

# Symposium Program

26<sup>th</sup> November (Tuesday)

## Welcome Address (10:00-10:05)

Tatsuo Saitoh (*PETRA*)

## Session A: Opening (10:05-11:45)

Session Chair: Hideki Yagi (*PETRA, SEI*)

10:05 A-1 (Keynote)

**Progress in Photonic Electronic Convergence Technologies through National Projects in Japan**  
Nobuhiko Nishiyama (*Institute of Science Tokyo, PETRA*)

10:25 A-2 (Plenary)

**High capacity, low power, short reach integrated silicon photonic interconnects**  
John E. Bowers (*UCSB*)

11:05 A-3 (Plenary)

**Mathematical and Information Technologies for the Realization of Cyber-Physical Systems and Their Industrial Applications**

Katsuki Fujisawa (*Institute of Science Tokyo*)

## 11:45-13:00 Lunch break

## Session B: Hybrid Integration (13:00-14:30)

Session Chair: Mitsuru Takenaka (*The University of Tokyo*)

13:00 B-1 (Invited)

**Hybrid Integration of Thin-film Lithium Niobate and Silicon Photonics**  
Shayan Mookherjea (*UCSD*)

13:35 B-2 (Invited)

**Hybrid integrated photonics accelerated by transfer printing**  
Yasutomo Ota (*Keio University*)

14:10 B-3

**InP/Si Heterogeneously Integrated Optical Devices using Chip on Wafer Bonding Process**  
Hideki Yagi, Naoki Fujiwara, Naoko Inoue, and Masaki Yanagisawa (*PETRA, SEI*)

## 14:30-15:00 Coffee Break

## Session C: Computing Architecture and Middleware (15:00-16:15)

Session Chair: Jun Miyazaki (*Institute of Science Tokyo*) / Yuta Namiki (*NEC*)

15:00 C-1

**A High-Performance Database Management System in Ultra-Low Latency Networks: An Overview and Use Cases**  
Yuta Namiki (*NEC*)

15:20 C-2

**Read-Safe Snapshots for Mixed OLTP/OLAP Database Workloads**  
Jun Miyazaki (*Institute of Science Tokyo*)

15:40 C-3

**Join query optimization using cardinality estimation and views**  
Makoto Onizuka (*Osaka University*)

## Poster Session (16:00-18:00)

## Reception (18:00-20:00) @Tsubame Terrace

## 27<sup>th</sup> November (Wednesday)

### Session D: Computing and Optical Networks (10:00-11:50)

Session Chair: Shinsuke Tanaka (*PETRA, Fujitsu*)

10:00 **D-1 (Invited)**

**Navigating the Future of Service Providers: A Journey Through Converged Transport Architecture**

Rob Piasecki (*Cisco*)

10:35 **D-2 (Invited)**

**Programmable Radio Spectrum Space**

Shunsuke Saruwatari (*Osaka University*)

11:10 **D-3**

**Developing a platform for control and management of multi-degree elastic optical path networks**

Kiyo Ishii (*AIST*)

11:30 **D-4**

**Low-latency optical communication with microresonator frequency comb as a light source**

Takasumi Tanabe (*Keio University*)

**11:50-13:00 Lunch break**

### Session E: Optical Transceivers (13:00-14:50)

Session Chair: Takuo Tanemura (*The University of Tokyo*)

13:00 **E-1 (Invited)**

**Ultra-high-density CPO transceivers and its integration technology**

Masaki Kato (*Marvell Technology*)

13:35 **E-2 (Invited)**

**Electrical and Optical Multiplexing Technique for High Symbol Rate Signal Generation (tentative)**

Hiroshi Yamazaki (*NTT*)

14:10 **E-3**

**Development of key building blocks for energy-efficient multi-carrier coherent transceiver**

Shinsuke Tanaka, Yohei Sobu, Tomoyuki Akiyama, Jun Matsui, Yutaro Enomoto (*PETRA, Fujitsu*)

14:30 **E-4**

**Development of 1.5- $\mu\text{m}$  InAs Quantum Dots on InP for On-Chip Light Sources and Design of Photonic Crystal Waveguides with a Large Negative Group Delay Dispersion**

Satoshi Iwamoto (*The University of Tokyo*)

**Closing Address (14:50-15:00)**

Shu Namiki (*AIST*)