

誌上発表論文一覧 (2018年1月-2023年10月)

■ネットワーク研究所フォトニック ICT 研究センター

発表月日	論文名	誌名/発表機関	巻号等	発表者
2018/1/10	Volume holographic spatial mode demultiplexer with a dual-wavelength method	Applied Optics	vol.57, no.2, pp.146-153	Shimpei Shimizu, Atsushi Okamoto, Fumiya Mizukawa, Kazuhisa Ogawa, Akihisa Tomita, Taketoshi Takahata, Satoshi Shinada, Naoya Wada
2018/1/15	Tunable dual-wavelength heterogeneous quantum dot laser diode with a silicon external cavity	Journal of Lightwave Technology	vol.36, no.2, pp.219-224	Tomohiro Kita, Atsushi Matsumoto, Naokatsu Yamamoto, Hirohito Yamada
2018/1/15	Millimeter-Wave Radio-Over-Fiber Network for Linear Cell Systems	Journal of Lightwave Technology	vol.36, no.2, pp.533-540	Atsushi Kanno, Pham Tien Dat, Naokatsu Yamamoto, Tetsuya Kawanishi
2018/1/15	100-GHz Radio and Power Over Fiber Transmission Through Multicore Fiber Using Optical-to-Radio Converter	Journal of Lightwave Technology	vol.36, no.2, pp.617-623	Toshimasa Umezawa, Pham Tien Dat, Kenichi Kashima, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2018/1/29	Time stretch dispersive Fourier Transform based single-shot pulse-by-pulse spectrum measurement using a pulse-repetition-frequency-variable gain-switched laser	SPIE Photonics West	no.1051709	Hideaki Furukawa, Takeshi Makino, Xiaomin Wang, Tetsuya Kobayashi, Mohammad H. Asghari, Paul Trinh, Bahram Jalali, Wai Sing Man, Kwong Shing Tsang, Naoya Wada
2018/1/29	Characteristics-improvement of QD semiconductor optical amplifier using rapid-thermal annealing process	SPIE Photonics West	no.105280F	Budsara Boriboon, Duang-Rudee Worasuchee, Atsushi Matsumoto, Kouichi Akahane, Naokatsu Yamamoto, Naoya Wada
2018/1/29	Spectral efficiency in crosstalk-impaired multi-core fiber links	SPIE Photonics West	no.1055102	Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Werner Klaus, Erik Agrell, Yoshinari Awaji, Naoya Wada
2018/1/29	High-capacity transmission with homogeneous multi-core fibers and wideband optical comb sources	SPIE Photonics West	no.105610C	Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Jun Sakaguchi, Yoshinari Awaji, Naoya Wada, John Marciante, Bill. P. P. Kuo, Stojan Radic
2018/1/30	Radio over fiber network technology for millimeter-wave distributed radar systems	SPIE Photonics West	no.105590Q	Atsushi Kanno, Naokatsu Yamamoto
2018/1/31	Compensation of third-order intermodulation distortion of electro-optic modulator by using frequency chirp modulation	SPIE Photonics West	no.1052819	Yuta Kashiwagi, Kosuke Takase, Tadashi Kawai, Akira Enokihara, Naokatsu Yamamoto, Tetsuya Kawanishi
2018/1/31	Study of high power generation in UTC-PD at 110-210 GHz	SPIE Photonics West	no.1053115	Toshimasa Umezawa, Atsushi Kanno, Kouichi Akahane, Atsushi Matsumoto, Naokatsu Yamamoto, Tetsuya Kawanishi
2018/3/1	Millimeter-Wave Integrated Photoreceivers for High Data Rate Photonic Wireless Communication	Journal of Selected Topics in Quantum Electronics	vol.24, no.2, 3900109	Toshimasa Umezawa, Kunihiisa Jitsuno, Pham Tien Dat, Kenichi Kashima, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2018/3/12	Impact of Fractionally Spatial Super-channel Time-slotted Switch Architecture Design	Optical Fiber Communication Conference	no.M3J.1	Yusuke Hirota, José Manuel Delgado Mendinueta, Satoshi Shinada, Ruben S. Luis, Hideaki Furukawa, Hiroaki Harai, Naoya Wada
2018/3/12	High-speed two-dimensional photodetector array for 4-WDM 25-Gbaud FSO communication	Optical Fiber Communication Conference	no.M3K.7	Toshimasa Umezawa, Takahide Sakamoto, Atsushi Kanno, Kouichi Akahane, Atsushi Matsumoto, Naokatsu Yamamoto, Tetsuya Kawanishi
2018/3/12	Radio-over-Fiber-based Seamless Fiber-Wireless Convergence for Small Cell and Linear Cell Networks	Optical Fiber Communication Conference	no.M4J.5	Pham Tien Dat, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2018/3/13	Inter-Core Skew Measurements in Temperature Controlled Multi-Core Fiber	Optical Fiber Communication Conference	no.Tu3B.3	Benjamin J. Puttnam, Georg F. Rademacher, Ruben S. Luis, Jun Sakaguchi, Yoshinari Awaji, Naoya Wada
2018/3/13	Demonstrating Network-scale Gain Transient Impact of Multiple Series EDFAs in Link Failure Cases	Optical Fiber Communication Conference	no.Tu3E.5	Yusuke Hirota, Masaki Shiraiwa, Hideaki Furukawa, Hiroaki Harai, Naoya Wada
2018/3/14	Full-Duplex and Scalable MIMO Fiber-Wireless Seamless System in W-Band for Future Mobile Networks	Optical Fiber Communication Conference	no.W1F.2	Pham Tien Dat, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi

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2018/3/14	W-band Radio-over-fiber Link Based on Self-oscillating Optical Frequency Comb Generator	Optical Fiber Communication Conference	no.W1F.6	G. K. M. Hasanuzzaman, Atsushi Kanno, Pham Tien Dat, Stavros Iezekiel
2018/3/14	93.34 Tbit/s/mode (280 Tbit/s) Transmission in a 3-Mode Graded-Index Few-Mode Fiber	Optical Fiber Communication Conference	no.W4C.3	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Roland Ryf, Hideaki Furukawa, Ryo Maruyama, Kazuhiko Aikawa, Akihiro Maruta, Yoshinari Awaji, Naoya Wada
2018/3/15	83.33 Tb/s Coherent PDM-8PSK SDM-TDM Spatial Super-channel and High-speed Core-joint Switching System	Optical Fiber Communication Conference	no.Th3H.2	José Manuel Delgado Mendinueta, Satoshi Shinada, Yusuke Hirota, Ruben S. Luis, Hideaki Furukawa, Naoya Wada
2018/3/15	159 Tbit/s C+L Band Transmission over 1045 km 3-Mode Graded-Index Few-Mode Fiber	Optical Fiber Communication Conference	no.Th4C.4	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Tobias A. Eriksson, Erik Agrell, Ryo Maruyama, Kazuhiko Aikawa, Hideaki Furukawa, Yoshinari Awaji, Naoya Wada
2018/3/15	Long-Haul Transmission over Few-Mode Fibers with Space-Division Multiplexing	Journal of Lightwave Technology	vol.36, no.6, pp.1382-1388	Georg F. Rademacher, Roland Ryf, Nicolas K. Fontaine, Haoshuo Chen, Rene-Jean Essiambre, Benjamin J. Puttnam, Ruben S. Luis, Yoshinari Awaji, Naoya Wada, Simon Gross, Nicolas Riesen, Michael Withford, Yi Sun, Robert Lingle
2018/4/5	Memory Effect on Adaptive Decision Making with a Chaotic Semiconductor Laser	Complexity	vol.2018, no.4318127	Takatomo Mihana, Yuta Terashima, Makoto Naruse, Song-Ju Kim, Atsushi Uchida
2018/4/6	Wired and Wireless Links to Bridge Networks	IEEE Microwave Magazine	vol.19, no.3, pp.102-111	Tetsuya Kawanishi, Atsushi Kanno, Hugo S. C. Freire
2018/4/10	Millimeter- And Terahertz-Wave Radio Systems Enabled by Photonics Technology for 5G/IoT and Beyond	IEEE International Conference on Photonics	no.D2PM-S2.1	Atsushi Kanno
2018/4/15	2 × 2 MIMO FBMC-OQAM Signal Transmission Over a Seamless Fiber-Wireless System in the W-band	IEEE Photonics Journal	vol.10, no.2, pp.1-14	François Rottenberg, Pham Tien Dat, Trung-Hien Nguyen, Atsushi Kanno, François Horlin, Jérôme Louveaux, Naokatsu Yamamoto
2018/4/25	Optical frequency comb applied optoelectronic oscillator for millimeter-wavesignal generation and its application	SPIE Defense + Commercial Sensing	no.10634	Atsushi Kanno, G. K. M. Hasanuzzaman, Naokatsu Yamamoto, Stavros Iezekiel
2018/5/14	System benefits of coupled-core multicore fibers with different coupling lengths	Conference on Lasers and Electro-Optics	no.SM3C.2	Rene-Jean Essiambre, Roland Ryf, Georg F. Rademacher
2018/5/14	Crosstalk Impact on a 535 Tb/s 172 km Transmission Using a Homogeneous 19-Core Multicore Fiber	Conference on Lasers and Electro-Optics	no.SM4C.1	Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Yoshinari Awaji, Naoya Wada
2018/5/14	Modulation and Detection for Multicore Superchannels with Correlated Phase Noise	Conference on Lasers and Electro-Optics	no.SM4C.3	Erik Agrell, Arni Alfredsson, Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Magnus Karlsson
2018/5/15	Demonstration of 1- μ m-band Si-Photonics-Based Quantum Dot Heterogeneous Tunable Laser	Conference on Lasers and Electro-Optics	no.JTu2A.15	Atsushi Matsumoto, Kouichi Akahane, Toshimasa Umezawa, Naokatsu Yamamoto, Hirohito Yamada, Tomohiro Kita
2018/5/15	Impact of differential group-velocity dispersion on intermodal four-wave mixing in few-mode fibers	Conference on Lasers and Electro-Optics	no.JTu2A.52	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Hideaki Furukawa, Yoshinari Awaji, Naoya Wada, Ryo Maruyama, Kazuhiko Aikawa
2018/5/15	Experimental Demonstration of Fiber-Nonlinearity Cancellation by Photonic Homodyne Down-Conversion in Conjugated-Paired Radio-on-Fiber System	Conference on Lasers and Electro-Optics	no.STu4C.5	Takahide Sakamoto, Guo-Wei Lu, Naokatsu Yamamoto
2018/5/17	28Gbps PAM4 60GHz Radio over Fiber System by Injection Locking Two-Tone Light to Directly-Modulated Laser	Conference on Lasers and Electro-Optics	no.JTh2A.195	Guo-Wei Lu, Ruben S. Luis, Hiroyuki Toda, Jiabin Cui, Takahide Sakamoto, Hongxiang Wang, Yuefeng Ji, Naokatsu Yamamoto
2018/5/17	Direct coupling between 2D-PDA and triangular/square shape aligned MCF for universal SDM photoreceiver	Conference on Lasers and Electro-Optics	no.STh4B.5	Toshimasa Umezawa, Takahide Sakamoto, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2018/5/31	High-frame-rate Spectrum Measurement for Ultrafast Optical Pulses based on Optical Signal Processing	URSI Atlantic Radio Science Meeting	no.S-D13-10	Naoya Wada, José Manuel Delgado Mendinueta, Hideaki Furukawa
2018/5/30	Influence of Highly Stacked Layer Numbers in Quantum-Dot Lasers	Compound Semiconductor Week	no.We5PP-L.2	Atsushi Matsumoto, Kouichi Akahane, Toshimasa Umezawa, Shinya Nakajima, Naokatsu Yamamoto

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2018/6/1	Demonstration of 10Gbps Fundamental Optical Logic Gate Operation Using MQW-SOA	Compound Semiconductor Week	no.Fr3A9.2	Yota Akashi, Shin'e Matsui, Shohei Isawa, Atsushi Matsumoto, Yuichi Matsushima, Hiroshi Ishikawa, Katsuyuki Utaka
2018/6/1	High-density InAs quantum dots for high-efficiency photodetection in telecom and THz band	Compound Semiconductor Week	no.Fr3B8.4	Toshimasa Umezawa, Kouichi Akahane, Atsushi Matsumoto, Atsushi Kanno, Naokatsu Yamamoto
2018/7/1	Performance Evaluation of Full-Duplex MIMO Seamless Fiber-Wireless System in W-Band	IEEE Photonics Technology Letters	vol.30, no.13, pp.1175-1178	Pham Tien Dat, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2018/7/2	Advanced Photoreceiver Technology for Space Division Multiplexing Communication	Advanced Photonics Congress	no.NeM4F.3	Toshimasa Umezawa, Takahide Sakamoto, Naokatsu Yamamoto
2018/7/2	90-GHz linear-cell systems for public transportation systems	International Conference on Transparent Optical Networks	no.Mo.B5.2	Tetsuya Kawanishi, Kei Akama, Atsushi Kanno, Naokatsu Yamamoto
2018/7/4	High-Frame-Rate Single-Shot Spectrum Measurement for Ultrafast Optical Pulses Based on Optical Signal Processing	International Conference on Transparent Optical Networks	no.We.B1.1	Naoya Wada, Hideaki Furukawa, José Manuel Delgado Mendinueta
2018/7/4	Recent Advances Using Homogeneous Single-Mode Multicore Fibers for Spatial Division Multiplexing	International Conference on Transparent Optical Networks	no.We.C1.3	Ruben S. Luis, Georg F. Rademacher, Benjamin J. Puttnam, Yoshinari Awaji, Naoya Wada
2018/7/4	Wavelength and Space Division Packet Super-channel Switching System for Future Data Center Optical Networks with a Switching Capacity of 53.3 Tb/s/port	International Conference on Transparent Optical Networks	no.We.D3.2	José Manuel Delgado Mendinueta, Satoshi Shinada, Yusuke Hirota, Ruben S. Luis, Hideaki Furukawa, Naoya Wada
2018/7/4	Fiber-wireless seamless transport based on radio over fiber technologies for 5G and beyond	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.4A1-2	Atsushi Kanno
2018/7/18	Scalable photonic reinforcement learning by time-division multiplexing of laser chaos	Scientific Reports	vol.8, no.10890	Makoto Naruse, Takatomo Mihana, Hirokazu Hori, Hayato Saigo, Kazuya Okamura, Mikio Hasegawa, Atsushi Uchida
2018/7/28	Demonstration of an SDM Network Testbed for Joint Spatial Circuit and Packet Switching	MDPI Photonics Journal	vol.5, no.20, pp.1-11	Ruben S. Luis, Hideaki Furukawa, Georg F. Rademacher, Benjamin J. Puttnam, Naoya Wada
2018/8/1	Propagation Study Including ITU-R Activities for Millimeter Wave Railway Communication Systems	Progress in Electromagnetics Research Symposium	no.SC3 1A-15	Hirokazu Sawada, Kentaro Ishizu, Fumihide Kojima, Hiroyo Ogawa, Kazuki Nakamura, Nagateru Iwasawa, Kunihiro Kawasaki, Nobuhiko Shibagaki, Keizou Inagaki
2018/8/1	O-L band bias-free high-speed UTC-PD for advanced optical fiber communications	Conference on Lasers and Electro-Optics Pacific Rim	no.W4J.2	Toshimasa Umezawa, Atsushi Kanno, Kouichi Akahane, Atsushi Matsumoto, Naokatsu Yamamoto
2018/8/3	Numerical analysis on double frequency-spacing optical comb for optimization of RF signals driving I-Q MZM	Conference on Lasers and Electro-Optics Pacific Rim	no.F2A.8	Akito Chiba, Yuta Moteki, Nobuhiro Kobayashi, Takahide Sakamoto, Kazumasa Takada
2018/8/3	Frequency Spacing and Offset Tunable Multiple-Frequency-Spaced Optical Comb Generation Using Multiple-Parallel Phase Modulator	Conference on Lasers and Electro-Optics Pacific Rim	no.F2F.3	Takahide Sakamoto, Akito Chiba
2018/8/3	Space and Time Division Packet Super-channel Switching System for Next Generation Data Center Networks	Progress in Electromagnetics Research Symposium	pp.1274-1281	José Manuel Delgado Mendinueta, Satoshi Shinada, Yusuke Hirota, Ruben S. Luis, Hideaki Furukawa, Naoya Wada
2018/8/6	64QAM OFDM Transmission Using 450nm Blue LD for Underwater Optical Wireless Communication System	MWP Symposium	no.P17	Ryohei Shinozaki, Atsushi Kanno, Naokatsu Yamamoto, Hideyuki Sotobayashi
2018/8/6	Flexible generation of 28 Gbps PAM4 60 GHz/80 GHz radio over fiber signal by injection locking of direct multilevel modulated laser to spacing-tunable two-tone light	Optics Express	vol.26, no.16, pp.331615	Guo-Wei Lu, Ruben S. Luis, Hiroyuki Toda, Jiabin Cui, Takahide Sakamoto, Hongxiang Wang, Yuefeng Ji, Naokatsu Yamamoto
2018/8/10	Terahertz-wave Communication System Using a Traveling-wave Tube Amplifier	Progress in Electromagnetics Research Symposium	pp.2405-2409	Atsushi Kanno, Norihiko Sekine, Akifumi Kasamatsu, Naokatsu Yamamoto, Mitsuru Yoshida, Norio Masuda
2018/8/14	Networks for Future Services in a Smart City: Lessons Learned from the Connected OFCity Challenge 2017	IEEE Communications Magazine	vol.56, no.8, pp.138-144	Domaniç Lavery, Marco Ruffini, Luca Valcarengi, Naoto Yoshimoto, Thomas Pfeiffer, David Hood, Junwen Zhang, Daniel King, Hal Roberts, Rajesh Yadav, Nicola Sambo, Marco Tacca, Silvia Fichera, Franco Tecchia, Marcello Carrozzino, Elaine Wong, Ning Chang, Yuki Yoshida, Denis Khotimsky, Jun Shan Wey

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発表月日	論文名	誌名/発表機関	巻号等	発表者
2018/8/23	Field trial of 95-GHz frequency-modulated continuous-wave radar system driven by radio over fiber techniques	IEEE Research and Applications of Photonics in Defense Conference	pp.39-42	Atsushi Kanno, Naokatsu Yamamoto, Sevia Mahdaliza Idrus, Nor Hisham Kahim, Kei Akama, Tetsuya Kawanishi, Nobuhiko Shibagaki, Kenichi Kashima
2018/8/31	Long distance crosstalk-supported transmission using homogeneous multicore fibers and SDM-MIMO demultiplexing	Optics Express	vol.26, no.18, pp.24044-24053	Ruben S. Luis, Georg F. Rademacher, Benjamin J. Puttnam, Yoshinari Awaji, Naoya Wada
2018/8/31	Adaptive space-time compression for efficient massive MIMO fronthauling	Optics Express	vol.26, no.18, pp.24098-24113	Paikun Zhu, Yuki Yoshida, Ken-ichi Kitayama
2018/9/1	Investigation of Intermodal Four-Wave Mixing for Nonlinear Signal Processing in Few-Mode Fibers	IEEE Photonics Technology Letters	vol.30, no.17, pp.1527-1530	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Hideaki Furukawa, Ryo Maruyama, Kazuhiko Aikawa, Yoshinari Awaji, Naoya Wada
2018/9/1	High Speed 2-D Photodetector Array for Space and Mode-Division Multiplexing Fiber Communications	Journal of Lightwave Technology	vol.36, no.17, pp.3684-3692	Toshimasa Urmezawa, Takahide Sakamoto, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2018/9/3	Linear cell radar system using radio-over-fiber links	Conference on Antenna Measurements and Applications		Tetsuya Kawanishi, Kei Akama, Atsushi Kanno, Naokatsu Yamamoto
2018/9/3	Millimeter-wave communication system implemented on radio over fiber networks in 5G/loT era	Conference on Antenna Measurements and Applications	no.54.4	Atsushi Kanno
2018/9/13	Compact Electro-Optical Frequency Tunable Sensors for Accelerator Diagnostics based on Telecommunication Technology	International Conference on Infrared, Millimeter, and Terahertz Waves	no.Th-POS-25, pp.1-2	Erik Bründermann, Anke-Susanne Müller, Isao Morohashi, Shinya Nakajima, Shingo Saito, Norihiko Sekine, Iwao Hosako
2018/9/20	Inter-symbol interference suppression for a hybrid use of OFDM and N-OTDM based on Fr-OFDM	Photonics in Switching and Computing	no.Th3C.3	Tsuyoshi Konishi, Yu Yamasaki, Gabriella Cincotti, Satoshi Shimizu, Naoya Wada, Hiroyuki Uenohara
2018/9/20	Record Spectral Efficient Transmission of 11.24 Bit/s/Hz/mode over 30 km Few-Mode Fiber	Photonics in Switching and Computing	no.Th3C.5	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Tobias A. Eriksson, Hideaki Furukawa, Yoshinari Awaji, Ryo Maruyama, Kazuhiko Aikawa, Naoya Wada
2018/9/21	Free-Space Few-Mode Kramers-Kronig Receiver	Photonics in Switching and Computing	no.Fr1A.2	Kasper Ingerslev, Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Werner Klaus, Satoshi Shinada, Yoshinari Awaji, Karsten Rottwitt, Toshio Morioka, Leif K. Oxenlowe, Naoya Wada
2018/9/21	Radio over multimode fiber system for short-reach radio relay links	Photonics in Switching and Computing	no.Fr1C.3	Atsushi Kanno, Naokatsu Yamamoto
2018/9/21	Optical Switching System for Next Generation Data Center Networks with Time-division Spatial Super-channels and Core-joint Optical Switches	Photonics in Switching and Computing	no.Fr3C.1	José Manuel Delgado Mendinueta, Satoshi Shinada, Yusuke Hirota, Ruben S. Luis, Hideaki Furukawa, Naoya Wada
2018/9/24	A Coherent Kramers-Kronig Receiver for 3-Mode Few-Mode Fiber Transmission	European Conference on Optical Communication	no.Mo3F.3	Ruben S. Luis, Georg F. Rademacher, Benjamin J. Puttnam, Satoshi Shinada, Hideaki Furukawa, Ryo Maruyama, Kazuhiko Aikawa, Naoya Wada
2018/9/24	228-spatial-channel Bi-directional Data Communication System Enabled by 39-core 3-mode Fiber	European Conference on Optical Communication	no.Mo3G.1	Jun Sakaguchi, Werner Klaus, Yoshinari Awaji, Naoya Wada, Tetsuya Hayashi, Takuji Nagashima, Tetsuya Nakanishi, Toshiki Taru, Taketoshi Takahata, Tetsuya Kobayashi
2018/9/24	Spatial-Mode Demultiplexer using 1550-nm-band Angularly Multiplexed Volume Holograms	European Conference on Optical Communication	no.Mo3G.4	Satoshi Shinada, Shimpei Shimizu, Taijun Shiba, Taketoshi Takahata, Atsushi Okamoto, Naoya Wada
2018/9/25	Measurement of Modal Dispersion and Group Delay in a Large Core Count Few-Mode Multi-Core Fiber	European Conference on Optical Communication	no.Tu1E.3	Simon Rommel, José Manuel Delgado Mendinueta, Werner Klaus, Jun Sakaguchi, Juan José Vegas Olmos, Yoshinari Awaji, Idelfonso Tafur Monroy, Naoya Wada
2018/9/25	Nonlinearity Mitigation in the Presence of Intercore-Crosstalk	European Conference on Optical Communication	no.Tu1F.3	Daniel Elson, Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Eric Sillekens, Lidia Galdino, Domaniç Lavery, Yoshinari Awaji, Naoya Wada, Polina Bayvel
2018/9/25	Experimental Investigation of Intermodal Nonlinear Signal Degradation in a Few-Mode Fiber Transmission System	European Conference on Optical Communication	no.Tu1G.1	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Hideaki Furukawa, Ryo Maruyama, Kazuhiko Aikawa, Yoshinari Awaji, Naoya Wada

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2018/9/25	Experimental Investigation of Parametric Mode and Wavelength Conversion in a 4.7 km Few-Mode Fiber	European Conference on Optical Communication	no.Tu4H.6	Georg F. Rademacher, Roland Ryf, Nicolas K. Fontaine, Haoshuo Chen, R. M. Jopson, Rene-Jean Essiambre, Benjamin J. Puttnam, Ruben S. Luis, Yoshinari Awaji, Naoya Wada, Simon Gross, Nicolas Riesen, Michael Withford, Yi Sun, Robert Lingle
2018/9/26	Inter-Core Crosstalk Penalties in Wideband WDM, MCF Transmission Over Transoceanic Distances	European Conference on Optical Communication	no.We2.32	Benjamin J. Puttnam, Georg F. Rademacher, Ruben S. Luis, Yoshinari Awaji, Naoya Wada
2018/9/26	THz communications enabled by photonics	European Conference on Optical Communication	no.We4H.1	Tetsuya Kawanishi
2018/9/27	1.6-Gbps LED-based Ultraviolet Communication at 280 nm in Direct Sunlight	European Conference on Optical Communication	no.Th1B.3	Kazunobu Kojima, Yuki Yoshida, Masaki Shiraiwa, Yoshinari Awaji, Atsushi Kanno, Naokatsu Yamamoto, Shigefusa F. Chichibu
2018/9/27	Cell-less Network for Handover-Free Communications to High-Speed Trains Using a Switched WDM Fiber-Wireless Backhaul	European Conference on Optical Communication	no.Th1B.6	Pham Tien Dat, Atsushi Kanno, Keizo Inagaki, Naokatsu Yamamoto, Tetsuya Kawanishi
2018/9/27	Optical Modulator with the Digitized Transfer Function for Multilevel Amplitude Shift Keying	European Conference on Optical Communication	no.Th2.9	Yuya Yamaguchi, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2018/9/27	400-Gbps Space Division Multiplexing Optical Wireless Communication using Two-Dimensional Photodetector Array	European Conference on Optical Communication	no.Th2.31	Toshimasa Umezawa, Takahide Sakamoto, Atsushi Kanno, Shinya Nakajima, Atsushi Matsumoto, Naokatsu Yamamoto, Tetsuya Kawanishi
2018/9/27	Flexible Manipulation of OPS Network Topologies with Optical Packet Flow Cut-Through in OPCI Networks	European Conference on Optical Communication	no.Th2.54	Sugang Xu, Masaki Shiraiwa, Yusuke Hirota, Hideaki Furukawa, Yoshinari Awaji, Naoya Wada
2018/9/27	1.2 Pb/s Transmission Over a 160 μ m Cladding, 4-Core, 3-Mode Fiber, Using 368 C+L band PDM-256-QAM Channels	European Conference on Optical Communication	no.Th3B.3	Ruben S. Luis, Georg F. Rademacher, Benjamin J. Puttnam, Tobias A. Eriksson, Hideaki Furukawa, Andrew Ross-Adams, Simon Gross, Michael Withford, Nicolas Riesen, Yusuke Sasaki, Kunimasa Saitoh, Kazuhiko Aikawa, Yoshinari Awaji, Naoya Wada
2018/9/27	Nanometre-scale pattern formation on the surface of a photochromic crystal by optical near-field induced photoisomerization	Scientific Reports	vol.8, no.14468	Ryo Nakagomi, Kazuharu Uchiyama, Hirotugu Suzuki, Eri Hatano, Kingo Uchida, Makoto Naruse, Hirokazu Hori
2018/10/1	45-Gbaud, 32-pixel 2D-PDA for Multi-core Fiber-based Optical Wireless Communication	IEEE Photonics Conference	pp.109-110	Toshimasa Umezawa, Takahide Sakamoto, Atsushi Kanno, Atsushi Matsumoto, Naokatsu Yamamoto, Tetsuya Kawanishi
2018/10/4	Why is the environment important for decision making? Local reservoir model for choice-based learning	PLOS ONE	vol.13, no.10, e0205161	Makoto Naruse, Eiji Yamamoto, Takashi Nakao, Takuma Akimoto, Hayato Saigo, Kazuya Okamura, Izumi Ojima, Georg Northoff, Hirokazu Hori
2018/10/9	On the Use of High-Order MIMO for Crosstalk Mitigation in Multi-Core Fiber Based SDM Systems	SBFoton International Optics and Photonics Conference	no.OS-C-TUE-0	Ruben S. Luis, Georg F. Rademacher, Benjamin J. Puttnam, Yoshinari Awaji, Naoya Wada
2018/10/24	Generation of Coherent Terahertz Carriers in the 3 THz Range Using Optical-Comb-Based THz Source for Terahertz Communications	International Topical Meeting on Microwave Photonics	pp.199-201	Isao Morohashi, Yoshihisa Irimajiri, Atsushi Kanno, Akira Kawakami, Naokatsu Yamamoto, Norihiko Sekine, Akifumi Kasamatsu, Iwao Hosako
2018/10/24	Large Active Area, High-Speed Photoreceiver for Optical Wireless Communications	International Topical Meeting on Microwave Photonics		Toshimasa Umezawa, Ken Kusakata, Atsushi Kanno, Atsushi Matsumoto, Naokatsu Yamamoto, Tetsuya Kawanishi
2018/10/25	Broadband Optical Phase Modulator Based on Electro-Optic Polymer	International Topical Meeting on Microwave Photonics		Yuya Yamaguchi, Atsushi Kanno, Naokatsu Yamamoto, Shingo Takano, Satoshi Oikawa, Akira Otomo, Tetsuya Kawanishi
2018/10/27	Impact of Temperature on Propagation Time and Inter-Core Skew in a 19-Core Fiber	Asia Communications and Photonics Conference	no.S3K.4	Benjamin J. Puttnam, Georg F. Rademacher, Ruben S. Luis, Rasmus T. Jones, Yoshinari Awaji, Naoya Wada
2018/11/2	Design of Silicon Photonic Integrated Optical Phased Array for Large Deflect Beam Steering Angle	International Conference on Analog VLSI Circuits	pp.133-136	Masaki Nishimura, Toshimasa Umezawa, Tetsuya Kawanishi, Naokatsu Yamamoto

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発表月日	論文名	誌名/発表機関	巻号等	発表者
2018/11/2	Si Photonic Resonator Filter with Tunable Microring and MMI Structures	International Conference on Analog VLSI Circuits	pp.145-148	Nattapol Ittipratheep, Suruk Udomsom, Ukrit Mankong, Toshimasa Umezawa, Atsushi Matsumoto, Naokatsu Yamamoto
2018/11/7	Numerical Investigation of the Equalization Enhanced Phase Noise Penalty for M-Quadrature Amplitude Modulation Formats in Short-Haul Few-Mode Fiber Transmission Systems with Time-Domain Equalization	MDPI Applied Sciences	vol.8, no.11, pp.2182	José Manuel Delgado Mendinueta, Werner Klaus, Jun Sakaguchi, Satoshi Shinada, Hideaki Furukawa, Yoshinari Awaji, Naoya Wada
2018/11/23	Advantage of heteroepitaxial GaSb thin-film buffer and GaSb dot nucleation layer for GaSb/AlGaSb multiple quantum well structure grown on Si(1 0 0) substrate by molecular beam epitaxy	Journal of Crystal Growth	vol.507, pp.357-361	Ryuto Machida, Kouichi Akahane, Issei Watanabe, Shinsuke Hara, Sachie Fujikawa, Akifumi Kasamatsu, Hiroki I. Fujishiro
2018/11/26	Seamless Convergence of Fiber and Wireless Systems for 5G and Beyond Networks	Journal of Lightwave Technology	vol.37, no.2, pp.592-605	Pham Tien Dat, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2018/12/7	High-Speed and Uninterrupted Communication for High-Speed Trains by Ultrafast WDM Fiber-Wireless Backhaul System	Journal of Lightwave Technology	vol.37, no.1, pp.205-217	Pham Tien Dat, Atsushi Kanno, Keizo Inagaki, François Rottenberg, Naokatsu Yamamoto, Tetsuya Kawanishi
2018/12/11	A Fractionally Spatial Super-channel Switching System Design with Spatial Channel Slicing	IEEE Global Communications Conference		Yusuke Hirota, Hideaki Furukawa, Hiroaki Harai, Naoya Wada
2018/12/14	Characteristics of homogeneous multi-core fibers for SDM transmission	APL Photonics	vol.4, no.022804	Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Arni Alfredsson, Werner Klaus, Jun Sakaguchi, Yoshinari Awaji, Erik Agrell, Naoya Wada
2019/1/9	Demonstration of All-Optical Logic Gate Device Using MQW-SOA and 10 Gbps XNOR Operation	physica status solidi (a)	vol.216, no.1, pp.1800259	Yota Akashi, Shin'e Matsui, Shohei Isawa, Asuka Matsushita, Atsushi Matsumoto, Yuichi Matsushima, Hiroshi Ishikawa, Katsuyuki Utaka
2019/1/9	Influence and its Optimal Design of Number of Stacked Layer in Quantum-Dot Lasers	physica status solidi (a)	vol.216, no.1, pp.1800502	Atsushi Matsumoto, Kouichi Akahane, Toshimasa Umezawa, Shinya Nakajima, Naokatsu Yamamoto
2019/1/15	Review of Space-Division Multiplexing Technologies in Optical Communications	IEICE Transactions on Communications	vol.E102.B, no.1, pp.1-16	Yoshinari Awaji
2019/1/15	High Capacity Transmission With Few-Mode Fibers	Journal of Lightwave Technology	vol.37, no.2, pp.425-432	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Tobias A. Eriksson, Roland Ryf, Erik Agrell, Ryo Maruyama, Kazuhiko Aikawa, Yoshinari Awaji, Hideaki Furukawa, Naoya Wada
2019/1/15	Converged Inter/Intradata Center Optical Network with Packet Super-channels and 83.33 Tb/s/port	Journal of Lightwave Technology	vol.37, no.2, pp.571-578	José Manuel Delgado Mendinueta, Satoshi Shinada, Yusuke Hirota, Ruben S. Luis, Hideaki Furukawa, Naoya Wada
2019/1/15	25-Gbaud 4-WDM Free-Space Optical Communication Using High-Speed 2-D Photodetector Array	Journal of Lightwave Technology	vol.37, no.2, pp.612-618	Toshimasa Umezawa, Takahide Sakamoto, Atsushi Kanno, Kouichi Akahane, Naokatsu Yamamoto, Tetsuya Kawanishi
2019/1/18	Wavelength division multiplexing of continuous variable quantum key distribution and 18.3 Tbit/s data channels	Communications Physics	vol.2, no.9	Tobias A. Eriksson, Takuya Hirano, Benjamin J. Puttnam, Georg F. Rademacher, Ruben S. Luis, Mikio Fujiwara, Ryo Namiki, Yoshinari Awaji, Masahiro Takeoka, Naoya Wada, Masahide Sasaki
2019/1/31	Unidirectional light transmission by two-layer nanostructures interacting via optical near-fields	Applied Physics Express	vol.12, no.022007	Makoto Naruse, Satoshi Ishii, Jean-Francois Motte, Aurélien Drezet, Serge Huant, Hirokazu Hori
2019/2/1	Time-division Packet Spatial Super-channel Switching System with 53.3 Tb/s/port for Converged Inter/intra Data Center Optical Networks	Journal of Lightwave Technology	vol.37, no.3, pp.677-687	José Manuel Delgado Mendinueta, Satoshi Shinada, Yusuke Hirota, Ruben S. Luis, Hideaki Furukawa, Hiroaki Harai, Naoya Wada
2019/2/2	Optical wireless power grid technology for extreme environments	SPIE Photonics West	no.109101X	Naokatsu Yamamoto, Atsushi Matsumoto, Toshimasa Umezawa
2019/2/5	Automatic bias control for radio-over-fiber-based train communication network system with single-sideband modulation	SPIE Photonics West	no.109450G	Atsushi Kanno, Naokatsu Yamamoto, Kohei Fujiwara, Kouichi Tokita
2019/2/5	Improvement of Crosstalk of High Speed 2D Photodetector Array	SPIE Photonics West	no.109450O	Ken Kusakata, Toshimasa Umezawa, Naokatsu Yamamoto, Tetsuya Kawanishi
2019/2/5	Numerical investigation on spatial coherent matched detection for detection of spatially multiplexed signals	SPIE Photonics West	no.109470B	Takahide Sakamoto, Toshimasa Umezawa, Naokatsu Yamamoto, Tetsuya Kawanishi

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発表月日	論文名	誌名/発表機関	巻号等	発表者
2019/2/6	Pulse-by-pulse single-shot optical spectrum analyzer developed on a single platform	SPIE Photonics West	no.109030E	Hideaki Furukawa, Takeshi Makino, Xiaomin Wang, Tetsuya Kobayashi, Bahram Jalali, Dale Capewell, Mohammad H. Asghari, Wai Sing Man, Kwong Shing Tsang, Naoya Wada
2019/2/7	Photonic Systems and Devices for Linear Cell Radar	Applied Sciences	vol.9, no.3, pp.554	Tetsuya Kawanishi, Atsushi Kanno, Pham Tien Dat, Toshimasa Umezawa, Naokatsu Yamamoto
2019/2/15	Pilot-Aided Joint-Channel Carrier-Phase Estimation in Space-Division Multiplexed Multicore Fiber Transmission	Journal of Lightwave Technology	vol.37, no.4, pp.1133-1142	Arni Alfredsson, Erik Agrell, Henk Wymeersch, Benjamin J. Puttnam, Georg F. Rademacher, Ruben S. Luis, Magnus Karlsson
2019/2/15	Investigation of Intermodal Nonlinear Signal Distortions in Few-Mode Fiber Transmission	Journal of Lightwave Technology	vol.37, no.4, pp.1273-1279	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Ryu Maruyama, Kazuhiko Aikawa, Yoshinari Awaji, Hideaki Furukawa, Klaus Petermann, Naoya Wada
2019/3/1	Live electrooptic imaging with a low-coherence optical LO signal source for suppression of interference noises	Optics Letters	vol.44, no.5, pp.1178-1181	Masahiro Tsuchiya, Shinji Fukui, Muneo Yorinaga
2019/3/4	Quantum state tomography of ultrafast optical pulses at telecom wavelength by broadband balanced homodyne detection	Advances in Photonics of Quantum Computing, Memory, and Communication XII	no.109330V	Terence Blesin, Rei Matsushita, Kouichi Akahane, Junko Ishi-Hayase
2019/3/4	Chromatic Dispersion Analysis and Compensation in a Large Core-Count Few-Mode Multi-Core Fiber Based on Optical Vector Network Analysis	Optical Fiber Communication Conference	no.M1E.2	John van Weerdenburg, Simon Rommel, José Manuel Delgado Mendiñueta, Werner Klaus, Jun Sakaguchi, Juan José Vegas Olmos, Ton Koonen, Yoshinari Awaji, Idelfonso Tafur Monroy, Chigo Okonkwo, Naoya Wada
2019/3/6	Wide-Band Intermodal Wavelength Conversion in a Dispersion Engineered Highly Nonlinear FMF	Optical Fiber Communication Conference	no.W1C.4	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Yoshinari Awaji, Masato Suzuki, Takemi Hasegawa, Naoya Wada
2019/3/6	Enhanced Optical Communications Through Joint Time-Frequency Multiplexing Strategies	Optical Fiber Communication Conference	no.W3I.1	Tsuyoshi Konishi, Takuya Murakawa, Tomotaka Nagashima, Satoshi Shimizu, Makoto Hasegawa, Kuninori Hattori, Masayuki Okuno, Shinji Mino, Akira Himeno, Naoya Wada, Hiroyuki Uenohara, Takahiro Kodama, Gabriella Cincotti
2019/3/6	Low-speed DSP assisted dispersion compensation-free IM/DD optical OFDM transmission over 100 km-SMF using time- and frequency-domain sparse-subcarrier multiplexing	Optical Fiber Communication Conference	no.W3I.3	Takahiro Kodama, Tatsuya Miyazaki, Masanori Hanawa, Akihiro Maruta, Naoya Wada, Gabriella Cincotti
2019/3/6	Impact of Modulation Format on Dynamic Channel Crosstalk Behavior in Multi-Core Fibers	Optical Fiber Communication Conference	no.W4C.4	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Yoshinari Awaji, Naoya Wada
2019/3/6	Dynamic Crosstalk Study in a Few-Mode-Multi-Core Fiber	Optical Fiber Communication Conference	no.We4B.1	Benjamin J. Puttnam, Georg F. Rademacher, Ruben S. Luis, Hideaki Furukawa, Andrew Ross-Adams, Simon Gross, Michael Withford, Nicolas Riesen, Yusuke Sasaki, Kunimasa Saitoh, Kazuhiko Aikawa, Yoshinari Awaji, Naoya Wada
2019/3/7	1-λ, 16-parallel lanes, 50-Gbaud on-off keying multi-core fiber communication directly coupled to high speed 2D-photodetector array	Optical Fiber Communication Conference	no.Th3B.7	Toshimasa Umezawa, Atsushi Matsumoto, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2019/3/7	Coherent Detection only by 2-D Photodetector Array: A Discreteness-aware Phase Retrieval Approach	Optical Fiber Communication Conference	no.Th4A.3	Yuki Yoshida, Toshimasa Umezawa, Atsushi Kanno, Naokatsu Yamamoto
2019/3/7	0.715 Pb/s Transmission over 2,009.6 km in 19-core cladding pumped EDFA amplified MCF link	Optical Fiber Communication Conference	no.Th4B.1	Benjamin J. Puttnam, Georg F. Rademacher, Ruben S. Luis, Tobias A. Eriksson, Werner Klaus, Yoshinari Awaji, Naoya Wada, Koichi Maeda, Shigehiro Takasaka, Ryuichi Sugizaki
2019/3/7	Field Trial of 1.5-Gbps 97-GHz Train Communication System Based on Linear Cell Radio Over Fiber Network for 240-km/h High-Speed Train	Optical Fiber Communication Conference	no.Th4C.2	Atsushi Kanno, Pham Tien Dat, Toshimasa Umezawa, Naokatsu Yamamoto, Tetsuya Kawanishi, Nagateru Iwasawa, Nariya Iwaki, Kazuki Nakamura, Kunihiro Kawasaki, Naoki Kanada, Naruto Yonemoto, Yosuke Sato, Masato Fujii, Katsuya Yanatori, Nobuhiko Shibagaki, Kenichi Kashima

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2019/3/7	Full-Duplex Transmission of Nyquist-SCM Signal over a Seamless Bidirectional Fiber-Wireless System in W-Band	Optical Fiber Communication Conference	no.W11.5	Pham Tien Dat, Atsushi Kanno, Naokatsu Yamamoto, Nguyen Van Dien, Nguyen Tan Hung, Tetsuya Kawanishi
2019/3/15	Crosstalk Impact on Continuous Variable Quantum Key Distribution in Multicore Fiber Transmission	IEEE Photonics Technology Letters	vol.31, no.6, pp.467-470	Tobias A. Eriksson, Benjamin J. Puttnam, Georg F. Rademacher, Ruben S. Luis, Mikio Fujiwara, Masahiro Takeoka, Yoshinari Awaji, Masahide Sasaki, Naoya Wada
2019/3/25	Analysis of Soft Robotics Based on the Concept of Category of Mobility	Complexity	vol.2019, no.1490541	Hayato Saigo, Makoto Naruse, Kazuya Okamura, Hirokazu Hori, Izumi Ojima
2019/4/3	Crosstalk analysis in high speed two-dimensional photodetector array directly coupled to multi-core fibers	SPIE Optics + Optoelectronics	no.1103110	Toshimasa Umezawa, Naokatsu Yamamoto
2019/4/7	THz and Photonic Seamless Communications	Journal of Lightwave Technology	vol.37, no.7, pp.1671-1679	Tetsuya Kawanishi
2019/4/15	228-Spatial-Channel Bi-Directional Data Communication System Enabled by 39-Core 3-Mode Fiber	Journal of Lightwave Technology	vol.37, no.8, pp.1756-1763	Jun Sakaguchi, Werner Klaus, Yoshinari Awaji, Naoya Wada, Tetsuya Hayashi, Takuji Nagashima, Tetsuya Nakanishi, Toshiki Taru, Taketoshi Takahata, Tetsuya Kobayashi
2019/4/15	1.2 Pb/s Throughput Transmission Using a 160 μ m Cladding, 4-Core, 3-Mode Fiber	Journal of Lightwave Technology	vol.37, no.8, pp.1798-1804	Ruben S. Luis, Georg F. Rademacher, Benjamin J. Puttnam, Tobias A. Eriksson, Hideaki Furukawa, Andrew Ross-Adams, Simon Gross, Michael Withford, Nicolas Riesen, Yusuke Sasaki, Kunimasa Saitoh, Kazuhiko Aikawa, Yoshinari Awaji, Naoya Wada
2019/4/15	Demonstration of PAM4-OCDM system with electrical amplitude-level pre-tuning and post-equalization for data centers applications	Optics Express	vol.27, no.8, pp.11227-11235	Takahiro Kodama, Tatsuya Miyazaki, Masanori Hanawa, Akihiro Maruta, Naoya Wada, Gabriella Cincotti, Ken-ichi Kitayama
2019/4/16	Handheld millimeter-wave radar and lidar systems using an IMU device	SPIE Defense + Commercial Sensing	no.10994	Atsushi Kanno, Rena Takaoka, Shintaro Otani, Hideyuki Sotobayashi, Naokatsu Yamamoto
2019/4/23	100GHz Optical-to-Radio Converter Module Adopting Power over Fiber Transmission	Optics & Photonics International congress	no.OWPT-2-01	Toshimasa Umezawa, Naokatsu Yamamoto
2019/4/30	Hybrid Optical Wireless-mmWave: Ultra High-Speed Indoor Communications for Beyond 5G	IEEE Conference on Computer Communications Workshops		Pham Tien Dat, Atsushi Kanno, Keizo Inagaki, Toshimasa Umezawa, Naokatsu Yamamoto, Tetsuya Kawanishi
2019/5/6	An Outdoor Evaluation of 1-Gbps Optical Wireless Communication using AlGaIn-based LED in 280-nm Band	Conference on Lasers and Electro-Optics	no.SM2G.1	Yuki Yoshida, Kazunobu Kojima, Masaki Shiraiwa, Yoshinari Awaji, Atsushi Kanno, Naokatsu Yamamoto, Shigefusa F. Chichibu, Akira Hirano, Masamichi Ippommatsu
2019/5/9	Theoretical and experimental analysis on Ar Implantation-Induced Quantum Dot Intermixing for 1550 nm-Band Photonic Integrated Circuit	Conference on Lasers and Electro-Optics	no.JTh2A.71	Atsushi Matsumoto, Yota Akashi, Shohei Isawa, Toshimasa Umezawa, Yuichi Matsushima, Katsuyuki Utaka
2019/5/10	Bit error rate performance of bias-free operational UTC-PD for high baud rate communications up to 100 Gbaud	Conference on Lasers and Electro-Optics	no.SF1G.2	Toshimasa Umezawa, Atsushi Matsumoto, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2019/5/20	Regional band-gap tailoring of 1550nm-band InAs quantum dot Intermixing by controlling ion implantation depth	Compound Semiconductor Week	no.MoP-D-4	Shohei Isawa, Yota Akashi, Atsushi Matsumoto, Kouichi Akahane, Yuichi Matsushima, Hiroshi Ishikawa, Katsuyuki Utaka
2019/6/18	Investigation of 100 GHz Output Power Performance in Uni-travelling Carrier Photodetector under Zero-bias Condition	Progress in Electromagnetics Research Symposium	pp.1813-1816	Toshimasa Umezawa, Atsushi Matsumoto, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2019/6/28	300-GHz Bistatic Radar System by Radio Over Fiber Network Technology	Air Traffic Management and Systems III	vol.555, pp.271-279	Atsushi Kanno, Norihiko Sekine, Akifumi Kasamatsu, Naokatsu Yamamoto, Tetsuya Kawanishi
2019/7/9	Optical Power Budget Enhancement in 50 Gb/s IM-DD PONs with NOMA-CAP Modulation and SOA-Based Amplification	International Conference on Transparent Optical Networks	no.We.D1.3	Samael Sarmiento, José Manuel Delgado Mendinueta, José Antonio Altabás, Salvatore Spadaro, Satoshi Shinada, Hideaki Furukawa, Juan José Vegas Olmos, José Antonio Lázaro, Naoya Wada

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発表月日	論文名	誌名/発表機関	巻号等	発表者
2019/7/7	Dual-Parallel Mach-Zehnder Modulator Integrated with 180-degree Hybrid for Compensation of Third-Order Intermodulation Distortion	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.MD2-4	Daichi Furubayashi, Yuta Kashiwagi, Tadashi Kawai, Akira Enokihara, Naokatsu Yamamoto, Tetsuya Kawanishi
2019/7/8	Experimental Evaluation of Wavelength-Dependence of Thin-Film LiNbO ₃ Modulator with an Extinction-Ratio-Tunable Structure	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.MD2-5	Yuya Yamaguchi, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2019/7/8	Optical Packet and Circuit Switching for Data Centers and Computing	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.MG2-4	Hideaki Furukawa
2019/7/9	Radio Over Fiber System for Uninterrupted High-Speed Railway Communications	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.S2-2	Atsushi Kanno, Tetsuya Kawanishi
2019/7/9	Mode Selective Switch Using Volume Holograms and a Spatial Light Modulator	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.TuD3-2	Taijun Shiba, Atsushi Okamoto, Tomohiro Maeda, Taketoshi Takahata, Satoshi Shinada, Naoya Wada
2019/7/9	Characterization of 2D high-speed photodetector array device for SDM fiber communication applications	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.TuD3-3	Ken Kusakata, Shoichi Takamizawa, Toshimasa Umezawa, Naokatsu Yamamoto, Tetsuya Kawanishi
2019/7/9	Experimental and Numerical Analysis of Eigenvalue Deviation in Optical Multi-Eigenvalue Modulated Signal Transmission	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.TuF1-5	Ken Mishina, Takahiro Kodama, Yuki Yoshida, Daisuke Hisano, Akihiro Maruta
2019/7/9	FPGA Demonstration of Adaptive Lowlatency High-fidelity Analog-to-digital Compression for Beyond-5G Wireless-wired Conversion	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.TuF3-4	Paikun Zhu, Yuki Yoshida, Ken-ichi Kitayama
2019/7/9	Experimental Investigation of 50-90 Gb/s IM-DD NOMA-CAP Modulation for Short Range Optical Transmission Applications	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.TuF3-5	Samael Sarmiento, José Manuel Delgado Mendinueta, José Antonio Altabás, Salvatore Spadaro, Satoshi Shinada, Hideaki Furukawa, Juan José Vegas Olmos, José Antonio Lázaro, Naoya Wada
2019/7/9	Simultaneous Compensation of Fiber Nonlinearity and Dispersive Fading Effects by Conjugated-Paired Radio-on-Fiber Transmission with Phase-Shifted Dual-Sideband Downconversion	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.TuP4-F2	Takahide Sakamoto, Guo-Wei Lu, Naokatsu Yamamoto, Tetsuya Kawanishi
2019/7/10	Polarization-Multiplexed Intensity-Modulated Signals Using the Kramers-Kronig Relations	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.TuF1-4	Ruben S. Luis, Georg F. Rademacher, Benjamin J. Puttnam, Satoshi Shinada, Naoya Wada
2019/7/10	High-Speed Characterization of Parallel Mach-Zehnder Optical Modulators	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.TuP4-F3	Hugo S. C. Freire, Yuya Yamaguchi, Tetsuya Kawanishi
2019/7/10	Transmission and Crosstalk Measurements in MC-EDFA amplified 19-core link	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.WB1-3	Benjamin J. Puttnam, Georg F. Rademacher, Ruben S. Luis, Tobias A. Eriksson, Werner Klaus, Yoshinari Awaji, Naoya Wada, Koichi Maeda, Shigehiro Takasaka, Ryuichi Sugizaki
2019/7/10	A Scalable SDM Receiver Front-End using Spectral Filtering and LO-Signal Mixing in the Few-Mode Domain	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.WB2-3	Georg F. Rademacher, Kasper Ingerslev, Ruben S. Luis, Benjamin J. Puttnam, Werner Klaus, Tobias A. Eriksson, Satoshi Shinada, Yoshinari Awaji, Ryu Maruyama, Kazuhiko Aikawa, Naoya Wada
2019/7/10	Suppression Effect on Nonlinear Distortion in Long Haul Transmission using Fractional OFDM Subcarriers	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.WF2-3	Yu Yamasaki, Tomotaka Nagashima, Gabriella Cincotti, Satoshi Shimizu, Kuninori Hattori, Masayuki Okuno, Shinji Mino, Akira Himeno, Naoya Wada, Hiroyuki Uenohara, Tsuyoshi Konishi
2019/7/10	Multi-Signal Power Collective Equalization for Dynamic Optical Path Operation	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.WP4-F6	Masaki Shiraiwa, Hideaki Furukawa, Yusuke Hirota, Satoshi Shinada, Yoshinari Awaji, Naoya Wada
2019/7/11	Characterization of Spatial-Mode Demultiplexer using 1550-nm-band Angularly Multiplexed Volume Holograms	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.ThE1-3	Satoshi Shinada, Taijun Shiba, Tomohiro Maeda, Taketoshi Takahata, Atsushi Okamoto, Naoya Wada
2019/7/25	Fiber-optic and Radio-wave Convergence for Ultra-Dense Small-cell and Moving-cell Networks	Advanced Electromagnetics Symposium	no.2A6.6	Pham Tien Dat, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2019/8/1	Enhanced Modal Dispersion Estimation Enabled by Chromatic Dispersion Compensation in Optical Vector Network Analysis	Journal of Lightwave Technology	vol.37, no.16, pp.4001-4007	John van Weerdenburg, Simon Rommel, José Manuel Delgado Mendinueta, Werner Klaus, Jun Sakaguchi, Juan José Vegas Olmos, Ton Koonen, Yoshinari Awaji, Idelfonso Tafur Monroy, Chigo Okonkwo, Naoya Wada

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2019/8/5	Master-slave carrier recovery for M-QAM multicore fiber transmission	Optics Express	vol.27, no.16, pp.22226-22236	Lars Lundberg, Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Magnus Karlsson, Peter A. Andrekson, Yoshinari Awaji, Naoya Wada
2019/9/3	Terahertz diagnostics at accelerators using radio frequency-driven frequency combs based on telecommunication technology	International Conference on Infrared, Millimeter, and Terahertz Waves	no.Tu-PM2-2-2, pp.1-2	Erik Bründermann, Johannes Leonhard Steinmann, Isao Morohashi, Shinya Nakajima, Shingo Saito, Norihiko Sekine, Anke-Susanne Müller, Iwao Hosako
2019/9/23	FPGA Demonstration of Adaptive Space-time Compression towards High-fidelity, Low-latency 5G Fronthaul	European Conference on Optical Communication	no.M.1.C.2	Paikun Zhu, Yuki Yoshida, Ken-ichi Kitayama
2019/9/24	8007 km C + L band transmission over MCF with 19-core cladding-pumped EDFA	European Conference on Optical Communication	no.Tu.1.A.2	Benjamin J. Puttnam, Georg F. Rademacher, Ruben S. Luis, Tobias A. Eriksson, Werner Klaus, Yoshinari Awaji, Naoya Wada, Koichi Maeda, Shigehiro Takasaka, Ryuichi Sugizaki
2019/9/24	Dynamic crosstalk and skew on a 1.3 Tb/s full-duplex O-band short reach transmission using an 8-core fiber	European Conference on Optical Communication	no.Tu.1.A.3	Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Tobias A. Eriksson, Tetsuya Hayashi, Tetsuya Nakanishi, Yoshinari Awaji, Hideaki Furukawa, Satoshi Shinada, Naoya Wada
2019/9/24	Experimental demonstration of phase-retrieving Coherent Detection of Higher-order Modulation Formats	European Conference on Optical Communication	no.Tu.1.D.2	Yuki Yoshida, Toshimasa Umezawa, Atsushi Kanno, Naokatsu Yamamoto
2019/9/25	High-Speed Multi-signal Power Equalisation for Flexible Optical Path Operation	European Conference on Optical Communication	no.WP31	Masaki Shiraiwa, Hideaki Furukawa, Yusuke Hirota, Satoshi Shinada, Yoshinari Awaji, Naoya Wada
2019/9/25	Split-Enabled 490 Gb/s Optical Interconnect with Direct Detection NOMA-CAC and 7-Core Multi-Core Fibre	European Conference on Optical Communication	no.P32	Samael Sarmiento, José Manuel Delgado Mendinueta, José Antonio Altabás, Salvatore Spadaro, Satoshi Shinada, Hideaki Furukawa, Juan José Vegas Olmos, José Antonio Lázaro, Naoya Wada
2019/9/25	Hybrid FSO/MMW System for High-speed and Reliable Mobile Fronthaul System	European Conference on Optical Communication		Pham Tien Dat, Hideo Fujita, Mitsuji Matsumoto, Nguyen Van Dien, Nguyen Tan Hung, Atsushi Kanno, Naokatsu Yamamoto
2019/9/25	Experimental Demonstration of Neural Network Based Demodulation for On-off Encoded Eigenvalue Modulation	European Conference on Optical Communication	no.W.1.B.4	Ken Mishina, Shohei Yamamoto, Takahiro Kodama, Yuki Yoshida, Daisuke Hisano, Akihiro Maruta
2019/9/25	Highly Spectral Efficient Transmission of 183×24.5 Gbaud 256-QAM Spatial Super Channels over 55 km Three-mode Fiber	European Conference on Optical Communication	no.W.2.A.5	Georg F. Rademacher, Kasper Ingerslev, Ruben S. Luis, Benjamin J. Puttnam, Tobias A. Eriksson, Hideaki Furukawa, Ryo Maruyama, Kazuhiko Aikawa, Yoshinari Awaji, Naoya Wada
2019/9/26	Demonstration of a 1 Pb/s spatial channel network node	European Conference on Optical Communication	no.PD.3.5	Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Tobias A. Eriksson, Yusuke Hirota, Satoshi Shinada, Andrew Ross-Adams, Simon Gross, Michael Withford, Ryo Maruyama, Kazuhiko Aikawa, Yoshinari Awaji, Hideaki Furukawa, Naoya Wada
2019/10/8	Dual Band Millimeter-Wave Integrated Photoreceiver	International Topical Meeting on Microwave Photonics		Toshimasa Umezawa, Kenichi Kashima, Atsushi Kanno, Pham Tien Dat, Naokatsu Yamamoto, Tetsuya Kawanishi
2019/10/10	80 Gb/s 2×2 MIMO Fiber-Wireless Integrated System in W Band Using IFoF Transmission	International Topical Meeting on Microwave Photonics		Pham Tien Dat, Atsushi Kanno, François Rottenberg, Jérôme Louveaux, Naokatsu Yamamoto, Tetsuya Kawanishi
2019/10/24	IMU-enabled nondestructive imaging system based on millimeter-wave radar	Conference on Antenna Measurements and Applications		Atsushi Kanno, Naokatsu Yamamoto, Rena Takaoka, Shintaro Otani, Hideyuki Sotobayashi
2019/11/1	Regional Bandgap Tailoring of 1550 nm-Band InAs Quantum Dot Intermixing by Controlling Ion Implantation Depth	physica status solidi (a)	vol.217, no.3, pp.1900521	Shohei Isawa, Yota Akashi, Ryosuke Morita, Runa Kaneko, Hirokazu Okada, Atsushi Matsumoto, Kouichi Akahane, Yuichi Matsushima, Hiroshi Ishikawa, Katsuyuki Utaka
2019/11/3	Experimental Investigation of Stimulated Raman Scattering Induced Crosstalk-Tilt in a Homogeneous Multi-Core Fiber	Asia Communications and Photonics Conference	no.S3A.2	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Yoshinari Awaji, Naoya Wada

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発表月日	論文名	誌名/発表機関	巻号等	発表者
2019/11/4	Temperature Induced Group-Delay Variations in a Graded-Index Few-Mode Fiber	Asia Communications and Photonics Conference	no.M3G.6	Benjamin J. Puttnam, Georg F. Rademacher, Ruben S. Luis, Ryo Maruyama, Kazuhiko Aikawa, Hideaki Furukawa, Yoshinari Awaji, Naoya Wada
2019/11/4	Millimeter-wave Radio-over-Fiber System for High-Speed Railway Communications	Asia Communications and Photonics Conference	no.S4E.2	Pham Tien Dat, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2019/11/5	On the performance of hybrid multi-core and few-mode fiber links	Asia Communications and Photonics Conference	no.T3G.1	Ruben S. Luis, Georg F. Rademacher, Benjamin J. Puttnam, Hideaki Furukawa, Yoshinari Awaji, Ryo Maruyama, Kazuhiko Aikawa, Naoya Wada
2019/12/9	Integrated Fiber-Wireless System in W Band for Ultra-Dense Small-Cell and Moving-Cell Network	IEEE Global Communications Conference Workshops		Pham Tien Dat, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2019/12/15	Polarization Equalization in Optical Vector Network Analysis for SDM Fiber Characterization	IEEE Photonics Technology Letters	vol.31, no.24, pp.1917-1920	Simon Rommel, John van Weerdenburg, José Manuel Delgado Mendiñueta, Werner Klaus, Jun Sakaguchi, Juan José Vegas Olmos, Ton Koonen, Yoshinari Awaji, Chigo Okonkwo, Idelfonso Tafur Monroy, Naoya Wada
2020/1/1	A Phase-Retrieving Coherent Receiver Based on Two-Dimensional Photodetector Array	Journal of Lightwave Technology	vol.38, no.1, pp.90-100	Yuki Yoshida, Toshimasa Umezawa, Atsushi Kanno, Naokatsu Yamamoto
2020/1/1	High-Speed Railway Communication System Using Linear-Cell-Based Radio-Over-Fiber Network and Its Field Trial in 90-GHz Bands	Journal of Lightwave Technology	vol.38, no.1, pp.112-122	Atsushi Kanno, Pham Tien Dat, Naokatsu Yamamoto, Tetsuya Kawanishi, Nagateru Iwasawa, Nariya Iwaki, Kazuki Nakamura, Kunihiro Kawasaki, Naoki Kanada, Naruto Yonemoto, Yosuke Sato, Masato Fujii, Katsuya Yanatori, Nobuhiko Shibagaki, Kenichi Kashima
2020/1/1	High Data-Rate and Long Distance MCF Transmission with 19-core C+L band Cladding-Pumped EDFA	Journal of Lightwave Technology	vol.38, no.1, pp.123-130	Benjamin J. Puttnam, Georg F. Rademacher, Ruben S. Luis, Tobias A. Eriksson, Werner Klaus, Yoshinari Awaji, Naoya Wada, Koichi Maeda, Shigehiro Takasaka, Ryuichi Sugizaki
2020/1/6	Wired and wireless seamless networks by photonics	Journal of Physics Photonics	vol.2, no.1	Tetsuya Kawanishi, Atsushi Kanno, Pham Tien Dat, Toshimasa Umezawa, Naokatsu Yamamoto
2020/1/15	Crosstalk-Induced System Outage in Intensity-Modulated Direct-Detection Multi-Core Fiber Transmission	Journal of Lightwave Technology	vol.38, no.2, pp.291-296	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Yoshinari Awaji, Naoya Wada
2020/1/15	Enhanced Optical Communications Through Joint Time-Frequency Multiplexing Strategies	Journal of Lightwave Technology	vol.38, no.2, pp.346-351	Gabriella Cincotti, Takuya Murakawa, Tomotaka Nagashima, Satoshi Shimizu, Makoto Hasegawa, Kuninori Hattori, Masayuki Okuno, Shinji Mino, Akira Himeno, Naoya Wada, Hiroyuki Uenohara, Takahiro Kodama, Tsuyoshi Konishi
2020/1/31	Converged RoF-based mobile fronthaul and passive optical network with NOMA-CAP modulation format	SPIE Photonics West	no.113070L	Samael Sarmiento, José Manuel Delgado Mendiñueta, José Antonio Altabás, Salvatore Spadaro, Satoshi Shinada, Hideaki Furukawa, Juan José Vegas Olmos, José Antonio Lázaro, Naoya Wada
2020/1/31	Mode-selective switch for ROADMs using volume holograms and spatial light modulator	SPIE Photonics West	no.1130908	Hotaka Hayashi, Atsushi Okamoto, Tomohiro Maeda, Taijun Shiba, Kazuhisa Ogawa, Akihisa Tomita, Taketoshi Takahata, Satoshi Shinada, Yuta Goto, Naoya Wada
2020/1/31	Spatial mode exchange technique using volume holograms with a random optical diffuser to reduce modal cross-talks	SPIE Photonics West	no.1130909	Shuanglu Zhang, Atsushi Okamoto, Taijun Shiba, Hotaka Hayashi, Kazuhisa Ogawa, Akihisa Tomita, Taketoshi Takahata, Satoshi Shinada, Yuta Goto, Naoya Wada
2020/2/3	Simple method for optimizing the DC bias of Kramers-Kronig receivers based on AC-coupled photodetectors	Optics Express	vol.28, no.3, pp.4067-4075	Ruben S. Luis, Georg F. Rademacher, Benjamin J. Puttnam, Cristian Antonelli, Satoshi Shinada, Hideaki Furukawa
2020/2/5	Fabrication of In(P)As Quantum Dots by Interdiffusion of P and As on InP(311)B Substrate	Crystals	vol.10, no.2, 90	Kouichi Akahane, Atsushi Matsumoto, Toshimasa Umezawa, Naokatsu Yamamoto

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発表月日	論文名	誌名/発表機関	巻号等	発表者
2020/2/21	Crosstalk Impact on the Performance of Wideband Multicore-Fiber Transmission Systems	Journal of Selected Topics in Quantum Electronics	vol.26, no.4, 4400609	Ruben S. Luis, Georg F. Rademacher, Benjamin J. Puttnam, Daniel Semrau, Robert Killey, Polina Bayvel, Yoshinari Awaji, Hideaki Furukawa
2020/3/1	Polarization-insensitive fiber-to-fiber gain of semiconductor optical amplifier using closely stacked InAs/GaAs quantum dots	Japanese Journal of Applied Physics	vol.59, no.032002	Toshiyuki Kaizu, Tomoya Kakutani, Kouichi Akahane, Takashi Kita
2020/3/9	High speed 2D-PDA FSO receiver for high optical alignment robustness with space diversity	Optical Fiber Communication Conference	no.M1J.2	Toshimasa Umezawa, Yuki Yoshida, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2020/3/9	<500ns Latency Overhead Analog-to-digital-compression Radio-over-fiber (ADX-RoF) Transport of 16-channel MIMO, 1024QAM Signals with 5G NR Bandwidth	Optical Fiber Communication Conference	no.M2F.7	Paikun Zhu, Yuki Yoshida, Ken-ichi Kitayama
2020/3/9	Nonlinear Impairment Scaling in Multi Mode Fibers for Mode Division Multiplexing	Optical Fiber Communication Conference	no.M3B.1	Peter M. Krummrich, Marius Brehler, Georg F. Rademacher, Klaus Petermann
2020/3/10	Digital Self-Coherent Continuous Variable Quantum Key Distribution System	Optical Fiber Communication Conference	no.T3D.5	Tobias A. Eriksson, Ruben S. Luis, K. Gümüs, Georg F. Rademacher, Benjamin J. Puttnam, Hideaki Furukawa, Naoya Wada, Yoshinari Awaji, Alex Alvarado, Masahide Sasaki, Masahiro Takeoka
2020/3/10	Fixed-rate-breaking All-optical OFDM System using Time-domain Hybrid PAM with Sparse Subcarrier Multiplexing and Power-loading for Optical Short-reach Transmission	Optical Fiber Communication Conference	no.T4G.2	Takahiro Kodama, Akihiro Maruta, Naoya Wada, Gabriella Cincotti
2020/3/10	Evaluation of Dynamic Skew on Spooled and Deployed Multicore Fibers Using O-Band Signals	Optical Fiber Communication Conference	no.T4J.4	Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Andrea Marotta, Cristian Antonelli, Fabio Graziosi, Antonio Mecozzi, Tetsuya Hayashi, Tetsuya Nakanishi, Satoshi Shinada, Yoshinari Awaji, Hideaki Furukawa, Naoya Wada
2020/3/11	Demodulation of Eigenvalue Modulated Signal Based on Eigenvalue-Domain Neural Network	Optical Fiber Communication Conference	no.M2F.7	Ken Mishina, Shingo Sato, Shohei Yamamoto, Yuki Yoshida, Daisuke Hisano, Akihiro Maruta
2020/3/11	High-Speed Radio-on-Free-Space Optical Mobile Fronthaul System for Ultra-Dense Radio Access Network	Optical Fiber Communication Conference	no.W2A.37	Pham Tien Dat, Atsushi Kanno, Keizo Inagaki, François Rottenberg, Jérôme Louveaux, Naokatsu Yamamoto, Tetsuya Kawanishi
2020/3/11	On the Sample Complexity of Phase-Retrieval Receiver Based on 2-D Arrayed Photodetectors	Optical Fiber Communication Conference	no.W4A.2	Yuki Yoshida, Toshimasa Umezawa, Atsushi Kanno, Keizo Inagaki, Naokatsu Yamamoto, Tetsuya Kawanishi
2020/3/12	Channel Dynamics in Few-Mode Fiber Transmission Under Mechanical Vibrations	Optical Fiber Communication Conference	no.Th1H.3	Georg F. Rademacher, Roland Ryf, Nicolas K. Fontaine, Haoshuo Chen, Benjamin J. Puttnam, Ruben S. Luis, Yoshinari Awaji, Hideaki Furukawa, Naoya Wada
2020/3/12	Characterization and Optical Compensation of LP01 and LP11 Intra-modal Nonlinearity in Few-Mode Fibers	Optical Fiber Communication Conference	no.Th1H.4	Francesco Da Ros, Pawel M. Kaminski, Georg F. Rademacher, Benjamin J. Puttnam, Ruben S. Luis, Werner Klaus, Hideaki Furukawa, Ryu Maruyama, Kazuhiko Aikawa, Toshio Morioka, Leif K. Oxenlowe, Naoya Wada, Michael Galili
2020/3/12	Experimental Demonstration of Optical Multicast Packet Transmissions in Optical Packet/Circuit Integrated Networks	Optical Fiber Communication Conference	no.Th2A.27	Yusuke Hirota, Sugang Xu, Masaki Shiraiwa, Yoshinari Awaji, Massimo Tornatore, Biswanath Mukherjee, Hideaki Furukawa, Naoya Wada
2020/3/12	10.66 Peta-Bit/s Transmission over a 38-Core-Three-Mode Fiber	Optical Fiber Communication Conference	no.Th3H.1	Georg F. Rademacher, Benjamin J. Puttnam, Ruben S. Luis, Jun Sakaguchi, Werner Klaus, Tobias A. Eriksson, Yoshinari Awaji, Tetsuya Hayashi, Takuji Nagashima, Tetsuya Nakanishi, Toshiki Taru, Taketoshi Takahata, Tetsuya Kobayashi, Hideaki Furukawa, Naoya Wada
2020/3/12	0.596 Pb/s S, C, L-Band Transmission in a 125µm Diameter 4-core Fiber Using a Single Wideband Comb Source	Optical Fiber Communication Conference	no.Th3H.5	Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Lidia Galdino, Domanić Lavery, Tobias A. Eriksson, Yoshinari Awaji, Hideaki Furukawa, Polina Bayvel, Naoya Wada

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2020/3/12	172 Tb/s C+L Band Transmission over 2040 km Strongly Coupled 3-Core Fiber	Optical Fiber Communication Conference	no.Th4C.5	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Roland Ryf, Sjoerd van der Heide, Tobias A. Eriksson, Nicolas K. Fontaine, Haoshuo Chen, Rene-Jean Essiambre, Yoshinari Awaji, Hideaki Furukawa, Naoya Wada
2020/4/1	FPGA-based adaptive space-time compression towards 5G MIMO fronthaul	Optics Communications	vol.459, no.15	Paikun Zhu, Yuki Yoshida, Ken-ichi Kitayama
2020/4/2	Wideband Intermodal Nonlinear Signal Processing With a Highly Nonlinear Few-Mode Fiber	Journal of Selected Topics in Quantum Electronics	vol.26, no.4, 7702007	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Yoshinari Awaji, Masato Suzuki, Takemi Hasegawa, Hideaki Furukawa, Naoya Wada
2020/4/15	Wavelength Division Multiplexing of 194 Continuous Variable Quantum Key Distribution Channels	Journal of Lightwave Technology	vol.38, no.8, pp.2214-2218	Tobias A. Eriksson, Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Mikio Fujiwara, Yoshinari Awaji, Hideaki Furukawa, Naoya Wada, Masahiro Takeoka, Masahide Sasaki
2020/5/1	Split-enabled 350–630 Gb/s optical interconnect with direct detection NOMA-CAP and 7-core multi-core fiber	Optics Communications	vol.463, pp.125321	Samael Sarmiento, José Manuel Delgado Mendinueta, José Antonio Altabás, Salvatore Spadaro, Satoshi Shinada, Hideaki Furukawa, Juan José Vegas Olmos, José Antonio Lázaro, Naoya Wada
2020/5/4	Dual-comb-based asynchronous pump-probe measurement with an ultrawide temporal dynamic range for characterization of photo-excited InAs quantum dots	Applied Physics Express	vol.13, no.062003	Akifumi Asahara, Yuto Arai, Tomohiro Saito, Junko Ishi-Hayase, Kouichi Akahane, Kaoru Minoshima
2020/5/11	Characterization of a self-organized deep-ultraviolet micro-light-emitting diode structure for high-speed solar-blind optical wireless communications	Conference on Lasers and Electro-Optics	no.SM4R.6	Kazunobu Kojima, Yuki Yoshida, Masaki Shiraiwa, Yoshinari Awaji, Atsushi Kanno, Naokatsu Yamamoto, Akira Hirano, Yosuke Nagasawa, Masamichi Ippommatsu, Shigefusa F. Chichibu
2020/5/12	Dynamic Skew Measurements in a Deployed 4-Core Fiber	Conference on Lasers and Electro-Optics	no.STu4R.1	Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Andrea Marotta, Cristian Antonelli, Antonio Mecozzi, Fabio Graziosi, Tetsuya Hayashi, Tetsuya Nakanishi, Yoshinari Awaji, Hideaki Furukawa, Naoya Wada
2020/5/13	Frequency compensated uni-travelling carrier photoreceiver for 100 Gbaud IM-DD communications	Conference on Lasers and Electro-Optics	no.SW3O.6	Toshimasa Umezawa, Atsushi Kanno, Atsushi Matsumoto, Kouichi Akahane, Naokatsu Yamamoto, Tetsuya Kawanishi
2020/5/14	Evaluation of Lasing Temperature Characteristics of 1550nm QD-based-LDs by IID-QDI Technique with Ar and B Ions and High Temperature Stability	Conference on Lasers and Electro-Optics	no.JTh2D.6	Atsushi Matsumoto, Shohei Isawa, Runa Kaneko, Kouichi Akahane, Toshimasa Umezawa, Yuichi Matsushima, Katsuyuki Utaka
2020/5/15	Optical Power Budget Enhancement in 50–90 Gb/s IM-DD PONs With NOMA-CAP and SOA-Based Amplification	IEEE Photonics Technology Letters	vol.32, no.10, pp.608-611	Samael Sarmiento, José Manuel Delgado Mendinueta, José Antonio Altabás, Salvatore Spadaro, Satoshi Shinada, Hideaki Furukawa, Juan José Vegas Olmos, José Antonio Lázaro, Naoya Wada
2020/5/20	Petabit-class Optical Networks Based on Spatial-Division Multiplexing Technologies	International Conference on Optical Network Design and Modelling	no.S7.1	Hideaki Furukawa, Ruben S. Luis
2020/6/1	Experimental Demonstration of a Petabit per Second SDM Network Node	Journal of Lightwave Technology	vol.38, no.11, pp.2886-2896	Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Tobias A. Eriksson, Yusuke Hirota, Satoshi Shinada, Andrew Ross-Adams, Simon Gross, Michael Withford, Ryo Maruyama, Kazuhiko Aikawa, Yoshinari Awaji, Hideaki Furukawa, Naoya Wada
2020/6/8	High-gain and Low-profile Dielectric Cuboid Antenna at J-band	European Conference on Antennas and Propagation		Yuto Samura, Kazuki Yamada, Igor Vladilenovich Minin, Norihiko Sekine, Junichi Nakajima, Atsushi Kanno, Shintaro Hisatake
2020/6/15	Dynamic Physical-Layer Secured Link in a Mobile MIMO VLC System	IEEE Photonics Journal	vol.12, no.3, 7902814	Othman Isam Younus, H. Le Minh, Pham Tien Dat, Naokatsu Yamamoto, Anh T. Pham, Zabih Ghassemlooy
2020/6/15	Digital Back Propagation in Long-Haul, MIMO-Supported, Multicore Fiber Transmission	IEEE Photonics Technology Letters	vol.32, no.12, pp.730-732	Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Yoshinari Awaji, Hideaki Furukawa, Naoya Wada

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2020/7/1	High-Capacity Super-Channel-Enabled Multi-Core Fiber Optical Switching System for Converged Inter/Intra Data Center and Edge Optical Networks	Journal of Selected Topics in Quantum Electronics	vol.26, no.4, 4501113	José Manuel Delgado Mendinueta, Satoshi Shinada, Yusuke Hirota, Hideaki Furukawa, Naoya Wada
2020/7/1	W-band Optoelectronic Oscillator	IEEE Photonics Technology Letters	vol.32, no.13, pp.771-774	G. K. M. Hasanuzzaman, Stavros Iezekiel, Atsushi Kanno
2020/7/3	Optimized design of QD-LD toward QD-SOA to achieve 35-dB maximum chip gain with 400-mA injected current	Optics Communications	vol.475, no.126238, pp.1-7	Budsara Boriboon, Duang-Rudee Worasuchep, Atsushi Matsumoto, Kouichi Akahane, Naokatsu Yamamoto, Naoya Wada
2020/7/14	Real-time Experimental Study of Multi-format Compatibility of ADX-RoF Fronthaul for 5G and Beyond	Signal Processing in Photonic Communications	no.SpTu2l.3	Paikun Zhu, Yuki Yoshida, Ken-ichi Kitayama
2020/7/15	2-D photodetector array for high-data-rate spatial sampling	IEEE Summer Topicals	no.WB1.2	Toshimasa Umezawa, Yuki Yoshida, Atsushi Kanno, Naokatsu Yamamoto
2020/7/17	FMCW linear cell radar interference mitigation through control of signal delay in radio-over-fiber links	IEICE Electronics Express	vol.17, no.15, pp.1-5	Tetsuya Miura, Kazunori Okuda, Atsushi Kanno, Pham Tien Dat, Nobuhiko Shibagaki, Kenichi Kashima, Yosuke Sato, Masato Fujii, Ryoki Haramoto, Tetsuya Hayashi, Sevia M. Idrus, Tetsuya Kawanishi
2020/7/22	Self-organized micro-light-emitting diode structure for high-speed solar-blind optical wireless communications	Applied Physics Letters	vol.117, no.031103	Kazunobu Kojima, Yuki Yoshida, Masaki Shiraiwa, Yoshinari Awaji, Atsushi Kanno, Naokatsu Yamamoto, Akira Hiranano, Yosuke Nagasawa, Masamichi Ippommatsu, Shigefusa F. Chichibu
2020/7/23	NOMA-CAP Modulation Format for Next Generation Converged Fronthaul-Optical Access and Data Center Interconnect Networks	International Conference on Transparent Optical Networks	no.Th.B4.2	José Manuel Delgado Mendinueta, Samael Sarmiento, José Antonio Altabás, Salvatore Spadaro, Satoshi Shinada, Juan José Vegas Olmos, José Antonio Lázaro, Hideaki Furukawa
2020/8/4	Power-over-Fiber-based 90-GHz High-Power-Integrated Photoreceiver for High Data Rate Radio-over-Fiber	Conference on Lasers and Electro-Optics Pacific Rim	no.C8F.2	Toshimasa Umezawa, Pham Tien Dat, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2020/8/6	Experimental emulation of nonlinear distortion suppression by FrOFDM subcarriers	IEICE Electronics Express	vol.17, no.17, pp.1-5	Yu Yamasaki, Tomotaka Nagashima, Gabriella Cincotti, Satoshi Shimizu, Kuninori Hattori, Masayuki Okuno, Shinji Mino, Akira Himeno, Naoya Wada, Hiroyuki Uenohara, Tsuyoshi Konishi
2020/8/31	Space-division multiplexed transmission in the S-band over 55 km few-mode fibers	Optics Express	vol.28, no.18, pp.27037-27043	Georg F. Rademacher, Benjamin J. Puttnam, Ruben S. Luis, Lidia Galdino, Ryo Maruyama, Kazuhiko Aikawa, Yoshinari Awaji, Hideaki Furukawa
2020/9/15	Intermodal Nonlinear Signal Distortions in Multi-Span Transmission With Few-Mode Fibers	IEEE Photonics Technology Letters	vol.32, no.18, pp.1175-1178	Georg F. Rademacher, Benjamin J. Puttnam, Ruben S. Luis, Ryo Maruyama, Kazuhiko Aikawa, Yoshinari Awaji, Hideaki Furukawa
2020/9/30	High-frequency short-pulse generation with a highly stacked InAs quantum dot mode-locked laser diode	International Conference on Solid State Devices and Materials	no.H-7-05	Kouichi Akahane, Atsushi Matsumoto, Toshimasa Umezawa, Naokatsu Yamamoto
2020/10/6	Generalization Performance of Artificial Neural Network Based-Demodulator for Eigenvalue Modulated Signal	OptoElectronics and Communications Conference/Photonics in Switching and Computing		Ken Mishina, Daisuke Hisano, Yuki Yoshida, Akihiro Maruta
2020/10/6	Fabrication of Sputtered Low-strain, Low-loss SiN Waveguide for Optical Phased Array Device	OptoElectronics and Communications Conference/Photonics in Switching and Computing		Masaki Nishimura, Toshimasa Umezawa, Wittawat Yamwong, Nipapan Klunngien, Naokatsu Yamamoto, Tetsuya Kawanishi
2020/10/7	CW operation and performances of 1550nm-band InAs quantum-dot monolithically-integrated lasers with quantum-dot intermixed regions	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.VP97	Runa Kaneko, Shohei Isawa, Ryosuke Morita, Hirokazu Okada, Atsushi Matsumoto, Kouichi Akahane, Yuichi Matsushima, Hiroshi Ishikawa, Katsuyuki Utaka
2020/10/7	Ultra-low-latency, High-fidelity Analog-to-digital-compression Radio-over-fiber (ADX-RoF) for MIMO Fronthaul in 5G and Beyond	Journal of Lightwave Technology	vol.39, no.2, pp.511-519	Paikun Zhu, Yuki Yoshida, Ken-ichi Kitayama
2020/10/7	Orchestration of Wired and Wireless Systems for Future Mobile Transport Network	International Conference on Advanced Technologies for Communications		Pham Tien Dat, Naokatsu Yamamoto, Atsushi Kanno, Tetsuya Kawanishi
2020/10/7	OLED-Based Visible Light Communication System Using Universal Filtered Multi-Carrier	International Conference on Advanced Technologies for Communications		Nghi Vinh Khanh, Pham Quang Thai, Vu Dinh Thanh, Pham Tien Dat, Khuong Ho Van, Nguyen Tan Hung
2020/10/9	Fiber wireless and optical wireless communications using high-speed photonic devices	International Conference on Advanced Technologies for Communications		Toshimasa Umezawa, Pham Tien Dat, Atsushi Kanno, Naokatsu Yamamoto

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2020/11/9	Experimental evaluation of the impact of the light source on the measurement of short-term average crosstalk in homogeneous single-mode multi-core fibers	Optics Express	vol.28, no.23, pp.35099-35107	Ruben S. Luis, Georg F. Rademacher, Benjamin J. Puttnam, Yoshinari Awaji, Hideaki Furukawa
2020/11/13	Terahertz diagnostic systems based on frequency combs without moving parts	International Conference on Infrared, Millimeter, and Terahertz Waves		Erik Br�ndermann, Isao Morohashi, Shinya Nakajima, Shingo Saito, Norihiko Sekine, Anke-Susanne M�ller, Iwao Hosako
2020/11/15	Impulse Response Measurement of Spooled and Twisted Few-Mode Multi-Core Fiber for Short-Range Optical Links	IEEE Photonics Technology Letters	vol.32, no.22, pp.1427-1430	John van Weerdenburg, Jos� Manuel Delgado Mendi�neta, Werner Klaus, Simon Rommel, Ruben S. Luis, Satoshi Shinada, Hideaki Furukawa, Idelfonso Tafur Monroy, Juan Jos� Vegas Olmos, Ton Koonen, Chigo Okonkwo, Naoya Wada
2020/11/24	Vector imaging of an in-plane electric current using a planar magneto-optical sensor	Optics Express	vol.28, no.25, pp.37343-37352	Masahiro Tsuchiya
2020/11/24	96-GHz Phased Array System Using Wavelength Selectable Switch-Based Dispersion Control	International Topical Meeting on Microwave Photonics	P.33, pp.249-252	Atsushi Kanno, Pham Tien Dat, Naokatsu Yamamoto
2020/11/24	101 Gb/s 2x2 End-to-End MIMO Fiber-Wireless System in W Band Using WDM Radio-over-Fiber	International Topical Meeting on Microwave Photonics	no.Tu2.2	Pham Tien Dat, Atsushi Kanno, Naokatsu Yamamoto, Fran�ois Rottenberg, J�r�me Louveaux, Tetsuya Kawanishi
2020/11/26	Integrated Optical Intensity Modulator with Analog Waveform-Shaping Function for PAM-4 Signal	International Topical Meeting on Microwave Photonics	no.Th1.2	Yuya Yamaguchi, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2020/12/1	Polarization Division Multiplexing-based Hybrid Microwave Photonic Links for Simultaneous mmW and Sub-6 GHz Wireless Transmissions	IEEE Photonics Journal	vol.12, no.6, 5502814	Dong-Nhat Nguyen, Jan Bohata, Matej Komanec, N. Stevens, Zabih Ghassemlooy, Pham Tien Dat, Stanislav Zvanovec
2020/12/7	Challenges in Coding, DSP and Parallel Operation of Quantum Key Distribution and Coherent Data Transmission	European Conference on Optical Communications	no.Mo2D-1	Tobias A. Eriksson, Ruben S. Luis, Georg F. Rademacher, Benjamin J. Puttnam, Kadir Gumus, Laurent Schmalen, Alex Alvarado, Hideaki Furukawa, Naoya Wada, Takuya Hirano, Masahide Sasaki, Masahiro Takeoka
2020/12/7	Multi-Span Transmission over 65 km 38-Core 3-Mode Fiber	European Conference on Optical Communications	no.Mo2E-3	Georg F. Rademacher, Benjamin J. Puttnam, Ruben S. Luis, Jun Sakaguchi, Werner Klaus, Tobias A. Eriksson, Yoshinari Awaji, Tetsuya Hayashi, Takuji Nagashima, Tetsuya Nakanishi, Toshiki Taru, Taketoshi Takahata, Tetsuya Kobayashi, Hideaki Furukawa
2020/12/8	Petabit Class Transmission and Switching	European Conference on Optical Communications	no.Tu1H-1	Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Tobias A. Eriksson, Yusuke Hirota, Satoshi Shinada, Andrew Ross-Adams, Simon Gross, Michael Withford, Ryo Maruyama, Kazuhiko Aikawa, Yoshinari Awaji, Hideaki Furukawa, Naoya Wada
2020/12/9	Artificial Neural Network-Based-Receiver for Eigenvalue-Modulated Signal in Presence of Optical CFO	European Conference on Optical Communications	no.We1D-3	Ken Mishina, Yuki Yoshida, Daisuke Hisano, Akihiro Maruta
2020/12/9	Real-time, Software-Defined, GPU-Based Receiver Field Trial	European Conference on Optical Communications	no.We1E-5	Sjoerd van der Heide, Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Ton Koonen, Satoshi Shinada, Yoshinari Awaji, Chigo Okonkwo, Hideaki Furukawa
2020/12/9	Up-to 292-Mbps Deep-UV Communication over a Diffuse-Line-of-Sight Link Based on Silicon Photo Multiplier Array	European Conference on Optical Communications	no.We2G-6	Yuki Yoshida, Kazunobu Kojima, Masaki Shiraiwa, Atsushi Kanno, Akira Hirano, Yosuke Nagasawa, Masamichi Ippommatsu, Naokatsu Yamamoto, Shigefusa F. Chichibu, Yoshinari Awaji
2020/12/9	30 GHz Radio over FSO System using High Speed 2D-PDA and Its Optical Path Switching Performance	European Conference on Optical Communications	no.We2G-7	Toshimasa Umezawa, Pham Tien Dat, Atsushi Kanno, Kunihisa Jitsuno, Naokatsu Yamamoto, Tetsuya Kawanishi
2020/12/9	Demonstration of Indoor 5G Fronthaul over Legacy Multimode Fiber Enabled by Real-time Analog-to-digital Compression (ADX)	European Conference on Optical Communications	no.We2J-4	Paikun Zhu, Yuki Yoshida, Ken-ichi Kitayama

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2020/12/10	First Demonstration of Autonomous TSN-based Beyond-Best-Effort Networking for 5G NR Fronthauls and 1,000+ Massive IoT Traffic	European Conference on Optical Communications		Naotaka Shibata, Paikun Zhu, Kazuto Nishimura, Yuki Yoshida, Kazunori Hayashi, Masaki Hirota, Rintaro Harada, Kazuaki Honda, Shin Kaneko, Jun Terada, Ken-ichi Kitayama
2020/12/10	Phase-Retrieving Coherent Reception and its Sample Complexity	European Conference on Optical Communications	no.Th2D-1	Yuki Yoshida, Toshimasa Umezawa, Atsushi Kanno, Naokatsu Yamamoto
2020/12/10	Single-Pixel IQ Monitor via Computational Coherent Reception with Widely Linear Phase Retrieval	European Conference on Optical Communications	no.Th2D-4	Yuki Yoshida, Takahito Tanimura, Setsuo Yoshida, Takeshi Hoshida, Naokatsu Yamamoto
2020/12/10	132 Gb/s 3x3 Full MIMO Fiber-Wireless Seamless System in W Band Using WDM/PDM RoF Transmission	European Conference on Optical Communications	no.Th2G-6	Pham Tien Dat, Naokatsu Yamamoto, Keizo Inagaki, Atsushi Kanno, François Rottenberg, Jérôme Louveaux, Tetsuya Kawanishi
2020/12/10	1.01 Peta-bit/s C+L-band transmission over a 15-mode fiber	European Conference on Optical Communications	no.Th3A-3	Georg F. Rademacher, Benjamin J. Puttnam, Ruben S. Luis, Tobias A. Eriksson, Nicolas K. Fontaine, Mikael Mazur, Haoshuo Chen, Roland Ryf, David T. Neilson, Pierre Sillard, Frank Achten, Yoshinari Awaji, Hideaki Furukawa
2021/1/8	High-frequency short-pulse generation with a highly stacked InAs quantum dot mode-locked laser diode	Japanese Journal of Applied Physics	vol.60, no.SBBH02	Kouichi Akahane, Atsushi Matsumoto, Toshimasa Umezawa, Naokatsu Yamamoto
2021/1/10	Demonstration of coherent detection technique for broadband optical comb light source	IEICE Electronics Express	vol.18, no.1, pp.1-5	Satoshi Shimizu, Ryohei Kamikawa, Yuta Kaihori, Yu Yamasaki, Tsuyoshi Konishi
2021/1/12	Short-range Wireless Transmitter Using Mesoscopic Dielectric Cuboid Antenna in 300-GHz Band	European Microwave Conference	no.EuMC09-4	Kazuki Yamada, Yuto Samura, Oleg Vladilenovich Minin, Atsushi Kanno, Norihiko Sekine, Junichi Nakajima, Igor Vladilenovich Minin, Shintaro Hisatake
2021/1/12	High-fidelity indoor MIMO radio access for 5G and beyond based on legacy multimode fiber and real-time analog-to-digital-compression	Optics Express	vol.29, no.2, pp.1945-1955	Paikun Zhu, Yuki Yoshida, Atsushi Kanno, Ken-ichi Kitayama, Naokatsu Yamamoto
2021/1/15	High Capacity Converged Passive Optical Network and RoF-based 5G+ Fronthaul Using 4-PAM and NOMA-CAP Signals	Journal of Lightwave Technology	vol.39, no.2, pp.372-380	Samael Sarmiento, José Manuel Delgado Mendinueta, José Antonio Altabás, Salvatore Spadaro, Satoshi Shinada, Hideaki Furukawa, Juan José Vegas Olmos, José Antonio Lázaro, Naoya Wada
2021/1/22	High-stability, high-signal-quality radio-over-fiber system for IEEE802.11ad packet transmission based on optical single-sideband modulation in W-band	IEICE Electronics Express	vol.18, no.4, pp.1-6	Kohei Fujiwara, Atsushi Kanno, Kouichi Tokita
2021/2/1	High Capacity Transmission in a Coupled-Core Three-Core Multi-Core Fiber	Journal of Lightwave Technology	vol.39, no.3, pp.757-762	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Roland Ryf, Sjoerd van der Heide, Tobias A. Eriksson, Nicolas K. Fontaine, Haoshuo Chen, Rene-Jean Essiambre, Yoshinari Awaji, Hideaki Furukawa, Naoya Wada
2021/2/15	Nonlinear Impairment Scaling in Multi-Mode Fibers for Mode-Division Multiplexing	Journal of Lightwave Technology	vol.39, no.4, pp.927-932	Peter M. Krummrich, Marius Brehler, Georg F. Rademacher, Klaus Petermann
2021/2/15	0.61 Pb/s S, C, and L-Band Transmission in a 125µm Diameter 4-core Fiber Using a Single Wideband Comb Source	Journal of Lightwave Technology	vol.39, no.4, pp.1027-1032	Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Lidia Galdino, Domaniç Lavery, Tobias A. Eriksson, Yoshinari Awaji, Hideaki Furukawa, Polina Bayvel, Naoya Wada
2021/2/15	FSO Receiver with High Optical Alignment Robustness Using High-Speed 2D-PDA and Space Diversity Technique	Journal of Lightwave Technology	vol.39, no.4, pp.1040-1047	Toshimasa Umezawa, Yuki Yoshida, Atsushi Kanno, Atsushi Matsumoto, Kouichi Akahane, Naokatsu Yamamoto, Tetsuya Kawanishi
2021/2/15	Highly Spectral Efficient C + L-Band Transmission Over a 38-Core-3-Mode Fiber	Journal of Lightwave Technology	vol.39, no.4, pp.1048-1055	Georg F. Rademacher, Benjamin J. Puttnam, Ruben S. Luis, Jun Sakaguchi, Werner Klaus, Tobias A. Eriksson, Yoshinari Awaji, Tetsuya Hayashi, Takuji Nagashima, Tetsuya Nakanishi, Toshiki Taru, Taketoshi Takahata, Tetsuya Kobayashi, Hideaki Furukawa, Naoya Wada
2021/2/17	Toward the megapixel live electrooptic imaging technique	Applied Physics Express	vol.14, no.032009	Masahiro Tsuchiya, Taku Sato, Atsushi Komuro

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発表月日	論文名	誌名/発表機関	巻号等	発表者
2021/2/23	Power-Efficient O-Band 40 Gbit/s PAM4 Transmitter Based on Dual-Drive Cascaded Carrier-Depletion and Carrier-Injection Silicon Mach-Zehnder Modulator With Binary Driving Electronics at CMOS Voltages	Journal of Selected Topics in Quantum Electronics	vol.27, no.3, 3500308	Guo-Wei Lu, Hong-Bo Zhang, Satoshi Shinada, Jianxun Hong, Yongpeng Cheng, Shiyoshi Yokoyama
2021/3/1	Spatial mode exchange technique using volume holograms with a random optical diffuser for reduction of crosstalk	Optical Review	vol.28, no.2, pp.1-9	Shuanglu Zhang, Atsushi Okamoto, Tajun Shiba, Hotaka Hayashi, Kazuhisa Ogawa, Akihisa Tomita, Taketoshi Takahata, Satoshi Shinada, Yuta Goto, Naoya Wada
2021/3/4	Nanosopic live electrooptic imaging	Scientific Reports	vol.11, no.5541	Masahiro Tsuchiya, Shigeru Takata, Kazuhiro Ohsone, Shinji Fukui, Muneo Yorinaga
2021/3/7	Large capacity and wideband transmission over SDM fibers	SPIE Photonics West	no.1171307	Georg F. Rademacher, Benjamin J. Puttnam, Ruben S. Luis, Werner Klaus, Jun Sakaguchi, Roland Ryf, Sjoerd van der Heide, Nicolas K. Fontaine, Haoshuo Chen, Rene-Jean Essiambre, Yoshinari Awaji, Hideaki Furukawa
2021/3/23	Optically controlled reconfigurable NRI-TL phase shifter for 5G antenna applications	European Conference on Antennas and Propagation	no.CS13-6	Asif Bilal, Abdul Quddious, Haris Votsi, Atsushi Kanno, Tetsuya Kawanishi, Stavros Iezekiel, Marco A. Antoniadis
2021/4/15	Field Trial of a Flexible Real-time Software-defined GPU-based Optical Receiver	Journal of Lightwave Technology	vol.39, no.8, pp.2358-2367	Sjoerd van der Heide, Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Ton Koonen, Satoshi Shinada, Yoshinari Awaji, Hideaki Furukawa, Chigo Okonkwo
2021/5/11	1550 nm-band InAs/InGaAlAs quantum dot DFB lasers grown on (311)B InP substrate with side gratings simultaneously fabricated with a ridge waveguide	Compound Semiconductor Week	no.TuC2-6	Ryosuke Morita, Runa Kaneko, Ryumi Katsuhara, Atsushi Matsumoto, Kouichi Akahane, Yuichi Matsushima, Hiroshi Ishikawa, Katsuyuki Utaka
2021/5/11	Optimization of Thickness of InGaAlAs Embedded Layers in 1.5- μ m-Band QD-LD	Compound Semiconductor Week	no.TuD2-3	Atsushi Matsumoto, Kouichi Akahane, Toshimasa Umezawa, Shinya Nakajima, Naokatsu Yamamoto
2021/5/12	1024-QAM Analog Waveform Transmission Over a Seamless Fiber-Wireless System in W Band	IEEE Conference on Computer Communications Workshops		Pham Tien Dat, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2021/5/12	3 x 3 MIMO Fiber-Wireless System in W-Band with WDM/PDM RoF Transmission Capability	Journal of Lightwave Technology	vol.39, no.24, pp.7794-7803	Pham Tien Dat, Francois Rottenberg, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2021/5/10	1.55 μ m Si-Photonics-Based Heterogeneous Tunable Laser Integrated with Highly Stacked QD-RSOA	Conference on Lasers and Electro-Optics	no.SM1H.5	Atsushi Matsumoto, Wataru Masuda, Kouichi Akahane, Toshimasa Umezawa, Naokatsu Yamamoto, Tomohiro Kita
2021/5/13	High power and high beam quality surface grating VCSEL	Conference on Lasers and Electro-Optics	no.STh1G.5	Ahmed M. A. Hassan, Xiaodong Gu, Masanori Nakahama, Satoshi Shinada, Moustafa Ahmed, Fumio Koyama
2021/5/13	Sub-millimeter large high-speed photodetector for FSO communications	Conference on Lasers and Electro-Optics	no.SW2C.5	Toshimasa Umezawa, Shinya Nakajima, Atsushi Matsumoto, Kouichi Akahane, Naokatsu Yamamoto
2021/5/14	50Gbps single mode 1060nm intracavity metal aperture VCSEL with transverse resonance	Conference on Lasers and Electro-Optics	no.SF2F.6	Hameeda R. Ibrahim, Ahmed M. A. Hassan, Xiaodong Gu, Satoshi Shinada, Moustafa Ahmed, Fumio Koyama
2021/5/15	Millimeter-wave radio-over-fiber system using optical phase modulation and photonic down-conversion for uplink fronthaul transmission	Optics Letters	vol.46, no.10, pp.2493-2496	Pham Tien Dat, Yuya Yamaguchi, Atsushi Kanno, Naokatsu Yamamoto, Masayuki Motoya, Satoshi Oikawa, Junichiro Ichikawa
2021/6/7	Fast dynamics of low-frequency fluctuations in a quantum-dot laser with optical feedback	Optics Express	vol.29, no.12, pp.17962-17975	Kazuto Yamasaki, Kazutaka Kanno, Atsushi Matsumoto, Kouichi Akahane, Naokatsu Yamamoto, Makoto Naruse, Atsushi Uchida
2021/6/7	4096-ary Eigenvalue Modulation Using 12 Triangular-Lattice-Shaped Eigenvalues	Optical Fiber Communication Conference	no.M3I.1	Ken Mishina, Hiroyuki Takeuchi, Takahiro Kodama, Yuki Yoshida, Daisuke Hisano, Akihiro Maruta
2021/6/7	Record High Power Single-mode Operation and Beam Steering of VCSEL-Integrated Amplifier/Beam Scanner	Optical Fiber Communication Conference	no.M5A.3	Shanting Hu, Xiaodong Gu, Ahmed M. A. Hassan, Masanori Nakahama, Satoshi Shinada, Fumio Koyama
2021/6/8	Optimization of a Hybrid EDFA-Raman C+L Band Amplifier through Neural-Network Models	Optical Fiber Communication Conference	no.Tu1E.5	Francesco Da Ros, Uriara de Moura, Ruben S. Luis, Georg F. Rademacher, Benjamin J. Puttnam, Ann Margareth Rosa Brusin, Andrea Carena, Yoshinari Awaji, Hideaki Furukawa, Darko Zibar

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2021/6/8	1060nm single-mode metal aperture VCSEL array with transverse resonance for 5km single-mode fiber transmission	Optical Fiber Communication Conference	no.Tu5C.1	Hameeda R. Ibrahim, Ahmed M. A. Hassan, Xiaodong Gu, Satoshi Shinada, Moustafa Ahmed, Fumio Koyama
2021/6/9	Solid-state VCSEL beam scanner with ultra-large field of view and high resolution	Optical Fiber Communication Conference	no.W1D.3	Ruixiao Li, Zeuku Ho, Xiaodong Gu, Satoshi Shinada, Fumio Koyama
2021/6/9	10,000 km Straight-line Transmission using a Real-time Software-defined GPU-Based Receiver	Optical Fiber Communication Conference	no.W1I.3	Sjoerd van der Heide, Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Ton Koonen, Satoshi Shinada, Yoshinari Awaji, Hideaki Furukawa, Chigo Okonkwo
2021/6/9	Joint Multi-Eigenvalue Demodulation Using Complex Moment-Based Eigenvalue Solver and Artificial Neural Network	Optical Fiber Communication Conference	no.W6A.13	Yuhei Terashi, Daisuke Hisano, Ken Mishina, Yuki Yoshida, Akihiro Maruta
2021/6/9	High Capacity and Long-Haul Transmission with Space-Division Multiplexing	Optical Fiber Communication Conference	no.W7D.1	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Roland Ryf, Sjoerd van der Heide, Tobias A. Eriksson, Nicolas K. Fontaine, Haoshuo Chen, Rene-Jean Essiambre, Yoshinari Awaji, Hideaki Furukawa
2021/6/10	Dynamic Skew in Multi-Core Fibers: From Lab Measurements to Field Trials	Optical Fiber Communication Conference	no.W7B.1	Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Andrea Marotta, Cristian Antonelli, Fabio Graziosi, Antonio Mecozzi, Tetsuya Hayashi, Tetsuya Nakanishi, Satoshi Shinada, Yoshinari Awaji, Hideaki Furukawa, Naoya Wada
2021/6/10	240-Gbps SDM-FSO communication using 4-bundle fiber and 2D photodetector array	Optical Fiber Communication Conference	no.W7E.2	Toshimasa Umezawa, Kunihisa Jitsuno, Naokatsu Yamamoto, Tetsuya Kawanishi
2021/6/10	S, C and Extended L-Band Transmission with Doped Fiber and Distributed Raman Amplification	Optical Fiber Communication Conference	no.Th4C.2	Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Manuel Mendez-Astudillo, Yoshinari Awaji, Hideaki Furukawa
2021/6/11	319 Tb/s Transmission over 3001 km with S, C and L band signals over >120nm bandwidth in 125μm wide 4-core fiber	Optical Fiber Communication Conference	no.FB3.3	Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Yoshinari Awaji, Hideaki Furukawa
2021/6/11	Transparent Fiber-Radio-Fiber Bridge at 101 GHz using Optical Modulator and Direct Photonic Down-Conversion	Optical Fiber Communication Conference	no.F3C.4	Pham Tien Dat, Atsushi Kanno, Yuya Yamaguchi, Naokatsu Yamamoto, Tetsuya Kawanishi, Masayuki Motoya, Satoshi Oikawa, Junichiro Ichikawa
2021/7/5	End-to-End Management of All Optical Disaggregated Network and Applications with Cloud Native Environment for the Smart World Network Infrastructure	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.M4A.4	Yusuke Hirota, Shinya Nakamura, Kohei Shiimoto, Hyde Sugiyama, Noboru Yoshikane, Satoru Okamoto, Masaki Murakami, Takahiro Hirayama, Satoshi Yamanoi
2021/7/6	Weak-Resonant Zero-Bias Operational High-Speed UTC-PD up to 160 Gbps Line Rate	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.T1D.5	Toshimasa Umezawa, Atsushi Matsumoto, Kouichi Akahane, Naokatsu Yamamoto
2021/7/6	Beam intensity averaging method for high precision beam control in optical phased array	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.T2E.5	Hayato Takemura, Toshimasa Umezawa, Yuya Yamaguchi, Naokatsu Yamamoto, Tetsuya Kawanishi
2021/7/7	Wideband and high throughput optical transmission with multi-core fibers and amplifiers	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.W1F.2	Benjamin J. Puttnam, Georg F. Rademacher, Ruben S. Luis, Yoshinari Awaji, Hideaki Furukawa
2021/7/7	Long-haul, high-capacity transmission with coupled SDM fibers	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.W3B.1	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Roland Ryf, Sjoerd van der Heide, Tobias A. Eriksson, Nicolas K. Fontaine, Haoshuo Chen, Rene-Jean Essiambre, Yoshinari Awaji, Hideaki Furukawa
2021/7/9	Peta-bit-per-second optical communications system using a standard cladding diameter 15-mode fiber	Nature Communications	vol.12, no.4238, pp.1-7	Georg F. Rademacher, Benjamin J. Puttnam, Ruben S. Luis, Tobias A. Eriksson, Nicolas K. Fontaine, Mikael Mazur, Haoshuo Chen, Roland Ryf, David T. Neilson, Pierre Sillard, Frank Achten, Yoshinari Awaji, Hideaki Furukawa
2021/7/16	Short-Range Wireless Transmission in the 300 GHz Band Using Low-Profile Wavelength-Scaled Dielectric Cuboid Antennas	Frontiers in Communications and Networks	vol.2, no.702968, pp.1-9	Kazuki Yamada, Yuto Samura, Oleg Vladilenovich Minin, Atsushi Kanno, Norihiko Sekine, Junichi Nakajima, Igor Vladilenovich Minin, Shintaro Hisatake

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発表月日	論文名	誌名/発表機関	巻号等	発表者
2021/7/21	Time Sensitive Networking for 5G NR Fronthauls and Massive IoT Traffic	Journal of Lightwave Technology	vol.39, no.16, pp.5336-5343	Naotaka Shibata, Paikun Zhu, Kazuto Nishimura, Yuki Yoshida, Kazunori Hayashi, Masaki Hirota, Rintaro Harada, Kazuaki Honda, Shin Kaneko, Jun Terada, Ken-ichi Kitayama
2021/7/27	Real-time, Software-defined, GPU-Based Optical Receiver	Signal Processing in Photonic Communications	no.SpTu4D.1	Sjoerd van der Heide, Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Ton Koonen, Satoshi Shinada, Yoshinari Awaji, Hideaki Furukawa, Chigo Okonkwo
2021/8/15	Radio over FSO Communication Using High Optical Alignment Robustness 2D-PDA and its Optical Path Switching Performance	Journal of Lightwave Technology	vol.39, no.16, pp.5270-5277	Toshimasa Umezawa, Pham Tien Dat, Kuniyoshi Jitsuno, Naokatsu Yamamoto, Tetsuya Kawanishi
2021/8/27	High power surface grating slow-light VCSEL	Applied Physics Express	vol.14, no.092006	Ahmed M. A. Hassan, Xiaodong Gu, Masanori Nakahama, Satoshi Shinada, Moustafa Ahmed, Fumio Koyama
2021/9/1	Compensation of inter-core skew in multi-core fibers with group velocity dispersion	Optics Express	vol.29, no.18, pp.28104-28109	Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Satoshi Shinada, Hideaki Furukawa
2021/9/2	Space-Division Multiplexing for Optical Fiber Communications	OSA Journal Optica	vol.6, no.9, pp.1186-1203	Benjamin J. Puttnam, Georg F. Rademacher, Ruben S. Luis
2021/9/3	Seamless Fiber-Wireless System in W-Band Using Optical Phase Modulation and Self-Homodyne Receiver	IEEE Photonics Technology Letters	vol.33, no.20, pp.1159-1162	Pham Tien Dat, Toshimasa Umezawa, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2021/9/4	Millimeter-wave signal generation and its radio-over-fiber link transmission based on optical SSB modulation in 105-GHz band	URSI General Assembly and Scientific Symposium		Kohei Fujiwara, Atsushi Kanno, Kouichi Tokita
2021/9/14	Single-pixel optical modulation analyzer: a low-complexity frequency-dependent IQ imbalance monitor based on direct detection with phase retrieval	Optics Express	vol.29, no.20, pp.31115-31129	Yuki Yoshida, Setsuo Yoshida, Shoichiro Oda, Takeshi Hoshida, Naokatsu Yamamoto, Atsushi Kanno
2021/9/14	Experimental evaluation of the crosstalk impulse response of a temperature controlled homogeneous multi-core fiber	European Conference on Optical Communication	no.Tu1A.6	Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Yoshinari Awaji, Hideaki Furukawa
2021/9/14	MEMS mirror-based 1×4 Core Selective Switch for 12-core fiber with low insertion-loss	European Conference on Optical Communication	no.Tu3C1.6	Yuta Goto, Ruben S. Luis, Yusuke Hirota, Satoshi Shinada, Sayaka Nagayama, Asa Higashitani, Tetsuya Kobayashi, Ryohei Fukumoto, Hideaki Furukawa
2021/9/14	1060nm Single-mode Metal-aperture VCSEL Array with Transverse Resonance and Low Power Consumption below 50 fJ/bit	European Conference on Optical Communication	no.Tu3D.5	Hameeda R. Ibrahim, Ahmed M. A. Hassan, Xiaodong Gu, Satoshi Shinada, Moustafa Ahmed, Fumio Koyama
2021/9/15	Ultra-wide band transmission in few-mode fibers	European Conference on Optical Communication	no.We4C1.1	Georg F. Rademacher, Benjamin J. Puttnam, Ruben S. Luis, Tobias A. Eriksson, Nicolas K. Fontaine, Mikael Mazur, Haoshuo Chen, Roland Ryf, David T. Neilson, Pierre Sillard, Frank Achten, Yoshinari Awaji, Hideaki Furukawa
2021/9/15	Performance Evaluation of an Interband All-Optical Wavelength Converter for Cost-Effective High-Capacity Optical Networks	European Conference on Optical Communication	no.We4C1.5	Isaac Sackey, Robert Elschnner, Robert Emmerich, Carsten Schmidt-Langhorst, Daniel Gross, Georg F. Rademacher, Yoshinari Awaji, Hideaki Furukawa, Takemi Hasegawa, Colja Schubert, Roland Freund
2021/9/16	Submillimeter Large High-speed Photodetector for High Optical Alignment Robustness Optical Wireless Communications	European Conference on Optical Communication	no.Th1B.5	Toshimasa Umezawa, Shinya Nakajima, Atsushi Kanno, Naokatsu Yamamoto
2021/9/16	Compact 1D/2D VCSEL Beam Scanner with Enhanced Field of View and High Resolution	European Conference on Optical Communication	no.Th1D.3	Ruixiao Li, Xiaodong Gu, Satoshi Shinada, Fumio Koyama
2021/9/22	Combining IST-based CFO Compensation and Neural Network-based Demodulation for Eigenvalue-modulated Signal	Journal of Lightwave Technology	vol.39, no.23, pp.7370-7382	Ken Mishina, Takaya Maeda, Daisuke Hisano, Yuki Yoshida, Akihiro Maruta
2021/9/27	In-process measurement of a keyhole using a low-coherence interferometer with a high repetition rate	Optics Express	vol.29, no.20, pp.32169-32179	Neisei Hayashi, Masaharu Hoshikawa, Katsuhiko Ishii, Takuma Fujita, Masakazu Kanamori, Takahiro Deguchi, Ryo Nomura, Hiroshi Hasegawa, Takeshi Makino, Takahiro Hashimoto, Hideaki Furukawa, Naoya Wada

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2021/10/25	Real-time, Software-defined, Multi-modulation Format, GPU-based Receiver	Asia Communications and Photonics Conference	no.M4H.1	Sjoerd van der Heide, Ruben S. Luis, Sebastiaan Goossens, Benjamin J. Puttnam, Georg F. Rademacher, Ton Koonen, Satoshi Shinada, Yoshinari Awaji, Alex Alvarado, Hideaki Furukawa, Chigo Okonkwo
2021/10/26	Growth of InPBi on InP(311)B substrate by molecular beam epitaxy	physica status solidi (a)	vol.219, no.4, pp.2100411	Kouichi Akahane, Atsushi Matsumoto, Toshimasa Umezawa, Yoriko Tominaga, Naokatsu Yamamoto
2021/10/26	1550 nm-Band InAs/InGaAlAs Quantum Dot Distributed Feedback Lasers Grown on InP(311)B Substrate with Side-Wall Gratings Simultaneously Fabricated with a Ridge Waveguide	physica status solidi (a)	vol.219, no.4, pp.2100453	Runa Kaneko, Rysuke Morita, Ryumi Katsuhara, Ryouta Yabuki, Atsushi Matsumoto, Kouichi Akahane, Yuichi Matsushima, Hiroshi Ishikawa, Katsuyuki Utaka
2021/11/3	High-power operations of single-mode surface grating long oxide aperture VCSELS	Applied Physics Letters	vol.119, no.191103	Ahmed M. A. Hassan, Xiaodong Gu, Masanori Nakahama, Satoshi Shinada, Moustafa Ahmed, Fumio Koyama
2021/11/16	100-Gb/s Fiber-Wireless System in 100-GHz Band Using 64-QAM OFDM Signal Transmission	International Topical Meeting on Microwave Photonics	no.Tu2.6	Pham Tien Dat, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2021/12/3	Performance Degradation Problem of Conventional TCP in Bufferless Optical Packet Switching Networks	International Conference on Emerging Technologies for Communications	no.C3-3	Yuusuke Hashimoto, Yosuke Tanigawa, Yusuke Hirota, Hideki Tode
2021/12/4	Laser Characteristic and Strain Distribution Dependence on Embedding Layer Thickness of Quantum Dots Laser Diodes Grown on InP(311)B Substrate	physica status solidi (a)	vol.219, no.4, pp.2100466	Atsushi Matsumoto, Kouichi Akahane, Toshimasa Umezawa, Shinya Nakajima, Naokatsu Yamamoto, Atsushi Kanno
2021/12/10	Millimeter-Wave and Terahertz Fixed Wireless Link Budget Evaluation for Extreme Weather Conditions	IEEE Access	vol.9, pp.163476-163491	Zu-Kai Weng, Atsushi Kanno, Pham Tien Dat, Keizo Inagaki, Kosuke Tanabe, Eisaku Sasaki, Thomas Kürner, Bo Kum Jung, Tetsuya Kawanishi
2021/12/15	Real-Time 10,000 km Straight-Line Transmission Using a Software-Defined GPU-Based Receiver	IEEE Photonics Technology Letters	vol.33, no.24, pp.1519-1522	Sjoerd van der Heide, Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Ton Koonen, Satoshi Shinada, Yoshinari Awaji, Hideaki Furukawa, Chigo Okonkwo
2021/12/28	Performances of Conventional SOAs Versus QD-SOA in 1530-nm Upstream Transmission of 40 Gb/s Access Network	IEEE Photonics Journal	vol.14, no.1, 7108912	Budsara Boriboon, Duang-Rudee Worasuchee, Satoshi Shimizu, Satoshi Shinada, Hideaki Furukawa, Atsushi Matsumoto, Kouichi Akahane, Naokatsu Yamamoto, Naoya Wada
2022/1/7	Full-duplex transmission of multi-Gb/s subcarrier multiplexing and 5G NR signals in 39 GHz band over fiber and space	Applied Optics	vol.61, no.5, pp.1183-1193	Dong-Nhat Nguyen, Luis Vallejo, Vincenc Almenar, Beatriz Ortega, Pham Tien Dat, Son Thai Le, Jan Bohata, Stanislav Zvanovec
2022/1/7	Transparent Fiber-Millimeter-Wave-Fiber System in 100-GHz Band Using Optical Modulator and Photonic Down-Conversion	Journal of Lightwave Technology	vol.40, no.5, pp.1483-1493	Pham Tien Dat, Yuya Yamaguchi, Masayuki Motoya, Satoshi Oikawa, Junichiro Ichikawa, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2022/1/31	High-speed fiber-wireless-fiber system in the 100-GHz band using a photonics-enabled receiver and optical phase modulator	Optics Letters	vol.47, no.5, pp.1149-52	Pham Tien Dat, Toshimasa Umezawa, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2022/2/1	Analysis of electric-field domain formations and carrier transport phenomena in GaAs/AlAs asymmetric double-quantum-well superlattices	Japanese Journal of Applied Physics	vol.61, no.SB1011	Tomonori Matsui, Seiryu Nishiyama, Shoji Goto, Makoto Hosoda, Kouichi Akahane, Naoki Ohtani
2022/2/21	3x3 MIMO RF transmission in radio over multimode fiber link	SPIE Photonics West	no.120270K	Atsushi Kanno, Naokatsu Yamamoto
2022/2/21	Investigation of NOMA-CAP Modulation Format for Cost-effective and Short Reach Next-Generation Optical Networking Applications	SPIE Photonics West	no.120270D	José Manuel Delgado Mendinueta, Samael Samiento, José Antonio Altabás, Satoshi Shinada, Juan José Vegas Olmos, José Antonio Lázaro, Hideaki Furukawa
2022/2/21	High data-rate and long-distance wideband transmission in 125 μm diameter fibers	SPIE Photonics West	no.120280H	Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Yoshinari Awaji, Hideaki Furukawa
2022/3/1	Ultra-compact VCSEL scanner for high power solid-state beam steering	Optics Express	vol.30, no.6, pp.8742-8749	Shanting Hu, Xiaodong Gu, Ahmed M. A. Hassan, Ruixiao Li, Masanori Nakahama, Satoshi Shinada, Fumio Koyama
2022/3/7	Hollow-core fiber capacities with receiver noise limitations	Optical Fiber Communication Conference	no.M2C.4	Werner Klaus, Peter J. Winzer
2022/3/7	372 Tb/s Unrepeated 213 km Transmission Over a 125μm Cladding Diameter, 4-Core MCF	Optical Fiber Communication Conference	no.M4B.3	Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Yoshinari Awaji, Hideaki Furukawa

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発表月日	論文名	誌名/発表機関	巻号等	発表者
2022/3/8	400-pixel high-speed photodetector for high optical alignment robustness FSO receiver	Optical Fiber Communication Conference	no.M4I.3	Toshimasa Umezawa, Atsushi Matsumoto, Kouichi Akahane, Atsushi Kanno, Naokatsu Yamamoto
2022/3/8	Investigation of Wideband Distributed Raman Amplification in a Few-Mode Fiber Link	Optical Fiber Communication Conference	no.Tu3E.1	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Juan Carlos Alvarado-Zacarias, Amezcua-Correa Rodrigo, Kazuhiko Aikawa, Yoshinari Awaji, Hideaki Furukawa
2022/3/9	Investigation of Long-Haul S-, C- + L-Band Transmission	Optical Fiber Communication Conference	no.W3C.5	Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Yoshinari Awaji, Hideaki Furukawa
2022/3/10	Eigenvalue-domain Neural Network Receiver for 4096-ary Eigenvalue-modulated Signal	Optical Fiber Communication Conference	no.Th3F.3	Hiroyuki Takeuchi, Ken Mishina, Yuhei Terashi, Daisuke Hisano, Yuki Yoshida, Akihiro Maruta
2022/3/11	Improvement of Self-Heating in Quantum Dot Reflective Semiconductor Optical Amplifier for SS-OCT Application	International Electrical Engineering Congress	no.P01906	Atsushi Matsumoto, Kouichi Akahane, Toshimasa Umezawa, Shinya Nakajima, Naokatsu Yamamoto, Atsushi Kanno
2022/3/11	Detection of S100 Calcium Binding Protein A6 by Silicon Nitride Photonic Sensor	International Electrical Engineering Congress	no.P01910	Suruk Udomsom, Atsushi Matsumoto, Nithi Atthi, Punramon Rattakorn, Atsushi Kanno, Wittawat Yamwong, Tetsuya Kawanishi, Ukrit Mankong, Naokatsu Yamamoto, Kitti Intuyod, Kazuo Imai, Toshimasa Umezawa, Manuel Mendez-Astudillo, Somchai Pinlaor
2022/3/11	High-Efficiency Air-Clad Type Silicon-Nitride Ring-Resonator for Bio-Sensing Applications	International Electrical Engineering Congress	no.P01911	Nithi Atthi, Manuel Mendez-Astudillo, Suruk Udomsom, Atsushi Matsumoto, Wittawat Yamwong, Nipapan Klunngien, Ukrit Mankong, Somchai Pinlaor, Kazuo Imai, Tuptim Angkaew, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi, Toshimasa Umezawa
2022/3/14	S-, C- and L-band transmission over a 157 nm bandwidth using doped fiber and distributed Raman amplification	Optics Express	vol.30, no.6, pp.10011-10018	Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Manuel Mendez-Astudillo, Yoshinari Awaji, Hideaki Furukawa
2022/3/15	A Comparative Study of Few-Mode Fiber and Coupled-Core Multi-Core Fiber Transmission	Journal of Lightwave Technology	vol.40, no.6, pp.1590-1596	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Roland Ryf, Sjoerd van der Heide, Tobias A. Eriksson, Nicolas K. Fontaine, Haoshuo Chen, Rene-Jean Essiambre, Yoshinari Awaji, Hideaki Furukawa
2022/3/15	High-Throughput and Long-distance Transmission with >120nm S-, C- and L-band signal in a 125µm 4-Core Fiber	Journal of Lightwave Technology	vol.40, no.6, pp.1633-1639	Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Yoshinari Awaji, Hideaki Furukawa
2022/3/25	Investigation of amplitude and phase evolution of a short-pulse propagating through a gain saturated semiconductor optical amplifier	IEICE Electronics Express	vol.19, no.6, pp.1-4	Satoshi Shimizu
2022/4/5	Demonstration of a 90 Tb/s, 234.8 km, C+L band unrepeated SSMF link with bidirectional Raman amplification	Optics Express	vol.30, no.8, pp.13114-13120	Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Yoshinari Awaji, Hideaki Furukawa
2022/4/8	Large Submillimeter High-Speed Photodetector for Large Aperture FSO Receiver	Journal of Selected Topics in Quantum Electronics	vol.28, no.2, 3801709	Toshimasa Umezawa, Atsushi Matsumoto, Kouichi Akahane, Shinya Nakajima, Naokatsu Yamamoto
2022/5/1	Multichannel random signal generation in optical fiber-based ring laser with quantum-dot semiconductor optical amplifier	Japanese Journal of Applied Physics	vol.61, no.SC1055	Kouichi Akahane, Atsushi Matsumoto, Toshimasa Umezawa, Naokatsu Yamamoto, Yuki Yata, Hideyuki Sotobayashi, Makoto Naruse, Atsushi Kanno
2022/5/5	Investigation of the growth mechanism and crystallographic structures of GaSb dots nucleation layer and GaSb thin film grown on Si(001) substrate by molecular beam epitaxy	Journal of Vacuum Science & Technology A	vol.40, no.032703	Ryuto Machida, Ryusuke Toda, Shinsuke Hara, Issei Watanabe, Kouichi Akahane, Sachie Fujikawa, Akifumi Kasamatsu, Hiroki I. Fujishiro
2022/5/16	Wideband Transmission in Single and Multi-core Fibers	Conference on Lasers and Electro-Optics	no.SM4J.3	Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Yoshinari Awaji, Hideaki Furukawa
2022/5/18	Temperature Characteristics of Intermixed Ridge Type Quantum Dot Lasers	Conference on Lasers and Electro-Optics	no.JW3B.75	Atsushi Matsumoto, Runa Kaneko, Kouichi Akahane, Ryumi Katsuhara, Ryouta Yabuki, Toshimasa Umezawa, Shinya Nakajima, Atsushi Kanno, Yuichi Matsushima, Katsuyuki Utaka

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2022/5/19	1 Pb/s Transmission in a 125 μ m diameter 4-core MCF	Conference on Lasers and Electro-Optics	no.JTh6B.1	Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Yoshinari Awaji, Hideaki Furukawa
2022/5/20	High-gain photoreceiver module integrated with QD-SOA for high-baud-rate optical communication	Conference on Lasers and Electro-Optics	no.SF3G.7	Toshimasa Umezawa, Kouichi Akahane, Atsushi Matsumoto, Atsushi Kanno, Naokatsu Yamamoto
2022/5/26	Performance of SOA in 100GBase-LR4 Link	International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology		Duang-Rudee Worasuchee, Pichakorn Sawatdee, Hideaki Furukawa, Naoya Wada
2022/6/2	Fabrication and Temperature Characteristics of 1550nm InAs/InGaAlAs Quantum Dot Distributed Feedback Lasers with Side Grating	Compound Semiconductor Week	no.22448073	Runa Kaneko, Ryumi Katsuhara, Ryouta Yabuki, Atsushi Matsumoto, Kouichi Akahane, Yuichi Matsushima, Hiroshi Ishikawa, Katsuyuki Utaka
2022/6/21	DSP-enhanced Radio-over-fiber Technologies for 5G-and-beyond Wired-wireless Convergence	Journal of Optical Communications and Networking	vol.14, no.8, pp.595-605	Paikun Zhu, Yuki Yoshida, Atsushi Kanno, Ken-ichi Kitayama
2022/6/29	1060-nm single-mode transverse coupled cavity VCSEL with intra-cavity surface relief for 58-Gbps modulation and 5-km single-mode fiber transmission	Applied Physics Letters	vol.120, no.261110	Shanting Hu, Xiaodong Gu, Hameeda R. Ibrahim, Masanori Nakahama, Satoshi Shinada, Fumio Koyama
2022/7/4	Experimental Demonstration of Multipath and Continuous Repetition in Optical Packet/Circuit Networks	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.ME2-2	Yusuke Hirota, Masaki Shiraiwa, Sugang Xu, Yoshinari Awaji, Massimo Tornatore, Biswanath Mukherjee, Hideaki Furukawa
2022/7/5	High-Speed Beam Steering LN Optical Phased Array Module using Comb-Electrode	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.TuA4-3	Hayato Takemura, Haruto Shinya, Yuya Yamaguchi, Toshimasa Umezawa, Atsushi Kanno, Tetsuya Kawanishi
2022/7/5	Experimental Investigation of Nonlinear Signal Distortions in Multi-Span FMF Transmission	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.TuB2-2	Georg F. Rademacher, Benjamin J. Puttnam, Ruben S. Luis, Kazuhiko Aikawa, Yoshinari Awaji, Hideaki Furukawa
2022/7/5	Photonic Frequency Conversion Technology for 5G Advanced Signal Transmission	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.WP-A-7	Pham Tien Dat, Atsushi Kanno
2022/7/6	C-band Single-lane 100G ER and 50G ZR PAM Transmissions based on Joint Optical-electrical Feedforward Equalization (OE-FFE) with Record-low Complexity	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.WB1-3	Paikun Zhu, Yuki Yoshida, Atsushi Kanno, Ken-ichi Kitayama
2022/7/6	50 GHz High Photocurrent PIN-PD and Its Thermal Effect	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.WD2-2	Yaofeng Yi, Toshimasa Umezawa, Atsushi Kanno, Tetsuya Kawanishi
2022/7/6	High-Efficient Pixel Layout Arrangement in High-Speed 2-D Photodetector Array	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.WD2-3	Siyang Duan, Toshimasa Umezawa, Atsushi Kanno, Tetsuya Kawanishi
2022/7/6	Mode-multiplexed Light Source using Angularly-Multiplexed Volume Holograms	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.WE3-1	Satoshi Shinada, Yuta Goto, Hideaki Furukawa
2022/7/6	Petabit-per-second class transmission and switching	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.WF2-3	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Yoshinari Awaji, Hideaki Furukawa
2022/7/6	Numerical Investigation of Short Pulse Propagation in a Semiconductor Optical Amplifier for Application to Optical Reservoir Computing	OptoElectronics and Communications Conference/Photonics in Switching and Computing	no.WP-G-6	Satoshi Shimizu
2022/7/6	Overview of GPU-Based Real-Time Receivers Using Kramers-Kronig Coherent Detection	Photonics in Switching and Computing	no.WF3-1	Ruben S. Luis, Sjoerd van der Heide, Georg F. Rademacher, Benjamin J. Puttnam, Chigo Okonkwo, Hideaki Furukawa
2022/7/11	Roadmap on multimode photonics	IOP Journal of Optics	vol.24, no.83001, pp.1-37	Ilaria Cristiani, Cosimo Lacava, Georg F. Rademacher, Benjamin J. Puttnam, Ruben S. Luis, Cristian Antonelli, Antonio Mecozzi, Mark Shtaf, Daniela Cozzolino, Davide Bacco, Leif K. Oxenlowe, Jian Wang, Yongmin Jung, David J. Richardson, Siddharth Ramachandran, Massimiliano Guasoni, Katarzyna Krupa, Denis Kharenko, Alessandro Tonello, Stefan Wabnitz, David B. Phillips, Daniele Faccio, Tijmen G. Euser, Shangran Xie, Philip St. J. Russell, Daoxin Dai, Yu Yu, Periklis Petropoulos, Frederic Gardes, Francesca Parmigiani

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発表月日	論文名	誌名/発表機関	巻号等	発表者
2022/7/12	S, C and L-band transmission in single and Multi-core fiber	IEEE Summer Topicals	no.TuG3.1	Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Yoshinari Awaji, Hideaki Furukawa
2022/7/13	Transmission Demonstrations Using Space-Division-Multiplexing	IEEE Summer Topicals	no.WC1.4	Benjamin J. Puttnam, Georg F. Rademacher, Ruben S. Luis, Yoshinari Awaji, Hideaki Furukawa
2022/7/18	Real-time transmission of geometrically-shaped signals using a software-defined GPU-based optical receiver	Optics Express	vol.30, no.15, pp.27171-27179	Sjoerd van der Heide, Ruben S. Luis, Sebastiaan Goossens, Benjamin J. Puttnam, Georg F. Rademacher, Ton Koonen, Satoshi Shinada, Yoshinari Awaji, Alex Alvarado, Hideaki Furukawa, Chigo Okonkwo
2022/8/1	High Optical Feedback Resistance of 1.55 μm 15-Layer-Stacked Quantum Dot Laser using InP(311)B Substrate	Conference on Lasers and Electro-Optics Pacific Rim	no.CMP11A-02	Atsushi Matsumoto, Kouichi Akahane, Toshimasa Umezawa, Naokatsu Yamamoto, Kazutaka Kanno, Makoto Naruse, Atsushi Uchida, Atsushi Kanno
2022/8/2	Ultra-broadband photodetector module toward 200 GHz using UTC-PD and frequency compensation technique	Conference on Lasers and Electro-Optics Pacific Rim	no.CTuP11E_05	Toshimasa Umezawa, Atsushi Matsumoto, Kouichi Akahane, Atsushi Kanno, Naokatsu Yamamoto
2022/8/31	Terahertz heterodyne spectroscopy of radio-frequency-driven frequency combs without moving parts based on telecommunication technology	International Conference on Infrared, Millimeter, and Terahertz Waves		Erik Br�ndermann, Johannes Leonhard Steinmann, Isao Morohashi, Shinya Nakajima, Shingo Saito, Norihiko Sekine, Anke-Susanne M�ller, Iwao Hosako
2022/9/1	Performance Comparison of Photonic Downconversion for Uplink Mobile Fronthaul	IEEE Photonics Technology Letters	vol.34, no.17, pp.923-926	Pham Tien Dat, Yuya Yamaguchi, Atsushi Kanno
2022/9/1	Route and mode selection considering mode dependence of inter-core crosstalk using predefined core prioritization on SDM-EONs	IEICE Communications Express	vol.11, no.9, pp.583-588	Yuya Seki, Yosuke Tanigawa, Yusuke Hirota, Hideki Tode
2022/9/20	Optoelectronic Feedforward Equalization: Simple 1-tap Optical Delay Line and Ethernet-compliant Linear FFE Enabling C-band100G PAM4 over ER+ distance	European Conference on Optical Communication	no.Tu1A.4	Paikun Zhu, Yuki Yoshida, Atsushi Kanno, Ken-ichi Kitayama
2022/9/20	Experimental Investigation of Coupling Offset Tolerances in a Space-Division Multiplexed 15-Mode Fiber Transmission System	European Conference on Optical Communication	no.Tu3A.4	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Nicolas K. Fontaine, Mikael Mazur, Haoshuo Chen, Roland Ryf, David T. Neilson, Pierre Sillard, Frank Achten, Yoshinari Awaji, Hideaki Furukawa
2022/9/20	Beam-curvature-compensated Solid-state Beam Scanner Integrated with Multi-grating Pitch Tunable Slow-light VCSELs for Enhanced Field of View	European Conference on Optical Communication	no.Tu3E.5	Ruixiao Li, Xiaodong Gu, Satoshi Shinada, Fumio Koyama
2022/9/20	Low-Loss Ti-diffused LiNbO ₃ Modulator Integrated with Electro-Optic Frequency-Domain Equalizer for High Bandwidth Exceeding 110 GHz	European Conference on Optical Communication	no.Tu4E.2	Yuya Yamaguchi, Pham Tien Dat, Shingo Takano, Masayuki Motoya, Yu Kataoka, Junichiro Ichikawa, Satoshi Oikawa, Ryo Shimizu, Naokatsu Yamamoto, Atsushi Kanno, Tetsuya Kawanishi
2022/9/20	Resonant-Cavity Two-Dimensional Photodetector Array and its Application to WDM-FSO Communication	European Conference on Optical Communication	no.Tu5.8	Toshimasa Umezawa, Shoichi Takamizawa, Atsushi Matsumoto, Kouichi Akahane, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi
2022/9/21	All-optical Mobile FSO Transceiver with High-Speed Laser Beam Steering and Tracking	European Conference on Optical Communication	no.Tu4F.2	Abdelmoula Bekkali, Hideo Fujita, Michikazu Hattori, Yuichiro Hara, Toshimasa Umezawa, Atsushi Kanno
2022/9/21	Transparent Delivery of 100-GHz Radio Signal to Indoor Using Broadband Phase-Modulated RoF System	European Conference on Optical Communication	no.We3F.5	Pham Tien Dat, Yuya Yamaguchi, Keizo Inagaki, Naokatsu Yamamoto, Atsushi Kanno
2022/9/21	Widely Nonlinear Phase Retrieval for Direct Detection-based Digital Twinning of Coherent Optical Components	European Conference on Optical Communication	no.We5.23	Yuki Yoshida, Setsuo Yoshida, Shoichiro Oda, Yuya Yamaguchi, Naokatsu Yamamoto, Takeshi Hoshida, Atsushi Kanno
2022/9/22	12.8 Tb/s SDM Optical Interconnect for a Spine-Leaf Datacenter Network with Spatial Channel Connectivity	European Conference on Optical Communication	no.Th2D.2	Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Satoshi Shinada, Tetsuya Hayashi, Tetsuya Nakanishi, Yuki Saito, Tetsu Morishima, Hideaki Furukawa
2022/9/22	Polarization Insensitive Self-Homodyne Detection Receiver for 360 Gb/s Data Center Links	European Conference on Optical Communication	no.Th3A.2	Budsara Boriboon, Ruben S. Luis, Georg F. Rademacher, Benjamin J. Puttnam, Satoshi Shinada, Hideaki Furukawa

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2022/9/22	Characterization of the First Field-Deployed 15-Mode Fiber Cable for High Density Space-Division Multiplexing	European Conference on Optical Communication	no.Th3B.1	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Giammarco Di Sciullo, Robert Emmerich, Nicolas Braig-Christophersen, Andrea Marotta, Lauren Dallachiesa, Roland Ryf, Antonio Mecozzi, Colja Schubert, Pierre Sillard, Frank Achten, Giuseppe Ferri, Jun Sakaguchi, Cristian Antonelli, Hideaki Furukawa
2022/9/22	1.53 Peta-bit/s C-Band Transmission in a 55-Mode Fiber	European Conference on Optical Communication	no.Th3C.3	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Nicolas K. Fontaine, Mikael Mazur, Haoshuo Chen, Roland Ryf, David T. Neilson, Daniel Dahl, Joel Carpenter, Pierre Sillard, Frank Achten, Marianne Bigot, Jun Sakaguchi, Hideaki Furukawa
2022/9/22	Demonstration of a Spatial Super Channel Switching SDM Network Node on a Field Deployed 15-Mode Fiber Network	European Conference on Optical Communication	no.Th3C.5	Ruben S. Luis, Georg F. Rademacher, Benjamin J. Puttnam, Giammarco Di Sciullo, Andrea Marotta, Robert Emmerich, Nicolas Braig-Christophersen, Ralf Stolte, Fabio Graziosi, Antonio Mecozzi, Colja Schubert, Giuseppe Ferri, Frank Achten, Pierre Sillard, Roland Ryf, Lauren Dallachiesa, Satoshi Shinada, Cristian Antonelli, Hideaki Furukawa
2022/9/30	Experimental Demonstration of Dynamic Service Function Chaining Based on Server Load Information in Optical Packet Switching Networks	Asia-Pacific Network Operations and Management Symposium	no.PS4-17	Yusuke Hashimoto, Yuya Seki, Kosuke Kubota, Akihiro Fujimoto, Yosuke Tanigawa, Yusuke Hirota, Hideki Tode
2022/10/1	Admittance Spectroscopy Up to 67 GHz in InGaAs/InAlAs Triple-Barrier Resonant Tunneling Diodes	IEICE Transactions on Electronics	vol.E105.C, no.10, pp.622-626	Kotaro Aikawa, Michihiko Suhara, Takumi Kimura, Junki Wakayama, Takeshi Makino, Katsuhiko Usui, Kiyoto Asakawa, Kouichi Akahane, Issei Watanabe
2022/10/1	Fifth-generation new radio millimeter-wave radio signal transmission over a seamless fiber-terahertz mobile fronthaul system for an ultra-dense small cell network	Optics Letters	vol.47, no.19, pp.5188-5191	Pham Tien Dat, Atsushi Kanno, Norihiko Sekine, Kouichi Akahane
2022/10/5	Quasi 2-bit 32-QAM OFDM based Digital RoF Link by Delta-sigma Modulation at 2.5 Gbit/s	International Topical Meeting on Microwave Photonics	no.WE1.4	Zu-Kai Weng, Pham Tien Dat, Atsushi Kanno, Tetsuya Kawanishi
2022/10/5	Transmission of Millimeter-wave Radio Signal over a Seamless Fiber-Terahertz System at 325 GHz	International Topical Meeting on Microwave Photonics	no.WE2.3	Pham Tien Dat, Keizo Inagaki, Norihiko Sekine, Isao Morohashi, Atsushi Kanno
2022/10/6	Convergence between terahertz and optical systems for 6G and beyond networks	International Topical Meeting on Microwave Photonics	no.Th1.4	Atsushi Kanno
2022/11/8	Phase Noise Sensitivity of Coherent FMCW LiDAR Measured by Variable linewidth Laser with Low-Frequency Compensation and Mirror Method	Asia Communications and Photonics Conference		Yu Zhou, Zu-Kai Weng, Keizo Inagaki, Atsushi Kanno, Tetsuya Kawanishi
2022/11/11	The role of parallelism in the evolution of optical fiber communication systems	Proceedings of the IEEE	vol.110, no.11, pp.1619-1654	Werner Klaus, Peter J. Winzer, K. Nakajima
2022/11/11	Few-Mode Fiber Technology, Deployments, and Systems	Proceedings of the IEEE	vol.110, no.11, pp.1804-1820	Pierre Sillard, Benyahya Kaoutar, Daiki Soma, Guillaume Labroille, Pu Jian, Koji Igarashi, Roland Ryf, Nicolas K. Fontaine, Georg F. Rademacher, Kohki Shibahara
2022/11/30	A Study on Efficient Coding Methods to Suppress Redundancy and ACK Traffic in LT Codes with Feedback	International Conference on Emerging Technologies for Communications	no.O4-5	Maho Ono, Yosuke Tanigawa, Yusuke Hirota, Hideki Tode
2022/12/1	Network Experiment of the 4 x 10 Gbps Layer 4 Payload "0" Replacement Filter	International Conference on Emerging Technologies for Communications	no.O6-1	Satoru Okamoto, Masaki Murakami, Shinya Nakamura, Yusuke Hirota, Shin'ichi Akahane, Naoaki Yamanaka
2022/12/15	Increasing the critical thickness of SiGe layers on Si substrates using sputter epitaxy method	Journal of Crystal Growth	vol.600, no.126900	Takahiro Tsukamoto, Yosuke Aoyagi, Shouta Nozaki, Nobumitsu Hirose, Akifumi Kasamatsu, Toshiaki Matsui, Yoshiyuki Suda
2022/12/21	60-Gb/s D-Band Wireless Signal Generation and Transmission Using Photonic Technology	IEEE-RIVF International Conference on Computing and Communication Technologies		Pham Tien Dat, Keizo Inagaki, Atsushi Kanno, Kouichi Akahane
2022/12/23	Single-pixel optical modulation analyzer based on phase retrieval for dual-polarization IQ modulators	Optics Express	vol.31, no.1, pp.659-672	Yuki Yoshida, Setsuo Yoshida, Shoichiro Oda, Takeshi Hoshida, Naokatsu Yamamoto, Atsushi Kanno

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発表月日	論文名	誌名/発表機関	巻号等	発表者
2023/1/1	Core and spectrum allocation to achieve graceful degradation of inter-core crosstalk with generalized hierarchical core prioritization on space-division multiplexing elastic optical networks	Journal of Optical Communications and Networking	vol.15, no.1, pp.43-56	Yuya Seki, Yosuke Tanigawa, Yusuke Hirota, Hideki Tode
2023/1/15	Analysis and Demonstration of Low-complexity Joint Optical-electrical Feedforward Equalization (OE-FFE) for Dispersion-limited High-speed IM/DD Transmission	Journal of Lightwave Technology	vol.41, no.2, pp.477-488	Paikun Zhu, Yuki Yoshida, Atsushi Kanno, Ken-ichi Kitayama
2023/2/1	A Scalable 26 GHz RoF Relay System using Optoelectronic Extender	IEEE Photonics Technology Letters	vol.35, no.6, pp.293-296	Jan Bohata, Dong-Nhat Nguyen, Pham Tien Dat, Zabih Ghassemlooy, Beatriz Ortega, Stanislav Zvanovec
2023/2/15	Sn distribution in Ge/GeSn heterostructures formed by sputter epitaxy method	Journal of Crystal Growth	vol.604, no.127045	Takahiro Tukamoto, Kento Ikeno, Nobumitsu Hirose, Akifumi Kasamatsu, Toshiaki Matsui, Yoshiyuki Suda
2023/2/22	Multi-Eigenvalue Demodulation Using Complex Moment-Based Eigensolver and Neural Network	Journal of Lightwave Technology	vol.41, no.14, pp.4713-4724	Yuhei Terashi, Daisuke Hisano, Ken Mishina, Yuki Yoshida, Akihiro Maruta
2023/2/24	94.5 GHz Dual-loop Optoelectronic Oscillator	International Conference on Electrical, Computer and Communication Engineering		G. K. M. Hasanuzzaman, Stavros Iezekiel, Atsushi Kanno
2023/2/24	Millimeter Wave Attenuation Due to Wind and Heavy Rain in a Tropical Region	MDPI Sensors	vol.23, no.5, pp.2532	Ukrit Mankong, Pakawat Chamsuk, Sitthichok Nakprasert, Sangdaun Potha, Zu-Kai Weng, Pham Tien Dat, Atsushi Kanno, Tetsuya Kawanishi
2023/3/6	Self-Coherent Transmission Using Metasurface-based Stokes-Vector Receiver	Optical Fiber Communication Conference	no.M1E.2	Go Soma, Yoshiro Nomoto, Toshimasa Umezawa, Yuki Yoshida, Yoshiaki Nakano, Takuo Tanemura
2023/3/6	Partial MIMO-based Mode Division Multiplexing Transmission over the First Field-Deployed 15-Mode Fiber in Metro Scenario	Optical Fiber Communication Conference	no.M2B.3	Alberto Gatto, Paola Parolari, Ruben S. Luis, Georg F. Rademacher, Benjamin J. Puttnam, Robert Emmerich, Colja Schubert, Giuseppe Ferri, Frank Achten, Pierre Sillard, Paolo Martelli, Giammarco Di Sciullo, Fabio Graziosi, Andrea Marotta, Antonio Mecozzi, Cristian Antonelli, Pierpaolo Boffi
2023/3/6	LCOS based Flexible Spatial Channel Switch for Heterogeneous SDM Fiber Network	Optical Fiber Communication Conference	no.M3C.5	Yuta Goto, Satoshi Shinada, Yusuke Hirota, Hideaki Furukawa
2023/3/6	Demonstration of Multi-Hop Mode-Group Routing in a Field-Deployed Multi-Mode Fiber Network	Optical Fiber Communication Conference	no.M4G.3	Paola Parolari, Alberto Gatto, Ruben S. Luis, Georg F. Rademacher, Benjamin J. Puttnam, Robert Emmerich, Colja Schubert, Giuseppe Ferri, Frank Achten, Pierre Sillard, Paolo Martelli, Giammarco Di Sciullo, Fabio Graziosi, Andrea Marotta, Antonio Mecozzi, Cristian Antonelli, Pierpaolo Boffi
2023/3/6	Transparent Radio-Fiber-Radio-Fiber System in 100-GHz Band for Indoor Uplink Signal Transmission in Beyond 5G	Optical Fiber Communication Conference	no.Tu2J.1	Pham Tien Dat, Yuya Yamaguchi, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi, Kouichi Akahane
2023/3/7	Experimental Investigation of Reduced Complexity MIMO Equalization in a 55-Mode Fiber SDM Transmission System	Optical Fiber Communication Conference	no.Tu3E.3	Ruby S. B. Ospina, Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Nicolas K. Fontaine, Mikael Mazur, Haoshuo Chen, Roland Rlyf, David T. Neilson, Daniel Dahl, Joel Carpenter, Pierre Sillard, Frank Achten, Marianne Bigot, Daril A. A. Mello, Hideaki Furukawa
2023/3/8	Delay Compensated Quad-level Delta-sigma Modulation Dual-color DRoF System for Beyond 5G Mobile Fronthaul	Optical Fiber Communication Conference	no.W2A.34	Zu-Kai Weng, Pham Tien Dat, Atsushi Kanno, Tetsuya Kawanishi, Kouichi Akahane
2023/3/8	DSP-enhanced Radio-over-fiber Xhaul Networks Toward Beyond-5G	Optical Fiber Communication Conference	no.W3F.6	Paikun Zhu, Yuki Yoshida, Atsushi Kanno, Kouichi Akahane, Ken-ichi Kitayama
2023/3/8	100-Gbps 2-SDM 2-WDM FSO beam direct detection using resonant cavity 4x4 photodetector array	Optical Fiber Communication Conference	no.W3I.2	Toshimasa Umezawa, Atsushi Matsumoto, Kouichi Akahane, Atsushi Kanno, Naokatsu Yamamoto
2023/3/8	Dispersion Compensation over C-band WDM Grid for 100Gb/s PAM4 System by Low-complexity Optoelectronic Feedforward Equalization (OE-FFE)	Optical Fiber Communication Conference	no.W4E.3	Paikun Zhu, Yuki Yoshida, Atsushi Kanno, Kouichi Akahane, Ken-ichi Kitayama
2023/3/9	Gbps-Class Solar-Blind WDM Optical Wireless Communication By (264, 274, 282)-nm Deep-UV LEDs and CsTe Photomultiplier Tube	Optical Fiber Communication Conference	no.Th1H.2	Yuki Yoshida, Kazunobu Kojima, Masaki Shiraiwa, Atsushi Kanno, Akira Hirano, Yosuke Nagasawa, Masamichi Ippommatsu, Naokatsu Yamamoto, Shigefusa F. Chichibu, Yoshinari Awaji

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2023/3/9	Temperature-Insensitive pulse and 120°C CW Operation of 1550nm-Band p-doped InAs/InGaAlAs Quantum Dot Lasers on InP(311)B Substrate	Optical Fiber Communication Conference	no.Th2A.6	Ryouta Yabuki, Atsushi Matsumoto, Ryumi Katsuhara, Siim Heinsalu, Kouichi Akahane, Yuichi Matsushima, Hiroshi Ishikawa, Katsuyuki Utaka
2023/3/9	Randomly Coupled 19-Core Multi-Core Fiber with Standard Cladding Diameter	Optical Fiber Communication Conference	no.Th4A.4	Georg F. Rademacher, Menno van den Hout, Ruben S. Luis, Benjamin J. Puttnam, Giammarco Di Sciullo, Tetsuya Hayashi, Ayumi Inoue, Takuji Nagashima, Simon Gross, Andrew Ross-Adams, Michael Withford, Jun Sakaguchi, Cristian Antonelli, Chigo Okonkwo, Hideaki Furukawa
2023/3/9	Transparent Relay and Switching of THz-wave Signals in 285-GHz Band Using Photonic Technology	Optical Fiber Communication Conference	no.Th4A.6	Pham Tien Dat, Yuya Yamaguchi, Keizo Inagaki, Shotaro Hirata, Shingo Takano, Junichiro Ichikawa, Ryo Shimizu, Isao Morohashi, Yuki Yoshida, Atsushi Kanno, Naokatsu Yamamoto, Tetsuya Kawanishi, Kouichi Akahane
2023/3/9	273.6 Tb/s Transmission Over 1001 km of 15-Mode Fiber Using 16-QAM C-Band Signals	Optical Fiber Communication Conference	no.Th4B.5	Menno van den Hout, Giammarco Di Sciullo, Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Nicolas K. Fontaine, Roland Ryf, Haoshuo Chen, Mikael Mazur, David T. Neilson, Pierre Sillard, Frank Achten, Jun Sakaguchi, Cristian Antonelli, Chigo Okonkwo, Hideaki Furukawa
2023/3/9	Colorless and Directionless ROADM for Meshed Coupled-Core Multicore Fiber Networks	Optical Fiber Communication Conference	no.Th4C.3	Ruben S. Luis, Giammarco Di Sciullo, Georg F. Rademacher, Benjamin J. Puttnam, Andrea Marotta, Robert Emmerich, Nicolas Braig-Christophersen, Ralf Stolte, Fabio Graziosi, Antonio Mecozzi, Colja Schubert, Tetsuya Hayashi, Takuji Nagashima, Cristian Antonelli, Hideaki Furukawa
2023/4/1	Metropolitan Area Network Model Design using Regional Railways Information for Beyond 5G Research	IEICE Transactions on Communications	vol.E106.B, no.4, pp.296-306	Takuji Tachibana, Yusuke Hirota, Keijiro Suzuki, Takehiro Tsuritani, Hiroshi Hasegawa
2023/4/14	Fiber-Terahertz-Fiber Bridge System in the 355-GHz Band using Simple Optical Frequency Comb and Photonics-Enabled Receiver	Optics Letters	vol.48, no.8, pp.2190-2193	Pham Tien Dat, Isao Morohashi, Norihiko Sekine, Atsushi Kanno, Naokatsu Yamamoto, Kouichi Akahane
2023/4/15	Resonant Cavity 4-λ Integrated 4x4 PD-Array for High Optical Alignment Robustness WDM-FSO Communications	Journal of Lightwave Technology	vol.41, no.8, pp.2465-2473	Toshimasa Umezawa, Shoichi Takamizawa, Atsushi Matsumoto, Kouichi Akahane, Naokatsu Yamamoto, Atsushi Kanno, Tetsuya Kawanishi
2023/5/9	Surface Photonic Crystal Engineering of a Multi-Mode VCSEL for a Bit-Loaded Broadband QAM-OFDM Data Link at 99 Gbit/s	MDPI Photonics	pp.549	Yu-Hong Lin, Chih Hsien Cheng, Cheng-Ting Tsai, Wei-Li Wu, Kent D. Choquette, Gong-Ru Lin
2023/5/12	Recent Advances in SDM Transmission Using Standard Cladding Diameter Multicore Fibers	Conference on Lasers and Electro-Optics	no.SF1M.1	Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Hideaki Furukawa
2023/5/15	Effects of a variable linewidth laser and variable linewidth shape laser on coherent FMCW LiDAR	Optics Continuum	vol.2, no.5, pp.1122-1136	Yu Zhou, Chen Zheng, Zu-Kai Weng, Keizo Inagaki, Tetsuya Kawanishi
2023/6/5	Ultra-long-distance distribution of low-phase-noise reference lightwave for optical communications	Optics Express	vol.31, no.13, pp.20715-20729	Jun Sakaguchi, Yoshinari Awaji, Hideaki Furukawa
2023/6/15	Demonstration of a 15-Mode Network Node Supported by a Field-Deployed 15-Mode Fiber	Journal of Lightwave Technology	vol.41, no.12, pp.3695-3703	Ruben S. Luis, Georg F. Rademacher, Benjamin J. Puttnam, Giammarco Di Sciullo, Andrea Marotta, Robert Emmerich, Nicolas Braig-Christophersen, Ralf Stolte, Fabio Graziosi, Antonio Mecozzi, Colja Schubert, Giuseppe Ferri, Frank Achten, Pierre Sillard, Roland Ryf, Lauren Dallachiesa, Satoshi Shinada, Cristian Antonelli, Hideaki Furukawa
2023/6/19	FPGA-driven random walk noise generation for tunable laser linewidth control	IEICE Electronics Express		Yu Zhou, Zu-Kai Weng, Keizo Inagaki, Tetsuya Kawanishi
2023/7/1	Multicore fiber interconnects for multi-terabit spine-leaf datacenter network topologies	Journal of Optical Communications and Networking	vol.15, no.7, pp.C41-C47	Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Satoshi Shinada, Tetsuya Hayashi, Tetsuya Nakanishi, Yuki Saito, Tetsu Morishima, Hideaki Furukawa

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2023/7/3	High Data-Rate and Wideband transmission in Single and Multi-Core Fibers	International Conference on Transparent Optical Networks	no.Mo.C1.1	Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Yoshinari Awaji, Hideaki Furukawa
2023/10/2	Transmission of 138.9 Tb/s over 12345 km of 125 μm cladding diameter 4-core fiber using signals spanning S, C, and L-band	European Conference on Optical Communications	no.MA.5.5	Menno van den Hout, Benjamin J. Puttnam, Giammarco Di Sciullo, Ruben S. Luis, Georg F. Rademacher, Cristian Antonelli, Chigo Okonkwo, Hideaki Furukawa
2023/10/3	Development of Three-Stage Burst-Mode EDFA with Flat Gain-Spectrum over Full C-Band for Core/Metro Networks	European Conference on Optical Communications	no.Tu.A.6.3	Yuta Goto, Yusuke Hirota, Ray Man, KS Tsang, Kit On Chung, Xiaomin Wang, Hideaki Furukawa
2023/10/4	3.56 Peta-bit/s C+L Band Transmission over a 55-mode Multi-Mode Fiber	European Conference on Optical Communications	no.We.A.1.1	Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Nicolas K. Fontaine, Mikael Mazur, Haoshuo Chen, Roland Ryf, David Neilson, Daniel Dahl, Joel Carpenter, Pierre Sillard, Frank Achten, Marianne Bigot, Jun Sakaguchi, Hideaki Furukawa
2023/10/4	Reduction of Modal Dispersion in a long-haul 15-Mode Fiber link by means of Mode Permutation	European Conference on Optical Communications	no.We.A.1.2	Giammarco Di Sciullo, Menno van den Hout, Georg F. Rademacher, Ruben S. Luis, Benjamin J. Puttnam, Nicolas K. Fontaine, Roland Ryf, Haoshuo Chen, Mikael Mazur, David T. Neilson, Pierre Sillard, Frank Achten, Jun Sakaguchi, Chigo Okonkwo, Antonio Mecozzi, Cristian Antonelli, Hideaki Furukawa
2023/10/4	384Gb/s PAM Transmission with CMOS-class Driving Voltage, Optical&RF-amplifier-free Reception and Low-complexity DSP Using a High-slope-efficiency Modulator	European Conference on Optical Communications	no.We.B.6.4	Paikun Zhu, Yuya Yamaguchi, Yuki Yoshida, Pham Tien Dat, Masayuki Motoya, Shingo Takano, Ryo Shimizu, Ken-ichi Kitayama, Kouichi Akahane
2023/10/4	Multi-Stacked Large-Aperture High-Speed PIN-Photodetector for Mobile-FSO Communication	European Conference on Optical Communications	no.We.D.1.2	Toshimasa Umezawa, Shinya Nakajima, Abdelmoula Bekkali, Michikazu Hattori, Atsushi Matsumoto, Atsushi Kanno, Kouichi Akahane, Naokatsu Yamamoto
2023/10/5	Coherent Detection Using Incoherent Spectrally Sliced ASE With a Polarization Insensitive Self-Homodyne Receiver	European Conference on Optical Communications	no.Th.A.5.4	Budsara Boriboon, Ruben S. Luis, Georg F. Rademacher, Benjamin J. Puttnam, Satoshi Shinada, Hideaki Furukawa
2023/10/5	Radio-over-Free-Space Optical System for Simultaneous Transmission of 5G NR mmW and sub-THz RAT Signals	European Conference on Optical Communications	no.Th.A.7.1	Pham Tien Dat, Toshimasa Umezawa, Yuki Yoshida, Keizo Inagaki, Naokatsu Yamamoto, Isao Morohashi, Atsushi Kanno, Tetsuya Kawanishi, Kouichi Akahane
2023/10/5	40.5 Tb/s, 312.9 km, Unrepeated Transmission Using Erbium-Doped Tellurite Fiber Amplifiers	European Conference on Optical Communications	no.Th.B.2.5	Ruben S. Luis, Benjamin J. Puttnam, Georg F. Rademacher, Menno van den Hout, Giammarco Di Sciullo, Chigo Okonkwo, Cristian Antonelli, Jun Sakaguchi, Hideaki Furukawa
2023/10/5	Switching in High-Capacity SDM networks	European Conference on Optical Communications	no.Th.B.6.1	Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Hideaki Furukawa
2023/10/5	Which Multi-Core Fiber Layout is Best for Highest Capacity Network Design?	European Conference on Optical Communications	no.Th.B.6.3	Yuya Seki, Yosuke Tanigawa, Yusuke Hirota, Hideki Tode
2023/10/5	C + L-Band Seeded Comb Regeneration for MCF Networks	European Conference on Optical Communications	no.Th.B.6.5	Benjamin J. Puttnam, Ruben S. Luis, Georg F. Rademacher, Giammarco Di Sciullo, Menno van den Hout, Jun Sakaguchi, Cristian Antonelli, Chigo Okonkwo, Hideaki Furukawa
2023/10/5	22.9 Pb/s Data-Rate by Extreme Space-Wavelength Multiplexing	European Conference on Optical Communications	no.Th.C.2.1	Benjamin J. Puttnam, Menno van den Hout, Giammarco Di Sciullo, Ruben S. Luis, Georg F. Rademacher, Jun Sakaguchi, Cristian Antonelli, Chigo Okonkwo, Hideaki Furukawa
2023/10/5	301 Tb/s E, S, C+L-Band Transmission over 212 nm bandwidth with E-band Bismuth-Doped Fiber Amplifier and Gain Equalizer	European Conference on Optical Communications	no.Th.C.2.4	Benjamin J. Puttnam, Ruben S. Luis, Yetian Huang, Ian Phillips, Dicky Chung, Nicolas K. Fontaine, Georg F. Rademacher, Mikael Mazur, Lauren Dallachiesa, Haoshuo Chen, Wlodek Forsysiak, Ray Man, Roland Ryf, David T. Neilson, Hideaki Furukawa