



CALL FOR PARTICIPATION

The 16th Conference on IP + Optical Network (iPOP2020)
Virtual Web Conference

Sept. 10-11, 2020, Japan Standard Time (UTC+09:00)

<https://www.pilab.jp/ipop2020/>

Sponsored by PIL (Photonic Internet Lab) and ISOCORE.

iPOP2020
COMMITTEE

General Co-Chairs: Naoaki Yamanaka, Keio University, Japan

Akio Kawabata, NTT, Japan

Bijan Jabbari, ISOCORE, USA

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Takehiro Tsuritani, KDDI Research, Japan

Technical Program Committee Co-Chairs: Akira Hirano, Tokyo Denki University, Japan

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Exhibition Committee Co-Chairs: Hirofumi Yamaji, TOYO Corporation, Japan

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Yusuke Hirota, NICT, Japan

Akio Kawabata,
NTT,
Japan



Naoaki Yamanaka,
Keio University,
Japan



Bijan Jabbari,
ISOCORE,
USA



WELCOME REMARKS: WE ARE GOING ON-LINE! (JUNE 8, 2020)

Dear friends, presenters and supporters of iPOP Conference, the world has been severely impacted by the COVID-19 pandemic. We were obliged to postpone the iPOP2020 event, planned for physical conference in May 28-29, to a virtual conference to be held September 10-11, 2020, following the guidelines of the CDC and local government advice. This impact, however, just start for new life and business style. Today, we use video conferencing and hold university classes remotely from home or remote office. Evidently, this requires sufficient bandwidth and quality and better human interfacing. This is a trend which has started and is giving rise to new businesses such as virtual university, virtual office and eventually remote delivery by autonomous vehicles – New areas for future iPOP events to focus on.

This year marks the 16th anniversary of this International conference, which has been founded and sponsored by Photonic Internet Labs (PIL) and ISOCORE. Since its inception, the conference has enjoyed well attendance with diverse and involved participants. Thanks to support of industry the event has been a real success. This year we are going to realize virtual iPOP 2020 with virtual presentation, virtual booth demo and virtual interoperability, all realizing by advanced network and cloud systems, given the short time to prepare but a new challenge for the state-of-the-art high-performance network applications.

This year we are augmenting the existing central theme of the conference with 5G network and smart city which including backbone, platform and services. In addition, we have network topics such as SDN, NFV and service chaining with the focus on reliable, manageable, flexible and cost-effective carrier and/or service provider networks. In the past few years these networks have mostly focused on datacenter, mobile access network integration like 5G and include AI and data analytics aspects. Integrating network and processing functions, sophisticated control and managing functions are newly created features in NTT networks which was announced as IOWN, a new paradigm for networking. The iPOP conference venue happens to be at the heart of IOWN technology.

Almost 3 years ago at the iPOP opening ceremony, Prof. Yamanaka indicated that iPOP which started as IP+OPTICAL, now it stands for Intelligent and Processing over Optical networks. Optical networking puts lower restriction on distance, bandwidth, and delay, allowing easily integrating some functions in the network. This integration of data processing with data transport in networks underscores an importance step. With topics such as multi-layer, multi-technology operation, integrating AI, cloud computing, edge computing, 5G networks with low latency, IoT, and reliable access. iPOP now features advanced physical and sophisticated processing technologies.

The technical program committee has put together an exciting program consisting of virtual technical sessions with emphasis on presentations on SDN, Orchestration with data/network, PCE (Path Computation Element) with data analytic and its applications, and advance data-center network with Optical Devices. In addition, there will be technology virtual showcases and other demonstrations virtually are new challenges.

We hope that you would be able to join us online at iPOP 2020 with virtual presentations and remote technical discussions. We look forward to your remote participation and support to make the event a great success!

iPOP 2020 General Co-Chairs

Naoaki Yamanaka, Akio Kawabata, Bijan Jabbari

REGISTRATION INFORMATION

The participation is **FREE**, but advance registration is required.

The registration site will be available at <https://www.pilab.jp/ipop2020/>

TIMETABLE (TENTATIVE)

* The Session will be held at Zoom Webinar. You need to advance registration to attend the session.

Thursday 10, September, 2020		Friday 11, September, 2020	
10:00-12:00	iPOP Plenary Opening: 20min. Keynote: 40min each K-1: "Scalable high-capacity optical transport technologies for Innovative Optical and Wireless Network (IOWN)", Yutaka Miyamoto (NTT) K-2: "Oscar Gonzalez des Dios" (Telefonica) iPOP Exhibition Introduction: 10min.	09:40-11:20	Technical Session (3) Networking with machine learning: 25min each T-9: "Analysis of the Optical Data Center Network Slicing Strategy in Support of Machine Learning Applications with Multiple Patterns", Cen Wang T-10: "Deep Reinforcement Learning based Computing Job Scheduling in Optical Cloud/Edge Data Center Network", Xiong Gao T-11: "Advanced Machine Learning-assisted Anomaly Detection Framework for BGP Networks", Genichi Mori T-12: "Relearning Architecture for Autonomic Resource Arbitration in SFC Platform", Takahiro Hirayama
Lunch Break (60 min)		Lunch Break (60 min)	
13:00-14:40	Technical Session (1) Network design and optimization: 25min each T-1: "Defragmentation for 1+1 protected elastic optical networks: A route partitioning approach", Bijoy Chand Chatterjee T-2: "Optimization Model for Virtualized Network Graph Design and Embedding", Takehiro Sato, T-3: "PoC construction of Expected Capacity Guaranteed Routing (ECGR) based on k-shortest path for Various Networks", Masahiro Matsuno T-4: "Minimizing the Cost of Translucent Space Division Multiplexing Elastic Optical Networks", Filippos Balas	11:20-12:00	Gold Sponsor Session: 20min each G-3 "Who is the Integrated Automation Hero?", Chang Kyu Kim, Japan G-4 "TBD", NTT
Break (10 min)		Break (10 min)	
14:50-16:30	Technical Session (2) Advanced network architectures: 25min each T-5: "Study of MEC architecture expansion for latency-aware application allocation", Tetsu Joh T-6: "Demonstration of Service Function Chain Allocation with Network Service Header", Rui Kang T-7: "Low Earth Orbit Satellite Network Architecture with Optical Inter Satellite Links", Cen Wang T-8: "Hierarchical Skew Handling over Massively Parallel Optical Channel for the Dynamic MAC", Kyosuke Sugiura	13:00-14:40	Technical Session (4) Network resiliency and automation: 25min each T-13: "Applying Partial Key Grouping-based Multipath Routing to a Highly Reliable Core Network", Taichi Okumura T-14: "Next-Generation Closed-Loop Automation - An Inside View", Laurent Ciavaglia T-15: "Node structure for high-availability and efficient metro ring network with optical burst signal", Kana Masumoto T-16: "A study of failure control method between VNF/VNFM on NFV architecture", Kotaro Mihara
16:30-17:10	Gold Sponsor Session: 20min each G-1 "gRPC Enabled Massively Parallel and Flexible Network", Kyosuke Sugiura, Keio University, Japan G-2 "Open 5G - OpenShift for local 5G geo-oriented edge computing", Hidetsugu SUGIYAMA, Red Hat K.K(Japan), Japan	14:50-16:55	Invited Session 125min TBD "Control and management of transport network domains", Tomohiro Otani (KDDI) "An intent-based approach to cloud resource management in accordance to cloud functional and non-functional requirements", Chao Wu (NTT) "Data oriented networking accelerating digital transformation", Motoyoshi Sekiya (Fujitsu) "Automation of intent-based network designing with machine learning", Takayuki Kuroda (NEC) "Integrated infrastructure automation for smart networks", Hervé Guesdon (UBIqube)
17:10-18:10	Poster Session / Showcase Presentation	16:55-17:10	Closing

VIRTUAL EXHIBITION & SHOWCASE

The Virtual Exhibition & Showcase will be held on the iPOP Web.

In order to access Exhibitor Booth/Session, you need the User ID listed in the Registration Confirmation e-mail.

Please check the iPOP2020 website for advance registration.

<https://www.pilab.jp/ipop2020/>

PARTICIPANTS



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ONLINE VENUE

As a countermeasure against infection of COVID-19, iPOP2020 will be held online using zoom.

Detailed information will be posted on the iPOP2020 website.

<https://www.pilab.jp/ipop2020/>