

Photonic Device Workshop 2019 Technical Program

Venue: Waseda University, Nishiwaseda Campus Bldg. No.63 (Tech. Session 2F / Rump Session 1F)

Dec. 5th (Thu): LQE Young Researchers Award Ceremony

Chair : Hiroshi Yasaka (Tohoku Univ.)

9:30 - 10:40

	9:30-9:40	Opening Remarks / Award Ceremony (Hiroshi Aruga: Mitsubishi Electric)	
(1)	9:40-10:10	[Commemorative Talk] High-power and High-beam-quality Double-lattice Photonic-crystal Lasers: 高出力・高ビーム品質二重格子フォトニック結晶レーザ	Masahiro Yoshida (Kyoto Univ.)
(2)	10:10-10:40	[Commemorative Talk] Ultra-high Bandwidth InP Modulator Co-assembled with High-speed Electronics: InP 変調器の超広帯域化技術と高速エレクトロニクス技術の融合	Yoshihiro Ogiso (NTT)
	10:40-10:55	Coffee Break / Showcase (15min)	

Dec. 5th (Thu): ISLC Preconference I

Chair : Akihiko Kasukawa (Furukawa Electric)

10:55 - 12:20

	10:55-11:00	Opening Remarks (Akihiko Kasukawa: Furukawa Electric)	
	11:00-11:10	Introduction of ISLC2020 (Paul Crump: FBH)	
(3)	11:10-11:50	Progress in Efficiency and Brightness in GaAs-Based High Power Diode Lasers	Paul Crump (FBH)
(4)	11:50-12:20	High Efficiency 9xx-nm Broad Area Laser Diode and its Reliability in High Power Operation: 高効率 9xx-nm 帯ブロードエリアレーザダイオードおよび高出力動作における信頼性	Yuji Yamagata (Fujikura)
	12:20-12:30	Showcase Short Presentation (1min/each)	
	12:30-13:50	Lunch Break / Showcase (80min)	

Dec. 5th (Thu): ISLC Preconference II

Chair : Nobuhiko Nishiyama (Tokyo Tech.)

13:50 - 15:00

(5)	13:50-14:30	Integrated Tunable Laser Systems on InP for OCT and Strain Sensing	Erwin Bente, Stefanos Andreou, Rastko Pajković, Joel Hazan, Kevin Williams (TU/e)
(6)	14:30-15:10	Heterogeneous III-V-on-Silicon Lasers and PICs for High-Performance Computing	Di Liang, Geza Kurczveil, Yingtao Hu, Antoine Descos, Bassem Tousson, Zhihong, Huang, Erwen Li, Chong Zhang, Raymond G. Beausoleil (HP Labs)
	15:10-15:40	Coffee Break / Showcase (30min)	

Dec. 5th (Thu): ISLC Preconference III
Chair : Hideki Yagi (Sumitomo Electric)
15:40 - 17:20

(7)	15:40-16:10	Next Generation Light Sources for Digital Coherent System: 次世代デジタルコヒーレント通信用光源の開発	Naoki Fujiwara (Sumitomo Electric)
(8)	16:10-16:50	High-performance Photodiodes and APDs Based on III-V Technologies	Jin-Wei Shi (NCU)
(9)	16:50-17:20	Status and Prospects of GaN-Based VCSELs: GaN 系面発光レーザーの現状と展望	Tetsuya Takeuchi (Meijo Univ.)

Dec. 5th (Thu): Poster Session
Sponsored by Tsurugi-Photonics Foundation
17:40 - 19:00 (18:30 – 20:30 Rump Session)

P-(1)		Study of Light-to-heat Conversion Micro Ring Resonator: 光熱変換型マイクロリング共振器に関する研究	Yuichiro Kondo (Tokyo Tech.)
P-(2)		Design of Semiconductor Optical Amplifier for High-Power Optical Phased Array: 光フェーズドアレイ素子の高出力化に向けた半導体光増幅器の設計	Shota Onoduka (Univ. Tokyo)
P-(3)		Si Waveguide Optical Circulator Based on Half TE-TM Mode Converter Using Magneto-optical Phase Shift: TE-TM 半モード変換器と非相反移相効果を用いた Si 導波路型光サーキュレータ	Satoshi Tanimoto (Tokyo Tech.)
P-(4)		Si MZI-based Wavelength Selective Switch Incorporating Ring Resonator: リング共振器を内包したシリコン MZI 型波長選択光スイッチ	Kosuke Itagaki (Tokyo Tech.)
P-(5)		High-speed 600-GHz-wide Wavelength Switching at TDA-DFB Laser: 波長切替幅 600GHz における TDA-DFB レーザの切替高速化	Yuri Niiya (Kyushu Univ.)
P-(6)		400-GHz Repetition Optical Pulse Train by Time-domain-multiplexing Technology: 時間多重による 400GHz 繰り返し光パルス列の生成	Kohei Ichiyama (Kyushu Univ.)
P-(7)		Study of the Relation between Thermal Resistance and Optical Gain in GaInAsP/SOI Hybrid SOA: GaInAsP/SOI ハイブリッド SOA における熱抵抗と光学利得の関係	Takayuki Miyazaki (Tokyo Tech.)
P-(8)		FMCW LiDAR Detection System Optimized for Reducing the Effect of Speckles on the Detector Aperture: スペックルによる影響低減のための FMCW LiDAR 受光部の研究	Shun Ishikura (Keio Univ.)
P-(9)		Integrated Optical Waveguide Gas Utilizing Amplifier Assisted Technique: EDFA を用いた光呼吸センシングデバイスの計測検討	Li Wenying (Kyushu Univ.)
P-(10)		Investigation of Ultra-low Vltage Quantum Well Mach-Zehnder Modulator for Optical Interconnection for Superconducting Integrated Circuits: 超伝導集積回路光インターコネクション用超低電圧量子井戸マッハ・ツェンダー光変調器の検討	Kota Sakai (YNU)
P-(11)		Linewidth-tunable Optical Source with Lorentzian Spectrum Based on External Modulation: 外部変調器を用いたローレンツ型スペクトルを持つ線幅可変光源	Jun Mochizuki (Waseda Univ.)
P-(12)		Topological Taper Structure towards Highly Efficient Coupling between Si Wire Waveguides and Topological Edge State Waveguide: Si 細線導波路とトポロジカル伝送路間の高効率な結合のためのトポロジカルテーパ構造の提案	Hibiki Kagami (Tokyo Tech.)

P-(13)	Novel Encryption Method by AND Operation between Two Carriers for High-Security Terahertz Wave Communication: 高セキュリティテラヘルツ波通信に向けた二搬送波間の AND 演算による新たな暗号化手法の検討	Kenta Yamauchi (Kyushu Univ.)
P-(14)	Proposal of the 1×N Optical Mode Switch Based on the Spatial Single Dimensional Mode: 空間 1 次元型 1×N 光モードスイッチの提案	Satoshi Ogawa (Kyushu Univ.)
P-(15)	Self-holding Magneto-Optical Switch Using Thin-film Magnet: 薄膜磁石を用いた自己保持型磁気光学スイッチ	Daiki Kano (Tokyo Tech.)
P-(16)	Study on Beam Propagation in Distorted Photonic Crystal - the Case of y Square Distortion-: 歪フォトニック結晶における光伝搬の研究 -y 二乗歪の場合-	Kanji Nanjo (Kyoto Inst. Tech.)
P-(17)	Resolution Analysis of Imaging Method Using Multimode Fiber and Optical Phased Array: 多モードファイバと光フェーズドアレイを用いたイメージング手法の分解能解析	Taichiro Fukui (Univ. Tokyo)
P-(18)	A Study of Fabrication Process of Low-loss Silicon Waveguides for Optical Isolators: 光アイソレータ用の低損失シリコン導波路の製作プロセスの検討	Naoya Katsumata (Kanagawa Inst. Tech.)
P-(19)	Fabrication of Air-bridge Waveguide Structures Nb ₂ O ₅ : Nb ₂ O ₅ を用いたエアブリッジ型導波路構造の製作	Naoki Yamanaka (Kanagawa Inst. Tech.)
P-(20)	Composition and Thickness Control of InAs/GaSb Superlattice Using MOVPE for Mid Infrared Photonic Devices: 中赤外デバイスのための MOVPE 法による InAs/GaSb 超格子の組成・層厚制御	Yuki Imamura (Univ. Miyazaki)
P-(21)	Automatic Probing Station for Silicon Photonic Devices: シリコン導波路デバイスの自動計測技術の研究	Chiharu Yatabe (Waseda Univ.)
P-(22)	Asymmetric Energy Transfer between Er and Yb in the Sensitization Effect of (Er _{0.1} Yb _{0.1} Y _{0.8}) ₂ SiO ₅ Optical Gain Medium: (Er _{0.1} Yb _{0.1} Y _{0.8}) ₂ SiO ₅ 光学利得媒体の増感効果における Er と Yb 間の非対称エネルギー移動	Ayuko Minowa (UEC Tokyo)
P-(23)	Crosstalk Reduction of THz Band Reflective AWG Frequency Filter: THz 帯反射型 AWG 周波数フィルタのクロストーク低減	Hiromu Yada (Sophia Univ.)
P-(24)	Effect of Limited Phase Shift on Single-Pixel Imaging using Optical Phased Array: 光フェーズドアレイを用いた単一ピクセルイメージングにおける位相シフト量制限の効果	Samar Emara (Univ. Tokyo)
P-(25)	Generation of Eigenmodes in Optical Fiber Using Photonic Crystal Waveplate: フォトニック結晶型波長板を用いた光ファイバの固有モードの生成	Hibiki Satoyoshi (Sophia Univ.)
P-(26)	Synthesis of Hydrogen Free SiNx toward Back-end Photonics by Programmable RAS: プログラマブル RAS によるバックエンドフォトニクスに向けた水素フリー-SiNx の合成	Grece Fabiola (UEC Tokyo)
P-(27)	Shape PEC of Electron-beam Lithography for C-ring Metamaterial Structures: C リングメタマテリアル構造のための電子ビームリソグラフィーの近接効果補正	Makoto Tanaka (Tokyo Tech.)

Dec. 6th (Fri): Photonics Devices for Beam Steering, Beam Forming, and Imaging I**Chair : Hideo Isshiki (UEC Tokyo)****9:55 - 11:00**

	9:55-10:00	Opening Remarks (Hideo Isshiki: UEC Tokyo)	
(10)	10:00-10:30	Development of Si Photonics Slow Light LiDAR: Si フォトニクスを用いたスローライト LiDAR の開発	Toshihiko Baba, Hiroshi Abe, Hiroyuki Ito, Takemasa Tamanuki (YNU)
(11)	10:30-11:10	A GeSi Time-of-Flight Image Sensing Platform Performs at Eye-safe and Low Ambient Noise Environment	Szulin Cheng (Artlux)
	11:10-11:30	Coffee Break / Showcase (20min)	

Dec. 6th (Fri): Photonics Devices for Beam Steering, Beam Forming, and Imaging II**Chair : Yuya Shoji (Tokyo Tech.)****11:30 - 12:30**

(12)	11:30-12:10	Monolithic Optical Phased Arrays in Silicon	Hossein Hashemi (USC)
(13)	12:10-12:40	Single-pixel Imaging Using Integrated Optical Phased Arrays: 光集積フェーズドアレイを用いた単画素イメージング	Takuo Tanemura, Yusuke Kohno, Taichiro Fukui, Yoshiaki Nakano (Univ. Tokyo)
	12:40-14:00	Lunch Break / Showcase (80min)	

Dec. 6th (Fri): Photonics Devices for Beam Steering, Beam Forming, and Imaging III**Chair : Hidetaka Nishi (NTT)****14:00 - 15:00**

(14)	14:00-14:30	VCSEL Beam Scanner and its Applications in 3D Sensing: VCSEL 型ビーム偏向器とその 3D センシング応用	Gu Xiaodong, Fumio Koyama (Tokyo Tech.)
(15)	14:30-15:00	Output Beam Control by Photonic-Crystal Lasers Having Lattice Points Displacements: フォトニック結晶レーザーの格子点変位による出射ビーム制御	Kyoko Kitamura (Kyoto Inst. Tech.)
	15:00-15:15	Coffee Break (15min)	

Dec. 6th (Fri): Photonics Devices for Beam Steering, Beam Forming, and Imaging IV**Chair : Goji Nakagawa (Fujitsu)****15:15 - 16:15**

(16)	15:15-15:45	Recent Advancement in Spatial Light Modulators and their Applications: 空間光制御デバイスの進展とその応用展開	Haruyoshi Toyoda, Hiroshi Tanaka (Hamamatsu Photonics)
(17)	15:45-16:15	Make the Invisible Visible with the Humanoid Visual LiDAR: 人間のような視覚 LiDAR で不可視を可視化する	Hisato Uetsuka (SteraVison)
	16:15-16:25	Poster Award Ceremony (Yuichi Tohmori: Tsurugi-Photonics Foundation)	
	16:25-16:30	Closing Remarks (Hiroshi Takahashi: Sophia Univ.)	

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