga</i> <i>Mitsubishi Electric Corp., Japan</i>	841
6D3-4	14:30 - 14:45	Modulation Bandwidth Enhancement beyond 100 GHz in Strongly Injection-locked Cascaded Semiconductor Ring Lasers <i>Gennady A. Smolyakov and Marek Osiński</i> <i>Univ. of New Mexico, USA</i>	843
6D3-5	14:45 - 15:00	Magnetically Controllable Hysteresis Loop in Semiconductor Nonreciprocal Bistable Lasers <i>K. Uehara, K. Tazawa, and H. Shimizu</i> <i>Tokyo Univ. of Agriculture and Tech., Japan</i>	845

[6D4] Integrated Lasers

President: Roderick Webb (Tyndall Nat'l Inst., Ireland)

15:30 - 17:00

6D4-1	 15:30 - 16:00	Monolithic Mode-locked Diode Lasers <i>A. C. Bryce¹, L. P. Hou², M. Hajj², B. Qiu³, and J. H. Marsh²</i> <i>¹Univ. of Illinois, USA, ²Univ. Of Glasgow, UK, ³SINANO, China</i>	847
6D4-2	 16:00 - 16:30	Quest for the Smallest Possible Laser <i>Yong-Hee Lee</i> <i>KAIST, Korea</i>	849
6D4-3	16:30 - 16:45	Pulse Energy Enhancement in Mode Locked Lasers with Cascaded Nonlinear Polarization Rotation <i>Feng Li¹, Edwin Ding², J. Nathan Kutz³, and P. K. A. Wai¹</i> <i>¹The Hong Kong Polytechnic Univ., Hong Kong, ²Azusa Pacific Univ., Canada, ³Univ. of Washington, USA</i>	851
6D4-4	16:45 - 17:00	Isolator-free EA-DFB Module with Forward Error Correction <i>Jun Endo¹, Kota Asaka¹, Atsushi Kanda¹, Toshio Ito¹, Mikio Yoneyama¹, Namiko Ikeda², Kenji Kawa², and Masami Urano²</i> <i>¹NTT Photonics Labs, Japan, ²NTT Microsystem Integration Labs, Japan</i>	853

Friday, July 6

Room E (#107)

[6E1] Wavelength Filtering Devices

President: Yongsoon Baek (ETRI, Korea)

08:30 - 10:00

6E1-1	08:30 - 08:45	Profilometry Based on Comb Interval Frequency Sweeping of Two Supercontinua with Different Center Wavelengths <i>Shuto Kojima¹, Yosuke Kasuya¹, Ken Kashiwagi¹, Samuel Choi², and Takashi Kurokawa¹</i> <i>¹Tokyo Univ. of Agriculture and Tech., Japan, ²Niigata Univ., Japan</i>	855
6E1-2	08:45 - 09:00	Polarization-independent Visible Wavelength Filter Incorporating a 2D Metal-dielectric Resonant Structure <i>Chang-Hyun Park, Yeo-Taek Yoon, and Sang-Shin Lee</i> <i>Kwangwoon Univ., Korea</i>	857

6E1-3	Invited	09:00 - 09:30	LCOS Based Waveshaper Technology for Optical Signal Processing and Performance Monitoring <i>Jochen Schröder¹, Michaël A. F. Roelens², Liang B. Du³, Arthur J. Lowery³, and Benjamin J. Eggleton¹</i> <i>¹Univ. of Sydney, Australia, ²Finisar Australia, Australia, ³Monash Univ., Australia</i> 859
6E1-4		09:30 - 09:45	Adiabaticity Analysis of Mode Conversion Using Quantum-optical Analogy in Multimode Waveguides <i>Tzung-Yi Lin, Fu-Chen Hsiao, and Shuo-Yen Tseng</i> <i>Nat'l Cheng Kung Univ., Taiwan</i> 861

[6E2] Photonic Materials and Measurement

Presider: Jung Jin Ju (ETRI, Korea)

10:30 - 12:00


6E2-1		10:30 - 10:45	Measurement of Optical Nonlinear Response in Silicon Wire Waveguides by Frequency-resolved Optical Gating <i>S. Suda, K. Tanizawa, H. Kawashima, S. Namiki, T. Hasama, and H. Ishikawa</i> <i>Nat'l Inst. of Advanced Industrial Sci. and Tech., Japan</i> 863
6E2-2		10:45 - 11:00	Novel High Resolution Miniature Spectrometer Using an Integrated Diffraction Hole Array <i>T. Yang¹, W. Li¹, W. Huang¹, and H. P. Ho²</i> <i>¹Nanjing Univ. of Posts and Telecommunications, China, ²The Chinese Univ. of Hong Kong, Hong Kong</i> 865
6E2-3	Invited	11:00 - 11:30	Er-doped High-index Materials for Compact, On-chip Devices <i>Jung H. Shin</i> <i>KAIST, Korea</i> 867
6E2-4		11:30 - 11:45	A Characterization Measurement of Passive Optical Components with Ultra-fast Speed and High-resolution Based on DD-OFDM <i>Tao Gui¹, Banghong Guo², Guangming Cheng², Jianping Li¹, Xinhuan Feng¹, Jianjun Guo², Hongyan Fu³, Dongyu Geng³</i> <i>¹Jinan Univ., China, ²South China Normal Univ., China, ³Huawei Technologies Co. Ltd., China</i> 869
6E2-5		11:45 - 12:00	Silicon Microspheres for VLSI Silicon CMOS Microphotronics <i>A. Serpengüzel</i> <i>Koç Univ., Turkey</i> 871

[6E3] Passive Si Photonics II

Presider: Myung Hyun Lee (Sungkyunkwan Univ., Korea)

13:30 - 15:00


6E3-1		13:30 - 13:45	High Q-factor Hydrogenated Amorphous Silicon Microdisk Resonators <i>T. Lipka, J. Amthor, C. Krueckel, and J. Müller</i> <i>Hamburg Univ., of Tech., Germany</i> 873
6E3-2		13:45 - 14:00	Compound Switch Consisting of Gap-variable Silicon Nanowire Waveguide Couplers <i>Y. Akihama, Y. Munemasa, Y. Kanamori, and K. Hane</i> <i>Tohoku Univ., Japan</i> 875

6E3-3		14:00 - 14:30	On-chip Optical Isolators and Silicon Photonics <i>T. Mizumoto, Y. Shoji, M. Itoh, and R. Takei</i> <i>Tokyo Inst. of Tech., Japan</i> 877
6E3-4		14:30 - 15:00	Silicon Photonic Components for Integrated Optical Systems <i>Sameer Walavalkar, Andrew Homyk, Se-Heon Kim, and Axel Scherer</i> <i>California Inst. of Tech., USA</i> 879

[6E4] Photonic Crystal Devices

President: Bongshik Song (Sungkyunkwan Univ., Korea)

15:30 - 17:00

6E4-1		15:30 - 15:45	Broadband Switching Functionality of W2 Photonic Crystal Waveguide <i>Kaiyu Cui, Xue Feng, Yidong Huang, Qiang Zhao, Zhilei Huang, and Wei Zhang</i> <i>Tsinghua Univ., China</i> 881
6E4-2		15:45 - 16:00	Design of Thin Film Photonic Crystal Devices with Complete Bandgap <i>Seung-Woo Jeon, Se-Young Park, Chan Lee, and Bong-Shik Song</i> <i>Sungkyunkwan Univ., Korea</i> 883
6E4-3		16:00 - 16:30	Slow-light Enhanced Nonlinearities in Photonic Crystals and Their Application to Optical Signal Processing and Quantum Integrated Optics <i>C. Monat^{1,2}, B. Corcoran², C. Xiong², M. J. Collins², M. Pelus², A. S. Clark², C. Grillet², J. Li³, L. O'Faolain³, T. F. Krauss³, G. Marshall⁴, M. J. Steel⁴, D. Moss², and B. J. Eggleton²</i> <i>¹Univ. de Lyon, France, ²Univ. of Sydney, Australia, ³Univ. of St Andrews, UK, ⁴Macquarie Univ., Australia</i> 885
6E4-4		16:30 - 16:45	Transmission Characteristics of Crossing Slot-waveguides with Finite Core-height <i>Yuhei Ishizaka, Yuki Kawaguchi, Kunimasa Saitoh, and Masanori Koshiba</i> <i>Hokkaido Univ., Japan</i> 887
6E4-5		16:45 - 17:00	Dual-focus Dual-layered Microlens Array <i>Jong-Moo Lee, Dong Hyo Lee, and Yong Soon Baek</i> <i>ETRI, Korea</i> 889

Friday, July 6

Room F (#108)

[6F1] Format Conversion

President: Hoon Kim (Nat'l Univ. of Singapore, Singapore)

08:30 - 10:00

6F1-1		08:30 - 08:45	41.6 Gb/s RZ-DPSK to NRZ-DPSK Format Conversion in a Microring Resonator <i>Meng Xiong^{1,2}, Oskars Ozolins^{2,3}, Yunhong Ding², Bo Huang^{1,2}, Yi An², Haiyan Ou², Christophe Peucheret², and Xinliang Zhang¹</i> <i>¹Huazhong Univ. of Sci. and Tech., China, ²Technical Univ. of Denmark, Denmark, ³Riga Tech. Univ., Latvia</i> 891
6F1-2		08:45 - 09:00	Polarization-insensitive NRZ-to-RZ Conversion with Pulsewidth Tunability <i>Gazi Mohammad Sharif, Quang Nguyen-The, Motoharu Matsuura, and Naoto Kishi</i> <i>Univ. of Electro-Comm., Japan</i> 893

6F1-3	Invited	09:00 - 09:30	Optical Signal Manipulation in High-speed Systems and Networks <i>L.-S. Yan, J. Ye, A.-L. Yi, Z.-Y. Chen, H.-Y. Jiang, W. Pan, and B. Luo</i> <i>Southwest Jiaotong Univ., China</i> 895
6F1-4		09:30 - 09:45	Wavelength Multicasting Accompanied with All-optical Modulation Format Conversion from NRZ-OOK to RZ-BPSK Using SOA-MZI Wavelength Converter <i>Daisuke Hisano¹, Tomonori Kono¹, Akihiro Maruta¹, Nobuo Ohata², Hiroshi Aruga², Eitaro Ishimura², Atsushi Sugitatsu², and Ken-Ichi Kitayama¹</i> <i>¹Osaka Univ., Japan, ²Mitsubishi Electric Corp., Japan</i> 897
6F1-5		09:45 - 10:00	Design of All-optical NRZ-OOK/RZ-QPSK Modulation Format Converter by Use of Cross Phase Modulation in Optical Fiber <i>Hiroki Terauchi, Akihiro Tokunaga, Nana Horaguchi, and Akihiro Maruta</i> <i>Osaka Univ., Japan</i> 899

[6F2] All-optical Signal Processing I

President: Lianshan Yan (Southwest Jiaotong Univ., China)

10:30 - 12:00

6F2-1		10:30 - 10:45	All-optical Pre-compensation of Nonlinear Fiber Distortion for WDM 40 Gb/s RZ-DPSK Signals <i>Mark D. Pelusi</i> <i>Univ. of Sydney, Australia</i> 901
6F2-2		10:45 - 11:00	Entire C-band Operation of Parametric Tunable Dispersion Compensator Using Zero-dispersion Polarization-maintaining HNLF <i>Ken Tanizawa¹, Junya Kurumida¹, Masanori Takahashi², Shigehiko Takasaka², Takeshi Yag², and Shu Namiki¹</i> <i>¹AIST, Japan, ²Furukawa Electric Co. Ltd., Japan</i> 903
6F2-3		11:00 - 11:15	SOA Blanking and Signal Pre-emphasis for Wavelength Agile 100Gb/s Transmitters <i>R. Maher^{1,2}, D. S. Millar¹, S. J. Savory¹, and B. C. Thomsen¹</i> <i>¹Univ. College London, UK, ²Dublin City Univ., Ireland</i> 905
6F2-4		11:15 - 11:30	Optical QPSK Regeneration Using Dual-pump Degenerate Phase-sensitive Amplification <i>Jeng-Yuan Yang, Youichi Akasaka, and Motoyoshi Sekiya</i> <i>Fujitsu Labs. of America, USA</i> 907
6F2-5	Invited	11:30 - 12:00	All-optical OFDM Transmission Using Photonic Integrated Optical DFT Devices <i>Inuk Kang</i> <i>Seoul Nat'l Univ., Korea</i> 909

[6F3] All-optical Signal Processing II

President: Inuk Kang (Seoul Nat'l Univ., Korea)

13:30 - 15:00

6F3-1		13:30 - 13:45	Experimental Demonstration of an Optical Packet Gating Using a Monolithically-integrated InP SOA-MZI-type All-optical Flip-flop Circuit with a Feedback Loop <i>Y. Naito, S. Satoshi, N. Fukui, T. Kato, K. Kobayashi, and H. Uenohara</i> <i>Tokyo Inst. of Tech., Japan</i> 911
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6F3-2	13:45 - 14:00	Investigation of Optical Label Recognition Using Optical Serial-to-parallel Converter with Phase Operation for DPSK Signal <i>Kotaro Negishi and Hiroyuki Uenohara</i> <i>Tokyo Inst. of Tech., Japan</i>	913
6F3-3	14:00 - 14:15	Transmission Property of Directly Modulated Signals Enhanced by a Micro-ring Resonator <i>Yi An, Abel Lorences Riesgo, Jorge Seoane, Yunhong Ding, Haiyan Ou, and Christophe Peucheret</i> <i>Technical Univ. of Denmark, Denmark</i>	915
6F3-4	14:15 - 14:30	Two-sided (15 krad/s at Input, 200 rad/s at Output) Endless Optical Polarization Tracking <i>B. Koch^{1,2}, R. Noé^{1,2}, V. Mirvoda¹, K. Puntsri¹, and D. Sandel¹</i> <i>¹Univ. of Paderborn, Germany, ²Novoptel GmbH, Germany</i>	917
6F3-5	14:30 - 14:45	High-speed Optical Pulse Train Generation By Line-by-line Spectral Intensity and Phase Coding <i>Ikhwan Kim, Hyunjoo Sung, and Dongsun Seo</i> <i>Myongji Univ., Korea</i>	919
6F3-6	14:45 - 15:00	Photonic Frequency Up-conversion Using Directly Modulated RSOA and Delay Interferometer <i>Zaineb Al-Qazwini and Hoon Kim</i> <i>Nat'l Univ. of Singapore, Singapore</i>	921