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**Toyama, Japan
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MOC2019 TECHNICAL PROGRAM

Sunday, 17 November

Main Hall, 3F

10:00-10:05 Opening Remarks

Conference Co-chairs:

O. Sugihara, *Utsunomiya Univ.*
H. Takahashi, *Sophia Univ.*

10:00-12:20 Session MS: MOC Science School in Toyama "Light and Laser" (in Japanese)

Coordinator:

H. Nakajima, *Waseda Univ.*

Moderators:

G. Hatakoshi, *Waseda Univ.*
S. Naka, *Univ. Toyama*

This session is for beginners and open to public, especially school students and non-experts.

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MS-2 Organic light emitting diodes — for new era displays —.....6

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Break (11:05-11:20)

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Coordinator:

T. Miyamoto, *Tokyo Inst. Tech.*

Moderators:

K. Yokomori, *Nanophotonics Eng. Org.*
E. Tokumitsu, *Japan Advanced Institute of Sci. & Tech.*
T. Maruyama, *Kanazawa Univ.*

This session is for beginners and open to public, especially school students and non-experts.

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Conference Co-chairs:

O. Sugihara, *Utsunomiya Univ.*
H. Takahashi, *Sophia Univ.*

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Room 201-203, 2F

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Q. Xu[†], E.Y.B. Pun[‡], and D.L. Zhang^{†,‡}, [†]*Tianjin University*, [‡]*City University of Hong Kong*

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Break (17:15-17:30)

Main Hall, 3F

17:30-18:30 Microconcert

♪♪ The 20th Microconcert ♪♪

Machida Philharmony Baroque Ensemble (MPB)

Program

- 1) Georg Friedrich Händel: "Concerto Grosso" Op.6-7
- 2) Carl Philipp Emanuel Bach: "Symphony for String Orchestra" Wq.182 No.4
- 3) Charles Gounod: "Ave Maria" Vocal: Hirochika Nakajima
- 4) John Rutter: "Suite for Strings"



Concert 2018 at Wako University Popuri Hall, Tokyo

Members on Stage

Chair: Prof. Kenichi Iga

Solo Concertmistress & Coach: Takako Yoshii

Secretary: Kaeko Fujii

Stage Manager: Akio Yoshii

Violin: Takako Yoshii, Kaeko Fujii, Tomoko Iga, Shoko Suzuki, Mariko Furuta, Mizuho Okada, Yoshikazu Karasawa, Mizue Hoshi, Akiko Maehara

Viola: Yoko Miyazaki, Reiko Araki

Cello: Mitsuko Nagahama, Kazutaka Okasaka, Masamichi Ishikawa

Contrabass: Kenichi Iga

Cembalo: Naomi Hanzawa

Break (18:30-18:45)

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18:45-20:15 Conference Party

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Y. Yang, *Tsinghua Univ.*

- F-1** **Polarization control of GaN-based micro-caavity lasers with top high-contrast grating reflectors.....284**
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- F-5** **High-voltage CMOS photovoltaic module with Schottky bypass diodes.....292**
10:00 J.-F. Liao, Y.-C. Cheng, and Y.-J. Hung, *National Sun Yat-sen University*
- F-6** **Green VCSELs based on nitride semiconductors (Invited).....N/A**
10:15 B.-P. Zhang, *Xiamen University*

Break (10:45-11:00)

11:00-12:45 Session G: Lasers

Chairs: U. Zeitner, *Fraunhofer IOF*

R. Petruškevičius, *Center for Physical Sciences and Technology*

- G-1** **High speed VCSELs and co-packaging for short reach communication within cloud and high performance computing (Invited).....298**
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- G-2** **High speed modulation single mode 850 nm DTCC-VCSEL.....300**
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- G-3** **Enhancement of modulation responses of directly modulated lasers with passive feedback and partially corrugated grating.....302**
11:45 S. Sulikhah¹, H.-W. Tsao², and S.-L. Lee¹, ¹*National Taiwan University of Science and Technology*, ²*National Taiwan University*
- G-4** **Observation of 60 GHz and 20 GHz multiple photon-photon resonances using active multimode interferometer laser diodes.....304**
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- G-5** **Quantum dot-based optically pumped VCSELs with high-contrast periodic gratings.....306**
12:15 T. Fördös^{1,4,5}, E.Y.B. Clarke¹, P. Patil¹, R. J. Airey¹, N. Babazadeh¹, B. Cemlyn³, M. Adams³, I. Henning³, and J. Heffernan^{1,2}, ¹*EPSRC National Epitaxy Facility, University of Sheffield*, ²*Department of Electronic and Electrical Engineering, University of Sheffield*, ³*School of Computer Science and Electronic Engineering, University of Essex*, ⁴*Nanotechnology Centre, VSB - Technical University of Ostrava*, ⁵*IT4Innovation, VSB - Technical University of Ostrava*
- G-6** **Local tuning of transfer-printed quantum-dot single-photon sources on a CMOS silicon chip.....308**
12:30 R. Katsumi, Y. Ota, A. Osada, T. Tajiri, T. Yamaguchi, M. Kakuda, S. Iwamoto, H. Akiyama, and Y. Arakawa, *The University of Tokyo*

Lunch (12:45-13:45)

13:45-15:30 Session H: Microoptics for SensingChairs: J. Zhang, *Ghent Univ.*K. Hotate, *Toyota Tech. Institute***H-1 Micro- and nano-structures for high-end optics (Invited)....312**13:45 U. D. Zeitner^{1,2}, F. Burmeister¹, T. Fluegel-Paul¹, and M. Heusinger², ¹*Fraunhofer IOF*,
²*Friedrich-Schiller-University Jena***H-2 Performance improvement of phase modulation scheme in Brillouin optical correlation domain reflectometry....314**14:15 K. Uyama¹, R. Shimizu², M. Kishi³, and K. Hotate¹, ¹*Toyota Technological Institute*, ²*The University of Tokyo*,
³*Kogakuin University***H-3 Miniature integrated spectrometer array....316**14:30 N. Danz¹, B. Höfer¹, E. Förster², T. Harzendorf¹, P. Dannberg¹, R. Leitel¹, S. Kleinle¹, and R. Brunner^{1,2},
¹*Fraunhofer Institute for Applied Optics and Precision Engineering IOF, Jena*, ²*Applied Optics, University of Applied Sciences, Jena***H-4 Effective localization of Brillouin dynamic grating for distributed fiber sensing by intensity-modulated correlation-domain technique....318**14:45 Y. Okawa¹, R. K. Yamashita², M. Kishi³, and K. Hotate¹, ¹*Toyota Tech. Inst.*, ²*Furukawa Electric Corp.*,
³*Kogakuin Univ.***H-5 Perforated microring resonators for enhanced sensing (Invited)....320**15:00 R. Petruškevičius¹, A. Balčytis^{1,2,3}, D. Urbonas^{1,4}, M. Gabalis¹, K. Vaškevičius¹, and S. Juodkazis³, ¹*Center for Physical Sciences and Technology*, ²*Yokohama National University*, ³*Swinburne University of Technology*,
⁴*IBM***Break (15:30-15:45)****15:45-16:00 Session PD: Postdeadline Session**Chairs: T. Arakawa, *Yokohama National Univ.*M. Kuwata, *Mitsubishi Electric Corp.***PD-1 High-power-output (11 dBm) SOA assisted extended reach EADFB laser (AXEL) for 1.25-Gbit/s high-loss budget optical access networks....324**M. Chen, T. Shindo, S. Kanazawa, H. Katsurai, Y. Nakanishi, A. Kanda, T. Yoshimatsu, and K. Sano,
*NTT Corporation***16:00-16:15 Award Ceremony****16:15-16:30 Closing Remarks**

Program Co-chairs:

T. Arakawa, *Yokohama National Univ.*M. Kuwata, *Mitsubishi Electric Corp.*