



OCTOBER  
14-17

# MWP2025

International Topical Meeting  
on Microwave Photonics

Centre des Congrès de Québec, Canada

[mwp2025.org](http://mwp2025.org)

## Program

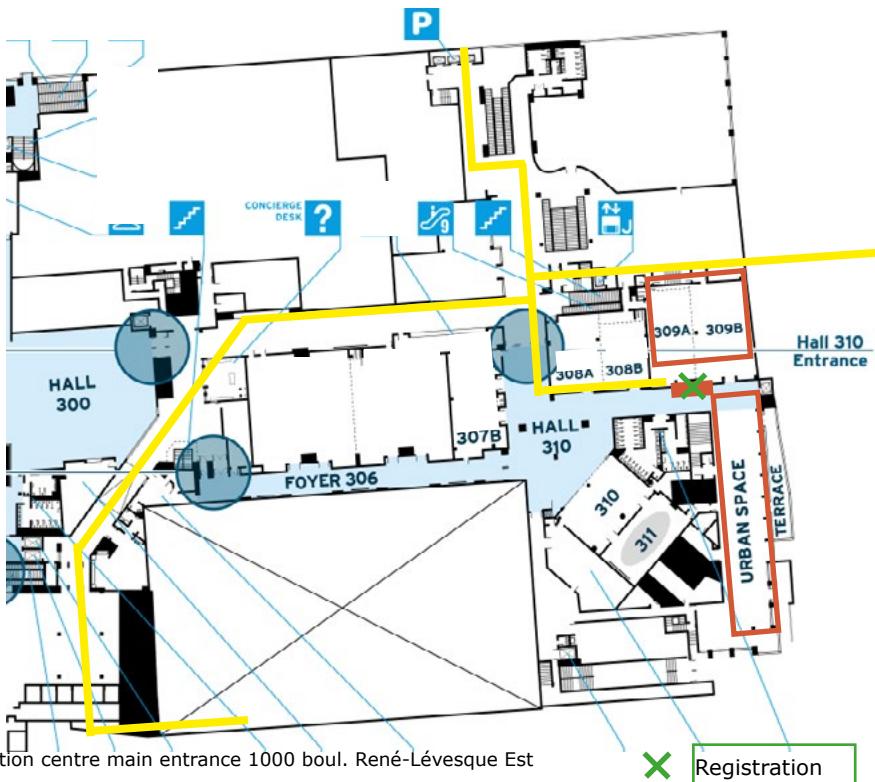
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**MWP 2025 - Secretariat:** mwp2025@conferium.com

# MEETING FLOOR PLAN - PLAN DES LIEUX DE LA CONFÉRENCE

Entrance from indoor parking



Entrance from 900 ave. Honoré-Mercier

## Venue:

Québec City Convention Centre  
1000, boul. René-Lévesque Est  
Québec (QC)  
(Main entrance, Level 4)

Entrance also possible at 900, ave. Honoré-Mercier, Level 2

## Registration desk and conferences:

Third level, Urban Space and room 309AB  
Accessible via Hall 310  
\*Main entrance is at level 4

# PROGRAM AT A GLANCE - PROGRAMME EN BREF

Tuesday, October 14, 2025 - Mardi le 14 octobre 2025			Room / Salle
12:00 - 18:45	Registration - Inscription	Welcome Desk	Urban Space
13:00 - 15:00	Workshop 1 - New frontiers in neuromorphic photonics		309AB
15:00 - 15:30	Coffee Break - Pause-café		Urban Space
15:30 - 18:30	Workshop 2 - Photonic control of antennas		309AB

Wednesday, October 15, 2025 - Mercredi le 15 octobre 2025			Room / Salle
07:00 - 20:00	Registration - Inscription	Welcome Desk	Urban Space
08:15 - 10:00	Welcome and Plenary Session 1		309AB
10:00 - 10:30	Coffee Break - Pause-café		Urban Space
10:30 - 12:15	We1 - Photonic microwave processing, sensing, and measurements 1		309AB
12:15 - 13:30	Lunch (included) - Repas du midi (inclus)		Urban Space
13:30 - 15:15	We2 - High-speed photomixers and optoelectronic converters and Tutorial		309AB
15:15 - 16:45	Coffee Break and We3 - Poster Session 1		Urban Space
16:45 - 18:25	We4 - High-performance microwave photonic signal sources 1		309AB
18:30 - 20:30	Welcome Reception - Réception de bienvenue		Urban Space

Thursday, October 16, 2025 - Jeudi le 16 octobre 2025			Room / Salle
08:00 - 18:30	Registration - Inscription	Welcome Desk	Urban Space
08:30 - 10:00	Plenary Session 2 and Invited		309AB
10:00 - 10:30	Coffee Break - Pause-café		Urban Space
10:30 - 12:15	Th1 - Photonic-enhanced artificial intelligence (AI) computing techniques		309AB
12:15 - 13:30	Lunch (included) - Repas du midi (inclus)		Urban Space
13:30 - 15:00	Th2 - Integrated microwave photonics		309AB
15:15 - 16:45	Coffee Break and Th3 - Poster Session 2		Urban Space
16:45 - 18:15	Th4 - Radio over Fiber (RoF) for B5G/6G mobile data and terrestrial communication systems		309AB
18:30 - 21:30	Award Banquet Evening - Banquet de remise de prix		Monastère des Augustines

Friday, October 17, 2025 - Vendredi le 17 octobre 2025

Room / Salle

08:00 - 16:30	Registration - Inscription	Welcome Desk	Urban Space
08:30 - 10:00	Plenary Session 3 and Invited		309AB
10:00 - 10:30	Coffee Break - Pause-café		Urban Space
10:30 - 12:15	Fr1 - High-performance microwave photonic signal sources 2		309AB
12:15 - 13:30	Lunch (included) - Repas du midi (inclus)		Urban Space
13:30 - 15:00	Fr2 - Photonic microwave processing, sensing, and measurements 2		309AB
15:00 - 15:30	Coffee Break - Pause-café		Urban Space
15:30 - 16:15	Fr3 - Postdeadline Session and Wrap-Up		309AB

# WELCOME MESSAGE FROM THE GENERAL CONFERENCE CHAIRS - MESSAGE DE BIENVENUE DES PRÉSIDENTS GÉNÉRAUX



**Lawrence R. Chen**  
General Chair  
McGill University,  
Canada



**Ghaya Baili**  
General co-Chair  
Thales Group,  
France



**Charles Middleton**  
General co-Chair  
Critical Frequency  
Design,  
USA



**Shilong Pan**  
General co-Chair  
Nanjing University of  
Aeronautics and  
Astronautics, China

Brush off your French skills...we are delighted to welcome you to the 2025 International Topical Meeting on Microwave Photonics (MWP2025) in Quebec City, the capital of the beautiful province of Quebec in Canada. MWP2025 is jointly sponsored by the IEEE Photonics Society, the IEEE Microwave Theory and Techniques (MTT) Society, the IEEE Quebec Section, and the IEEE Montreal Section. This occasion marks the fourth time that the MWP conference will be held in Canada, and the second time in Quebec. We welcome delegates from around the world to the technical conference, which will be held in the Québec City Convention Centre which is centrally located and steps away from the provincial legislature (National Assembly) and historic Old Quebec.

Microwave photonics involves the use of photonic devices, systems, and techniques for applications in microwave, millimetre-wave, and THz wave engineering. The field continues to experience growth due to the increased interest in reconfigurable systems enabled by integrated microwave photonics, artificial intelligence, and space systems. The conference will begin with two exciting workshops on Tuesday, October 14, followed by single technical oral and poster sessions from Wednesday, October 15 until Friday, October 17. The Technical Program Committee received 70 contributed submissions from the Americas, Europe and the Middle East, and the Asia-Pacific regions.

Quebec City is known for its rich history, vibrant culture, and stunning architecture. As one of North America's oldest cities, it offers a unique blend of European charm and Canadian hospitality. From the cobblestone streets of Old Quebec to the majestic Château Frontenac overlooking the St. Lawrence River, the city provides a picturesque backdrop for both academic exchange and cultural exploration. Delegates will have the opportunity to enjoy world-class cuisine, historic landmarks, and scenic beauty—all within walking distance of the conference venue.

We hope that you will enjoy the breadth (and depth) of topics covered in the technical program and that you will take advantage of the time to experience various cultural activities in Quebec's capital region.

# WELCOME MESSAGE FROM THE TECHNICAL PROGRAM COMMITTEE CHAIRS - MESSAGE DE BIENVENUE DES PRÉSIDENTS DU COMITÉ DE PROGRAMME TECHNIQUE



**José Azaña**  
TPC Chair  
INRS-EMT,  
Canada



**Mable Fok**  
TPC Co-chair  
University of Georgia,  
USA



**Xiaoke Yi**  
TPC Co-chair  
University of Sydney,  
Australia



**Maurizio Burla**  
TPC Co-chair  
Technical University  
of Berlin,  
Germany

On behalf of the Technical Program Committee, we would like to warmly welcome you to the MWP 2025. The flagship conference of the microwave photonics field will begin with two workshops on October 14, respectively devoted to optical neuromorphic computing and photonics for antennas, and will then proceed with two and half days of oral and poster sessions, from October 15 to 17.

The MWP 2025 scientific program comprises a total of 76 presentations, including 3 plenary talks, one Tutorial, 9 invited talks, 37 oral presentations and 26 posters. The oral presentations have been grouped into 12 sessions, which will cover a wide range of relevant and timely topics for the microwave photonics community, namely, Photonic microwave processing, sensing and measurement technologies, High-speed photomixers and optoelectronic converters, High-performance microwave photonic signal sources, Photonic-enhanced artificial intelligence computing techniques, Integrated microwave photonics, and Radio over Fiber (RoF) for B5G/6G mobile data and terrestrial communication systems. The conference also comprises two sessions for poster presentations on these topics on October 15 and 16, respectively.

Besides the regular oral and poster sessions, the technical program of MWP 2025 features three plenary presentations and one Tutorial by four world leaders in the area, namely, Renato Lombardi on "Microwave Photonics for 5GA and 6G," Paul Prucnal on "Neuromorphic photonics," Cheng Wang on "Integrated Lithium Niobate microwave and terahertz photonics," and Juerg Leuthold on "Microwave Plasmonics".

The technical program will conclude on October 17 with oral presentation of post-deadline papers, reviewed and accepted by the Technical Program Committee

We hope you enjoy the technical program of MWP 2025.

# **ORGANIZING COMMITTEE - COMITÉ ORGANISATEUR**

## **ORGANIZING COMMITTEE - COMITÉ ORGANISATEUR**

### **General Chair/*Président général* :**

**Lawrence R. Chen**, McGill University, Canada

### **General co-Chairs/*Co-présidents* :**

**Charles Middleton**, Critical Frequency Design, US

**Ghaya Baili**, Thales Group, France

**Shilong Pan**, Nanjing University of Aeronautics and Astronautics, China

## **TECHNICAL PROGRAM COMMITTEE (TPC) - COMITÉ DE PROGRAMME TECHNIQUE (CPT)**

### **TPC Chair/*Président du CPT* :**

**José Azaña**, INRS-EMT, Canada

### **TPC Co-chairs/*Co-présidents du CPT* :**

**Mable Fok**, University of Georgia, USA

**Xiaoke Yi**, University of Sydney, Australia

**Maurizio Burla**, Technical University of Berlin, Germany

### **TPC Members/*Membres du CPT* :**

**Siva Yegnanarayanan**, MIT Lincoln Laboratory, USA

**Daniel Yap**, Hugues Research Labs (HRL), USA

**Scott Diddams**, University of Colorado, USA

**Alexander N. Tait**, Queen's University, Canada

**Aneek James**, Draper, USA

**Yue-Kai Huang**, NEC Labs America, USA

**Lukas Chrostowski**, UBC, Canada

**Marc Perron**, Alizem inc. - Deep Tech Commercialization Services

**Liam Barry**, Dublin City University, Ireland

**Antonella Bogoni**, CNIT, Pisa, Italy

**David Marpaung**, University of Twente, The Netherlands

**Daniel Dolfi**, Thales Alenia Space, France

**Camille-Sophie Brès**, EPFL, Switzerland

**Ivana Gasulla**, Universidad Politécnica de Valencia, Spain

**Antonio Hurtado**, Strathclyde University, UK

**Christina Lim**, University of Melbourne, Australia

**Toshikazu Hashimoto**, NTT Labs, Japan

**Xiaoxiao Xue**, Tsinghua University, China

**Tetsuya Kawanishi**, Waseda University, Japan

**Chaoran Huang**, The Chinese University of Hong Kong, HK

**Choudhary Amol**, Indian Institute of Technology at Delhi, India

**Lam Anh Bui**, Central Queensland University, Australia

**Ming Li**, Chinese Academy of Science - Beijing, China

**Xihua Zou**, Southwest Jiaotong University, China

**John Xiupu Zhang**, Concordia University, Canada

## **WORKSHOP ORGANIZERS/CHAIRS - ORGANISATEURS/PRÉSIDENTS DES ATELIERS**

### **Workshop 1 - New frontiers in neuromorphic photonics**

**Antonio Hurtado**, Strathclyde University, UK

**Miguel C. Soriano**, IFISC, CSIC-UIB, Spain

### **Workshop 2 - Photonic control of antennas**

**Maurizio Burla**, Technical University of Berlin, Germany

**Xiaoke Yi**, University of Sydney, Australia

**Antonella Bogoni**, Scuola Superiore Sant'Anna, Italy

## **CONFERENCE LOGISTICS - LOGISTIQUE DE LA CONFÉRENCE**

**Lisa Nolet**, Conférium-Agora, Event Organizer/compagnie d'organisation

**Alexis Levasseur-Dutil**, Conférium-Agora, Event Organizer/compagnie d'organisation

**Pierre Bolduc**, Conférium-Agora, Event Organizer/compagnie d'organisation

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# **PLENARY SPEAKERS - CONFÉRENCIERS DE PLÉNIÈRE**

## **Renato Lombardi**

*Huawei Technologies Italia*



Renato Lombardi is Director of Huawei Italy Research Center, Vice President of Huawei's Microwave Product Line. In these roles, he oversees the research and development of microwave / millimeter-wave technologies for wireless communications and the implementation of innovative mobile broadband backhauling solutions all over the world.

Renato Lombardi joined Huawei in 2008, founding the Huawei Research Center in Milan, Italy. In 2011, he was awarded the title of "Fellow of Huawei for Microwave".

Renato has more than 30 years of experience in the microwave and millimeter-wave industry. He previously led the Siemens Microwave Business and Product Management and then in 2006 appointed Director of Research and Development.

In 2015 Renato Lombardi has been elected Chair of the ETSI Industry Study Group mWT (millimeter-Wave Transmission).

Renato Lombardi graduated from the Politecnico of Milano, the largest and most prestigious technical University in Italy with a Master's Degree in Electronic Engineering.

### **Presentation on Wednesday, October 14, 2025, 8:30 a.m.:**

*The importance of Microwave Photonics to face the challenges of 5G and 6G*

## **Paul Prucnal**

*Princeton University USA*



Paul Prucnal is a Professor of Electrical and Computer Engineering at Princeton University. He received his A.B. from Bowdoin College, and M.S., M.Phil. and Ph. D. degrees from Columbia University.

He was a faculty member at Columbia from 1979-1988, and joined the faculty at Princeton University in 1988. Prucnal is co-author of the book, Neuromorphic Photonics, and editor of the book Optical Code Division Multiple Access: Fundamentals and Applications. He is a Life Fellow of the IEEE, Fellow of Optica and the National Academy of Inventors, and a member of Phi Beta Kappa and Sigma Xi.

He was the recipient of the Gold Medal from the Faculty of Mathematics, Physics, and Informatics at Comenius University, and numerous teaching awards at Princeton, including the President's Award for Distinguished Teaching.

### **Presentation on Thursday, October 16, 2025, 8:30 a.m.:**

*Neuromorphic Photonics*

## **Cheng Wang**

*City University of Hong Kong, Hong Kong SAR, China*



Dr. Cheng Wang is an Associate Professor of Electrical Engineering at City University of Hong Kong. He received his B.S. degree in Microelectronics from Tsinghua University in 2012, and his S.M. (2015) and Ph.D. (2017) degrees, both in Electrical Engineering from Harvard University, supervised by Prof. Marko Lončar.

After conducting research as a postdoctoral fellow at Harvard, he joined City University of Hong Kong as an Assistant Professor in 2018. Prof. Wang's research focuses on the design and nanofabrication technology of integrated photonic devices and circuits. His current research effort focuses on realizing integrated lithium niobate photonic circuits for applications in optical communications, millimeter-wave/terahertz technologies, nonlinear optics, and quantum photonics.

Since joining CityU, Prof. Wang has received a number of awards in research, including the Croucher Innovation Award (2020), 35 Innovators Under 35 (China) by MIT Technology Review (2021), and Alibaba DAMO Academy Young Fellow (2024).

**Presentation on Friday, October 17, 2025, 8:30 a.m.:**

*Integrated lithium niobate microwave and terahertz photonics*

## **TUTORIAL SPEAKER - CONFÉRENCIER TUTORIEL**

### **Juerg Leuthold**

*ETH, Switzerland*

**Presentation on Wednesday, October 15, 2025, 1:30 p.m.:**

*Microwave Plasmonics*

# INVITED SPEAKERS - CONFÉRENCIERS INVITÉS

**Prof. Jianping Yao**, University of Ottawa, Canada. Title: "Microwave Photonics and AI"

**Dr. Nicolas Fontaine**, Nokia Bell Labs, USA. Title: "Transoceanic Submarine Fiber Sensing and Integrated Ultrastable Lasers"

**Prof. Mengjie Yu**, University of California – Berkeley, USA. Title: "Integrated Nonlinear Lithium Niobate Photonic Circuits: Towards Ultrafast, Low-Power, and Scalable Light-Matter Interfaces" (**Presentation by Ian Christen**)

**Prof. Shilong Pan**, Nanjing University of Aeronautics and Astronautics, China. Title: "Integrated photonic radar" (**Presentation by Ruiqi Zheng**)

**Prof. Guillermo Carpiñero**, Universidad Carlos III – Madrid, Spain. Title: "All-dielectric broadband interconnects and devices"

**Dr. Lute Maleki, OEWaves**, USA. Title: "Investigating the Role of Ultra-Low Noise Lasers in Advancing Microwave Photonics"

**Prof. Franklyn J. Quinlan**, NIST & Univ. of Colorado, USA. Title: "Cryogenic and Room Temperature Microwave Generation with High-Speed Photodetection of Ultrashort Optical Pulse Trains"

**Dr. Chris Roeloffzen**, Lionix International, The Netherlands. Title: "Integrated reconfigurable microwave photonic filters"

**Prof. Benjamin Eggleton**, University of Sydney (Australia). Title : "Frontiers of Integrated Brillouin Photonics"

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# GENERAL INFORMATION

## VENUE

Québec City Convention Centre (CCQ)  
Main entrance  
1000, boul. René-Lévesque Est  
Québec (QC)

## PARKING

Indoor parking at the Convention Centre, self-service, paid.

## REGISTRATION DESK

All participants should register at the registration desk to collect conference badge. The registration desk is located in the Urban Space, accessible via Hall 310 of CCQ.  
Opening Hours:

Tuesday, October 14 12:00-19:00  
Wednesday, October 15 07:00-20:30  
Thursday, October 16 08:00-18:30  
Friday, October 17 08:00-17:00

## EXHIBITION HALL

Wednesday, October 15 07:00-20:30  
Thursday, October 16 08:00-16:45

## LUNCHES AND COFFEE BREAKS

Lunches and coffee breaks are located in the Urban Space, accessible via Hall 310 of CCQ.

## INTERNET ACCESS / MOBILE PHONE

Free internet facilities are available to all participants in the conference venue. Access code will be provided onsite.

During the sessions, please turn off your mobile phone or set it to mute.

## NAME BADGE

Name badge is the participant identification to access the sessions and exhibition and should be worn for all the conference and social events.

## CERTIFICATE OF ATTENDANCE

An official Certificate of attendance will be sent after the conference.

## DISCLAIMER

The MWP 2025 secretariat and organizers cannot assume liability for personal accidents, loss of or damage to private property of participants and accompanying persons, either during, or directly arising from the MWP 2025. Participants should make their own arrangements with respect to health and travel insurance.

## SECURITY & SAFETY

Please do not leave bags and luggage unattended at any time, whether inside or outside session rooms.

## SPEAKERS PRESENTATIONS FILES

Speakers are invited you to bring their PPT presentation file on a USB stick to Plenary room 309AB at the LATEST 30 minutes before the start of their session (when no other session is undergoing) to give time to our audiovisual technician to make adjustments in the room if needed. They also may take advantage of coffee breaks or lunchtimes to do so.

# RENSEIGNEMENTS GÉNÉRAUX

## LIEU

Centre des congrès de Québec (CCQ)  
Entrée principale  
1000, boul. René-Lévesque Est  
Québec (QC)

## STATIONNEMENT

Stationnement intérieur du CCQ,  
libre-service, payant.

## KIOSQUE D'INSCRIPTION

Tous les participants doivent s'inscrire au kiosque d'inscription et récupérer le porte-nom de la conférence. Le kiosque d'inscription est situé dans l'espace urbain accessible via le Hall 310. Heures d'ouverture:

Mardi, 14 octobre	12:00-19:00
Mercredi, 15 octobre	07:00-20:30
Jeudi, 16 octobre	08:00-18:30
Vendredi, 17 octobre	08:00-17:00

## HALL D'EXPOSITION

Mercredi, 15 octobre	07:00-20:30
Jeudi, 16 octobre	8:00-16:45

## REPAS ET PAUSES-CAFÉ

Les repas et les pauses-café se trouvent dans l'espace urbain accessible via le Hall 310.

## ACCÈS INTERNET ET CELLULAIRE

Un accès internet gratuit est disponible pour tous les participants sur le lieu de la conférence. Le code d'accès sera fourni sur place

Pendant les sessions, veuillez éteindre votre téléphone portable ou le mettre en sourdine.

## PORTE-NOM

Le porte-nom est l'identification du participant pour accéder aux sessions et à l'exposition et doit être porté pour toute la conférence et les événements sociaux.

## CERTIFICAT DE PARTICIPATION

Un certificat officiel de participation sera envoyé après la conférence.

## ASSURANCE

Le secrétariat et les organisateurs de MWP 2025 ne peuvent être tenus responsables des accidents personnels, de la perte ou des dommages causés à la propriété privée des participants et des personnes accompagnatrices, que ce soit pendant MWP 2025 ou directement à la suite de celui-ci. Les participants doivent prendre leurs propres dispositions en ce qui concerne l'assurance maladie et l'assurance voyage.

## SÉCURITÉ

Veuillez ne pas laisser vos sacs et bagages sans surveillance à tout moment, que ce soit à l'intérieur ou à l'extérieur des salles de session.

## FICHIERS DE PRÉSENTATION

Les présentateurs sont invités à apporter leur fichier de présentation PPT sur une clé USB dans la salle plénière 309AB AU PLUS TARD 30 minutes avant le début de leur session (lorsqu'aucune autre session n'est en cours) afin de laisser le temps à notre technicien audiovisuel d'effectuer les réglages nécessaires dans la salle. Ils peuvent également profiter des pauses-café ou du dîner pour le faire.

# SOCIAL EVENTS - ACTIVITÉS SOCIALES

## WELCOME RECEPTION - RÉCEPTION DE BIENVENUE

**Wednesday, October 15, 2025 - Mercredi 15 octobre, 18:30-20:30**  
Quebec City Convention Centre, Urban Space / Espace urbain via Hall 310

Drinks and appetizers will be served

*Boissons et bouchées seront servies*

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## POSTER SESSIONS - SESSION D'AFFICHES

**Wednesday, October 15, 2025 - Mercredi 15 octobre, 15:15-16:45**

**Thursday, October 16, 2025 - Jeudi 16 octobre, 15:15-16:45**

Quebec City Convention Centre, Urban Space / Espace urbain via Hall 310

Poster sessions will provide an opportunity for informal, interactive presentations and discussions.

*Les sessions d'affiches seront l'occasion de faire les présentations d'affiches et d'avoir des discussions informelles et interactives.*

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## AWARD BANQUET EVENING - BANQUET DE REMISE DE PRIX

**Thursday, October 16, 2025 - Jeudi 16 octobre, 18:30-21:30**

Monastère des Augustines - Noviciat room

77 Rue des Remparts, Québec, QC G1R 5C4 / 13-minute walk from the CCQ

Located in the heart of Old Québec, the Monastère des Augustines is a place of living memory. It occupies the former wings of the Hôtel-Dieu de Québec monastery, the origin of the first hospital in North America north of Mexico, dating back to the 17th century.

This evening will be a great opportunity to network with colleagues in a relaxed setting, over a good meal featuring local flavours. The student awards will be presented at this event. A four-course menu with local flavours, a welcome cocktail, and wine will be served. A festive option at a pub nearby will be suggested after dinner.

*Situé au cœur du Vieux-Québec, le Monastère des Augustines est un lieu de mémoire vivante. Il occupe les ailes anciennes du monastère de l'Hôtel-Dieu de Québec, à l'origine du premier hôpital en Amérique au nord du Mexique, dont les origines remontent au 17e siècle. Cette soirée sera une excellente occasion de réseauter avec des collègues dans un cadre détendu, autour d'un bon repas aux saveurs locales. Les prix étudiants seront remis lors de cet événement. Un menu quatre services aux saveurs locales, un cocktail de bienvenue et du vin seront servis. Une option festive dans un pub voisin sera proposée après le banquet.*

---



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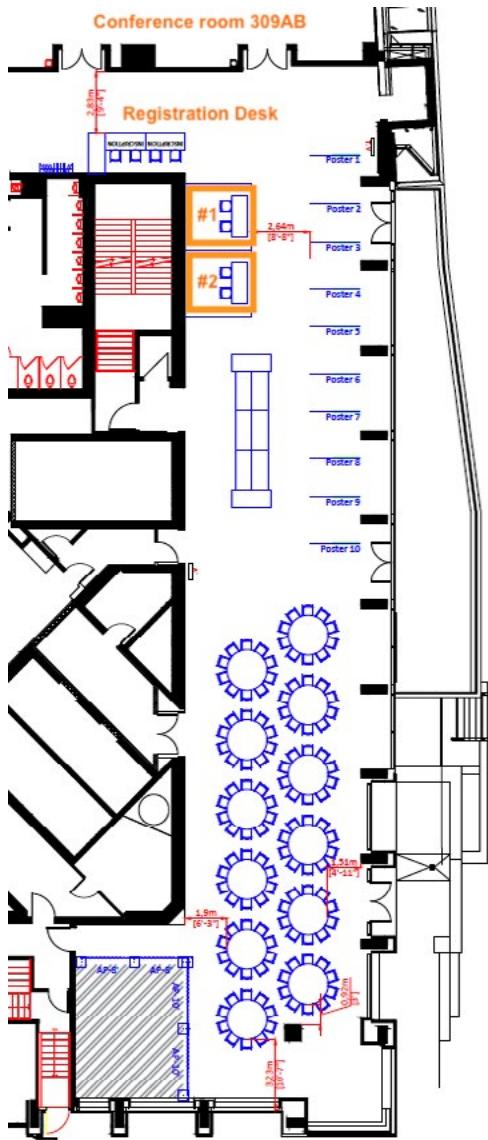
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# EXHIBITORS - EXPOSANTS



Exhibitor booth #1: Discovery Semiconductors Inc.

Exhibitor booth #2: Centre d'optique, photonique et lasers (COPL)

# THANKS TO OUR PARTNERS ! - MERCI À NOS PARTENAIRES !

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# WORKSHOPS - ATELIERS

**Tuesday, October 14 - Mardi 14 octobre**

## **WORKSHOP 1 - NEW FRONTIERS IN NEUROMORPHIC PHOTONICS**

**Quebec City Convention Centre, Room 309AB via Hall 310**

**Co-chairs: Antonio Hurtado**

**Miguel Cornelles Soriano**

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**13:00 - 13:30 NEUROMORPHIC PHOTONICS: LIGHT-ENABLED NEURONS AND NEURAL NETWORKS FOR ULTRAFAST AND EFFICIENT INFORMATION PROCESSING**  
**Antonio Hurtado**, University Strathclyde, United Kingdom  
Antonio Hurtado, Miguel Cornelles Soriano

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**13:30 - 14:00 PHOTONIC NEUROMORPHIC COMPUTING: ISING MACHINES FOR COMBINATORIAL OPTIMIZATION**  
**Bhavin Shastri**, Queen's University, Canada  
Bhavin Shastri

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**14:00 - 14:30 INTEGRATED OPTICS FOR NEUROMORPHIC COMPUTING AND INTELLIGENT PHOTONIC APPLICATIONS**  
**Luigi Di Lauro**, INRS, Canada  
Luigi Di Lauro

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**14:30 - 15:00 TOWARD BIOPLAUSIBLE NEUROMORPHIC HARDWARE WITH SILICON MICRORESONATORS**  
**Stefano Biasi**, University Trento, Italy  
Stefano Biasi

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## **WORKSHOP 2 - PHOTONIC CONTROL OF ANTENNAS**

**Quebec City Convention Centre, Room 309AB via Hall 310**

**Co-chairs:** **Maurizio Burla**

**Antonella Bogoni**

**Xiaoke Yi**

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**15:30 - 16:00 PHOTONIC CONTROL OF ANTENNAS: FROM THE SEMINAL DEMONSTRATIONS TO FUTURE PROSPECTS**

**Willie Ng**, The Aerospace Corporation, United States of America  
Willie Ng

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**16:00 - 16:30 INTEGRATED MULTIBEAM BEAMFORMERS AT MICROWAVE AND MILLIMETER WAVE FREQUENCIES**

**Luca Rinaldi**, Scuola Superiore Sant'Anna, Italy  
Luca Rinaldi

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**16:30 - 17:00 DEVELOPMENT OF A RECONFIGURABLE BEAMFORMING NETWORK USING A HYBRID INTEGRATED MICROWAVE PHOTONIC PLATFORM: FROM SCHEMATIC TO SYSTEM**

**Chris Roeloffzen**, Lionix International, Netherlands  
Chris Roeloffzen

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**17:00 - 17:30 REAL-TIME SPECTROGRAM ANALYSIS AND PROCESSING FOR RADAR SENSING**

**Xinyi Zhu**, Institut National de la Recherche Scientifique, Canada  
Xinyi Zhu

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**17:30 - 18:00 PHOTONIC INTEGRATED CIRCUITS FOR CONTROL OF MM-WAVE PHASED ARRAYS**

**Guillermo Carpintero**, Universidad Carlos III de Madrid, Spain  
Guillermo Carpintero

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# SCIENTIFIC PROGRAM - ORAL PRESENTATIONS -

## PROGRAMME SCIENTIFIQUE - PRÉSENTATIONS ORALES

### Wednesday, October 14 - Mercredi 14 octobre

All MWP oral sessions will be at Quebec City Convention Centre, Room 309AB via Hall 310

#### WELCOME AND PLENARY SESSION 1

**Co-chairs:** Lawrence Chen

Jose Azana

Xiaoke Yi

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##### 8:15 - 8:30 WELCOME AND OPENING REMARKS

**Lawrence R. Chen**, McGill Univ., Canada  
Lawrence R. Chen, José Azaña

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##### 8:30 - 9:30 THE IMPORTANCE OF MICROWAVE PHOTONICS TO FACE THE CHALLENGES OF 5G AND 6G

**Renato Lombardi**, Huawei Technologies, Italy  
Renato Lombardi  
**Plenary Speaker**

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##### 9:30 - 10:00 TRANSOCEANIC SUBMARINE FIBER SENSING AND INTEGRATED ULTRASTABLE LASERS

**Nicolas Fontaine**, Nokia Bell Labs, United States of America  
Nicolas Fontaine  
**Invited Speaker**

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#### WE1 - PHOTONIC MICROWAVE PROCESSING, SENSING, AND MEASUREMENTS 1

**Co-chairs:** Lam Bui

Hugues Guillet de Chatellus

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##### 10:30 - 10:45 TIME-FREQUENCY ANALYSIS OF COMPLEX THZ-BANDWIDTH WAVEFORMS USING LINEAR MICROWAVE PHOTONIC PROCESSING

**Geunweon Lim**, Institut national de la recherche scientifique, Canada  
Geunweon Lim, Benjamin Crockett, Majid Goodarzi, José Azaña  
**Student Award finalist**

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##### 10:45 - 11:00 SCALED REFLECTION CROSS-SECTION/ISAR MEASUREMENT USING PHOTONIC IC

**Lucio De Pra**, UMASS Dartmouth, United States of America  
Lucio De Pra, Michael Benker, Tariq Manzur, Yifei Li  
**Student Award finalist**

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**11:00 - 11:15 HIGH-PRECISION 4D PARRALLEL LIDAR BASED ON DUAL ELECTRO-OPTIC COMBS AND INJECTION-LOCKED OEO**

**Junze Tian**, Beijing Institute of Technology, China (People's Republic of)  
Junze Tian, Jiangyi Tong, Jianhao Duan, Shukang Xu, Bin Wang,  
Weifeng Zhang

**Student Award finalist**

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**11:15 - 11:30 REAL-TIME SPECTROGRAM OF 20 GHZ BANDWIDTH FREQUENCY HOPPING SIGNALS USING A 6 GHZ DETECTOR**

**Connor Rowe**, INRS, Canada  
Connor Rowe, Benjamin Crockett, Xinyi Zhu, José Azaña

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**11:30 - 11:45 ADAPTIVE PHOTONIC SELF-INTERFERENCE CANCELLATION ASSISTED BY DEEP LEARNING ON MICROCONTROLLERS**

**Nicole Daniel**, The University of Sydney, Australia  
Nicole Daniel, Suen Xin Chew, Yeming Chen, Hongchau Chen, Jeffrey Shao,  
Chen Song, Linh Nguyen, Xiaoke Yi

**Student Award finalist**

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**11:45 - 12:15 RECENT ADVANCES IN INTEGRATED MICROWAVE PHOTONIC RADARS (INVITED)**

**Ruiqi Zheng**, Jinan University, China (People's Republic of)  
Shilong Pan, Ruiqi Zheng  
**Invited Speaker**

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**WE2 - HIGH-SPEED PHOTOMIXERS AND OPTOELECTRONIC CONVERTERS AND TUTORIAL**

**Co-chairs: Guillermo Carpiñero**

**Maurizio Burla**

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**13:30 - 14:30 MICROWAVE PLASMONICS**

**Juerg Leuthold**, ETH, Switzerland  
Juerg Leuthold, Boris Vukovic, Laurenz Kulmer, Tobias Blatter, Hande Ibili,  
Yannik Horst, Marcel Destraz, Wolfgang Heni, Jasmin Smajic  
**Tutorial Speaker**

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**14:30 - 14:45 THZ-WAVE RAPID BEAM SWITCHING AND WIRELESS TRANSMISSION ENABLED BY HIGH-SPEED TUNABLE LASER AND CHROMATIC DISPERSION**

**Yoshiki Kamiura**, Kyushu University, Japan  
Masato Kawano, Ryota Kaide, Yoshiki Kamiura, Yuya Mikami,  
Yuya Ueda, Kazutoshi Kato

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**14:45 - 15:00 COMPACT WDM TERAHERTZ LINK WITH SIC BASED UTC-PD AND HIGH-SPEED ENVELOPE DETECTION**

**Shinji Iwamoto**, Kyushu University, Japan  
Shinji Iwamoto, Yoshiki Kamiura, Ryo Doi, Chengyuan Qian,  
Yuya Mikami, Tadao Ishibashi, Hiroshi Ito, Kazutoshi Kato

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- 15:00 - 15:15 **BROADBAND PHOTOMIXING-BASED THZ TRANSMITTER FOR MULTI-CHANNEL HIGH-SPEED WIRELESS COMMUNICATION**  
**Yoshiki Kamiura**, Kyushu University, Japan  
Yoshiki Kamiura, Shinji Iwamoto, Ryo Doi, Yuya Mikami, Tadao Ishibashi, Kazutoshi Kato
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## **COFFEE BREAK AND WE3 - POSTER SESSION 1**

- 15:15 - 16:45   **CCQ URBAN SPACE VIA HALL 310**  
(See Poster Presentations section for details)
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## **WE4 - HIGH-PERFORMANCE MICROWAVE PHOTONIC SIGNAL SOURCES 1**

**Co-chairs: Carlos Pousa**

**Nicolas Fontaine**

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- 16:45 - 17:15 **ALL-DIELECTRIC BROADBAND INTERCONNECTS AND DEVICES**  
**Guillermo Carpintero**, Universidad Carlos III de Madrid, Spain  
Guillermo Carpintero, Daniel Headland, Enderson Falcón-Gómez, Ashish Kumar, Daniel Gallego Cabo, Alejandro Rivera-Lavado  
**Invited Speaker**
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- 17:15 - 17:30 **DISPERSION-TUNED MODE-LOCKED OPTOELECTRONIC OSCILLATOR**  
**Zhuoran Wang**, McGill University, Canada  
Zhuoran Wang, Santiago Bernal, David Plant, Lawrence R. Chen  
**Student Award finalist**
- 

- 17:30 - 17:45 **ABSOLUTE FREQUENCY STABILIZATION AND PHASE NOISE REDUCTION OF TUNABLE LASERS VIA REFERENCE-STABILIZED FIBER INTERFEROMETER**  
**Jose Javier Fernandez-Pacheco Cuesta**, Thales Research and Technology, France  
Jose Javier Fernandez-Pacheco Cuesta, Loïc Morvan, Daniel Dolfi
- 

- 17:45 - 18:15 **INVESTIGATING THE ROLE OF ULTRA-LOW NOISE LASERS IN ADVANCING MICROWAVE PHOTONICS**  
**Lute Maleki**, OEwaves, Inc., United States of America  
Lute Maleki  
**Invited Speaker**
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# Thursday, October 16 - Jeudi 16 octobre

All MWP oral sessions will be at Quebec City Convention Centre, Room 309AB via Hall 310

## PLENARY SESSION 2 AND INVITED

**Co-chairs:** Mable Fok

José Azaña

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### 8:30 - 9:30 NEUROMORPHIC PHOTONICS

**Paul Prucnal**, Princeton University, United States of America

Paul Prucnal

**Plenary Speaker**

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### 9:30 - 10:00 MICROWAVE PHOTONICS AND AI

**Jianping Yao**, University of Ottawa, Canada

Jianping Yao

**Invited Speaker**

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## TH1 - PHOTONIC-ENHANCED ARTIFICIAL INTELLIGENCE (AI) COMPUTING TECHNIQUES

**Co-chairs:** Antonio Hurtado

Luigi di Lauro

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### 10:30 - 10:45 HIGH-DENSITY PHOTONIC CONVOLUTION COMPUTING ENABLED BY A

**SOLITON MICROCOMB AND A MICRODISK MESH ARRAY**

**Shanshan Cheng**, University of Ottawa, Canada

Shanshan Cheng, Yiran Guan, Chenye Qin, Kunpeng Jia, Zhenda Xie, Jianping Yao

**Student Award finalist**

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### 10:45 - 11:00 PHOTONIC-ASSISTED MULTIPLY-ACCUMULATE OPERATIONS FOR HIGH-

**THROUGHPUT COMPLEX-VALUED DOT PRODUCTS**

**Hao Sun**, Institut National de la Recherche Scientifique Centre Énergie Matériaux Télécommunications(INRS-EMT), Canada

Hao Sun, Xinyi Zhu, José Azaña

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### 11:00 - 11:15 A MICROWAVE PHOTONIC CONVOLUTIONAL ACCELERATOR WITH INCREASED COMPUTATIONAL EFFICIENCY

**Mahdi Chegini**, University of Ottawa, Canada

Mahdi Chegini, Jianping Yao

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### 11:15 - 11:30 END-TO-END LEARNING OF A NEURAL-NETWORK DIGITAL PREDISTORTION SCHEME FOR A NOISY RF LINK

**Keisuke Matsuda**, ETH Zurich, Switzerland

Keisuke Matsuda, Samuel Hess, Chenrui Xu, Taichiro Fukui, Laurenz Kulmer, Tobias Blatter, Juerg Leuthold

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**11:30 - 11:45 AI-COMPUTING THROUGH LOW-CONSUMPTION VCSEL-BASED ANALOG RADIO-OVER-FIBER SYSTEM**  
**Jacopo Nanni**, Department of Electrical, Electronic and Information Engineering (DEI), University of Bologna, Italy  
Jacopo Nanni, Siqi Wang, Aziz Benlarbi Delai, Giovanni Tartarini

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**11:45 - 12:00 DEMONSTRATION OF DUAL-PUMP DEGENERATE OPTICAL PARAMETRIC OSCILLATION IN KERR MICRORESONATORS FOR INTEGRATED COHERENT ISING MACHINES**  
**Kambiz Jamshidi**, TU Dresden, Germany  
Menglong He, Mohd Saif Shaikh, Abdou Shetewy, Kambiz Jamshidi

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**12:00 - 12:15 IMAGE CLASSIFICATION WITH A SIMPLE PHOTONIC PERCEPTRON BASED ON HETERODYNE DETECTION**  
**Miguel Cuenca Piquerás**, Engineering Research Institute I3E Univ.  
Miguel Hernández, Spain  
Miguel Cuenca Piquerás, Carlos Fernandez-Pousa,  
Hugues Guillet de Chatellus

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## **TH2 - INTEGRATED MICROWAVE PHOTONICS**

**Co-chairs: Xinyi Zhu**

**Hao Sun**

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**13:30 - 14:00 INTEGRATED NONLINEAR LITHIUM NIOBATE PHOTONIC CIRCUITS: TOWARDS ULTRAFAST, LOW-POWER, AND SCALABLE LIGHT-MATTER INTERFACES**  
**Ian Christen**, University of California, Berkeley, United States of America  
Mengjie Yu, Ian Christen  
**Invited Speaker**

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**14:00 - 14:15 DEMONSTRATION OF AN INP-SOI HETEROGENEOUSLY INTEGRATED DISTRIBUTED COHERENT RADAR SYSTEM**  
**Luca Rinaldi**, CNIT, Italy  
Valentina Gemmato, Federico Camponeschi, Filippo Scotti, Luca Rinaldi,  
Muhammad Imran, Claudio Porzi, Paolo Ghelfi, Mirco Scaffardi,  
Antonella Bogoni

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**14:15 - 14:30 A SILICON PHOTONIC CHIP FOR SIMULTANEOUS MICROWAVE AND NEAR-INFRARED DUAL-BAND BEAMFORMING**  
**Ruiqi Zheng**, Jinan University, China (People's Republic of)  
Ruiqi Zheng, Jingxu Chen, Jinkun Hu, Haikun Huang, Jiejun Zhang,  
Jianping Yao

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**14:30 - 14:45 FINE-GRAINED DIFFRACTIVE SLAB FOR ACCURATE AND LOW-COMPLEXITY ON-CHIP PHOTONIC CONVOLUTION**  
**Shen Zichao**, Chinese Academy of Sciences, China (People's Republic of)  
Shen Zichao, Weichao Ma, Ruixuan Wang, Wangzhe Li

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**14:45 - 15:00 CHARACTERIZATION OF A 300 GHZ CARRIER WAVE USING AN ON-CHIP SILICON ELECTRO-OPTIC-MODULATION COMB**

**Yasunori Yoshida**, Nihon University, Japan

Yasunori Yoshida, Rai Kou, Guangwei Cong, Haruki Yaguchi, Mitsuki Nakamura, Tatsuto Okubo, Xuejun Xu, Kenichi Hitachi, Junia Nomura, Noritsugu Yamamoto, Katsuya Oguri, Koji Yamada, Atsushi Ishizawa

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**COFFEE BREAK AND TH3 - POSTER SESSION 2**

**15:15 - 16:45 CCQ URBAN SPACE VIA HALL 310**

(See Poster Presentations section for details)

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**TH4 - RADIO OVER FIBER (ROF) FOR B5G/6G MOBILE DATA AND TERRESTRIAL COMMUNICATION SYSTEMS**

**Co-chairs: Tetsuya Kawanishi**

**Jianping Yao**

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**16:45 - 17:15 RECONFIGURABLE INTEGRATED MICROWAVE PHOTONIC FILTERS**

**Chris Roeloffzen**, LioniX International, Netherlands

Chris Roeloffzen, Charoula Mitsolidou, Marcel Hoekman, Carlos Ruiz Pineda, Roelof Bernardus Timens, Ahmad W. M. Mohammad, Ilka Visscher, Roel Botter, Paul Kapteijn, Lan Anh Tran, Alberto Zarzuelo, Guillermo Carpintero

**Invited Speaker**

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**17:15 - 17:30 A FULLY PACKAGED 140 GHZ ANALOG RADIO-OVER-FIBER TRANSMITTER CHIPSET WITH SIGE DRIVER AND TFLN MODULATOR PIC**

**Reinier Broucke**, Ghent University - imec, Belgium

Reinier Broucke, Karol Obara, Homa Zarebidaki, Jacopo Leo, Ivan Pietro, Hamed Sattari, Nishant Singh, Guy Torfs

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**17:30 - 17:45 PRECOMPENSATION OF NONLINEAR PHASE SHIFTS FOR THZ ANALOG RADIO-OVER-FIBER SYSTEMS**

**Ryoji Ito**, The University of Osaka, Japan

Ryoji Ito, Takaki Sugiyama, Daisuke Hisano, Akihiro Maruta, Hirofumi Sasaki, Ken Mishina

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**17:45 - 18:00 LIGHTNING-RESISTANT OUTDOOR ANTENNA UNIT USING RADIO OVER FIBER AND POWER OVER FIBER**

**Kensuke Ikeda**, Central Research Institute of Electric Power Industry, Japan

Kensuke Ikeda

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**18:00 - 18:15 A WAVELENGTH DIVISION RF-PASSIVE OPTICAL NETWORK FOR MMWAVE ANALOG RADIO-OVER-FIBER DISTRIBUTION ON LARGE INTELLIGENT SURFACES**

**Guy Torfs**, University of Gent in collaboration with imec, Belgium

Michiel Van Osta, Reinier Broucke, Joris Van Kerrebroeck, Piet Demeester, Nishant Singh, Guy Torfs

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# **Friday, October 17 - Vendredi 17 octobre**

All MWP oral sessions will be at Quebec City Convention Centre, Room 309AB via Hall 310

## **PLENARY SESSION 3 AND INVITED**

**Co-chairs: Maurizio Burla**

**José Azaña**

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**8:30 - 9:30 INTEGRATED LITHIUM NIOBATE MICROWAVE AND TERAHERTZ PHOTONICS -**

**CHENG WANG, CITY UNIVERSITY OF HONG KONG, CHINA**

**Cheng Wang, City University of Hong Kong, Hong Kong**

**Cheng Wang**

**Plenary Speaker**

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**9:30 - 10:00 FRONTIERS OF INTEGRATED BRILLOUIN PHOTONICS**

**Benjamin Eggleton, University of Sydney, Australia**

**Benjamin Eggleton**

**Invited Speaker**

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## **FR1 - HIGH-PERFORMANCE MICROWAVE PHOTONIC SIGNAL SOURCES 2**

**Co-chairs: Franklyn Quinlan**

**Cheng Wang**

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**10:30 - 10:45 MICROWAVE FREQUENCY COMB GENERATION BASED ON AN  
OPTOELECTRONIC OSCILLATOR INTEGRATING A COUPLED OPTOELECTRONIC  
UP-CONVERSION RECIRCULATING LOOP**

**Yiran Guan, University of Ottawa, Canada**

**Yiran Guan, Jianping Yao**

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**10:45 - 11:00 TUNABLE OPTICAL PULSE INTERLEAVING FOR LOW PHASE NOISE  
MICROWAVE GENERATION**

**Maximilian Gloßner, Institute of Microwaves and Photonics (LHFT), Germany**  
**Maximilian Gloßner, Christian Carlowitz**

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**11:00 - 11:15 GENERATION OF PHASE-STABILIZED MICROWAVE FREQUENCY COMBS  
BASED ON AN ACTIVELY MODE-LOCKED OPTOELECTRONIC OSCILLATOR**

**Junyi Zhang, Jinan University, China (People's Republic of)**

**Junyi Zhang, Sheng Dong, Guangying Wang, Ruiqi Zheng, Jiejun Zhang,  
Jianping Yao**

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**11:15 - 11:30 SINGLE-MODE OPTOELECTRONIC OSCILLATOR BASED ON ASE SOURCE AND  
CASCADED ZERO-DISPERSION RECIRCULATING LOOPS**

**Zhuoran Wang, McGill University, Canada**

**Zhuoran Wang, Santiago Bernal, David Plant, Lawrence R. Chen**

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- 11:30 - 11:45 **EXPERIMENTAL DEMONSTRATION OF SUB-10 KHZ LINewidth TUNABLE DFB LASER ARRAY BASED ON SELF-INJECTED FEEDBACK**  
**Yue Zhang**, NanJing University, China (People's Republic of)  
Yue Zhang, Jiale Xu, Jie Zhao, Zijiang Yang, Zhenxing Sun, X. Chen
- 
- 11:45 - 12:15 **CRYOGENIC AND ROOM TEMPERATURE MICROWAVE GENERATION WITH HIGH-SPEED PHOTODETECTION OF ULTRASHORT OPTICAL PULSE TRAINS**  
**Franklyn Quinlan**, National Institute of Standards and Technology, United States of America  
Franklyn Quinlan  
**Invited Speaker**
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## **FR2 - PHOTONIC MICROWAVE PROCESSING, SENSING, AND MEASUREMENTS 2**

**Chair: Ian Christen**

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- 13:30 - 13:45 **PHOTONIC CORRELATION OF MULTI-GHZ SIGNALS - APPLICATION TO APERTURE SYNTHESIS IN RADIO ASTRONOMY**  
**Hugues Guillet de Chatellus**, Institut FOTON, Univ Rennes/CNRS, France  
Guillaume Bourdarot, Vincent Carlet, Tituan Allain, Bernard Lazareff, Jean-Philippe Berger, Hugues Guillet de Chatellus
- 
- 13:45 - 14:00 **A HIGHLY FLEXIBLE PHOTONIC-ASSISTED PHASED ARRAY WITH BROADBAND COVERAGE**  
**Xue Lan**, State Key Laboratory of Information Photonics and Optical Communications, Beijing University of Posts and Telecommunications, China (People's Republic of)  
Xue Lan
- 
- 14:00 - 14:15 **PRECISE TRANSMISSION DELAY MEASUREMENT IN MICROWAVE PHOTONIC LINKS**  
**Jinping Xiao**, Key Laboratory of Photonic Information Technology Ministry of Industry and Information Technology Beijing Institute of Technology, China (People's Republic of)  
Jinping Xiao, Wei Wei, zhuoran Li, Guoying Zheng, Jinchuan Yao, Weilin Xie, Yi Dong
- 

- 14:15 - 14:30 **ELECTRO-OPTIC DOPPLER TARGET SIMULATION FOR FMCW LIDAR**  
**Johannes Reichstein**, Friedrich Alexander Universität Erlangen-Nürnberg, Germany  
Johannes Reichstein, Marius Schmidt, Christian Carlowitz
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**14:30 - 14:45 FAST AND STABLE FREQUENCY TUNING OF OPTOELECTRONIC TERAHERTZ  
WAVES USING OPTICAL SINGLE-SIDEBAND MODULATION**

**Yoshiki Kamiura**, Kyushu University, Japan

Bo Li, Tomohiro Tetsumoto, Ming Che, Masato Kawano, Shenghong Ye,  
Yuya Mikami, Norihiko Sekine, Kazutoshi Kato, Yoshiki Kamiura,  
Shinji Iwamoto

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**14:45 - 15:00 PHOTONIC-BASED MULTI-BEAM FORMING AND STEERING FOR A  
SYNTHETIC APERTURE RADAR RECEIVER**

**Ahmad W. M. Mohammad**, Lionix International B. V, Netherlands

Ahmad W. M. Mohammad, Maarten T. Eijkel, Chris Roeloffzen,  
Paul W. van Dijk, Lennart Wevers, Rick W. Heuvink, Willy J. Bergsma,  
Edwin Klein, Furkan Sahin, Federico Camponeschi, Paolo Ghelfi

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**FR3 - POSTDEADLINE SESSION AND WRAP-UP**

**Co-chairs: José Azaña**

**Lawrence Chen**

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**15:30 - 16:30 POSTDEADLINE SESSION AND WRAP-UP**

# POSTER PRESENTATIONS - PRÉSENTATIONS D'AFFICHES

**Wednesday, October 14 -**  
**Mercredi 14 octobre**

## COFFEE BREAK AND WE3 - POSTER SESSION 1

**15:15 - 16:45 CCQ URBAN SPACE VIA HALL 310**

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### TERAHERTZ POLARIMETRIC SPECTROMETER USING CMOS DETECTOR

**Redwan Ahmad**, École de technologie supérieure (ÉTS), Canada  
Redwan Ahmad, Xavier Ropagnol, Richard Al Hadi, François Blanchard

**POSTER BOARD #01**

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### Y-BRANCH WAVEGUIDE-TYPE EXCLUSIVE OR LOGICAL GATE FOR THZ-BAND COMMUNICATION

**Koichi Takiguchi**, Ritsumeikan University, Japan  
Koichi Takiguchi, Wataru Ishihara

**POSTER BOARD # 03**

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### MICROWAVE PHOTONIC CHANNELIZATION-BASED BROADBAND PHASED ARRAY RECEIVER

**Shilong Chen**, Beijing University of Posts and Telecommunications,  
China (People's Republic of)  
Shilong Chen

**POSTER BOARD # 05**

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### POWER RESPONSE OF GAINAS/INP UNI-TRAVELING CARRIER PHOTODIODES (UTC-PDS) WITH ABRUPT AND GRADED COLLECTORS

**Amirmohammad Miran zadeh**, ETH zurich, Switzerland  
Amirmohammad Miran zadeh, Nikolaos Poumpouridis, Rinchen Bhutia,  
Pascal Kaufmann, Olivier Ostinelli, Colombo Bolognesi  
**Student Award finalist**

**POSTER BOARD # 07**

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### A HIGHLY LINEAR AND COMPACT SI RING-ASSISTED MACH-ZEHNDER MODULATOR AT X BAND

**Min-Hyeok Seong**, Yonsei University, Korea, Republic of (South Korea)  
Min-Hyeok Seong, Yongjin Ji, Woo-Young Choi  
**Student Award finalist**

**POSTER BOARD # 09**

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### FAST TUNABLE INP-LNOI DBR LASER AT 1550NM

**Sara Bassil**, III-V Lab, France  
Sara Bassil, Sylvain Boust, Cosimo Calo, Romain Hersent, Hamed Sattari, Ivan Prieto Gonzalez,  
Homa Zarebidaki, François Duport, Frédéric Van Dijk, Nadege Courjal

**POSTER BOARD # 11**

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**A PRACTICAL DEMONSTRATION OF MACH-ZEHNDER MODULATOR CHIRP MEASUREMENT USING A DC METHOD**

**Lam Bui**, Central Queensland University (CQUniversity), Australia

Lam Bui

**POSTER BOARD # 13**

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**A 4.5 GHZ OPTICAL RECEIVER UTILIZING AN 800UW MODIFIED RGC**

**TRANSIMPEDANCE AMPLIFIER**

**Jeongyong Yang**, University of Virginia, United States of America

Shadrach Sarpong, Jeongyong Yang, Junwu Bai, Andreas Beling, Travis Blalock, Steven Bowers

**POSTER BOARD # 15**

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**MILLIMETER-WAVE FIXED WIRELESS: CHALLENGES AND INSIGHTS FROM MODELS AND MACHINE LEARNING**

**Ukrit Mankong**, CHIANG MAI UNIVERSITY, Thailand

Nutwipa Pinkhumpee, Chumphon Kaewmalee, Ukrit Mankong

**POSTER BOARD # 17**

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**SELF-PULSATING III-V/SI DFB LASER FOR TUNABLE PHOTONIC MICROWAVE GENERATION**

**Mourad Azhar**, SAMOVAR, Télécom SudParis, Institut Polytechnique de Paris, France

Mourad Azhar, Youcef Driouche, Joan Manel Ramirez, Kamel Merghem

**POSTER BOARD # 19**

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**PHOTONIC TERAHERTZ VECTOR ANALYSIS WITH OPTICAL FREQUENCY COMB MODULATION**

**Ding Zhe**, Zhejiang University, Republic of China

Ding Zhe, Yang Zuomin, Lyu Zhidong, Chen Shiping, Zhou Peiqi, Zhang Lu, Yu Xianbin

**POSTER BOARD # 21**

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**A COST-EFFECTIVE SINGLE ELEMENT DIELECTRIC ROD ANTENNA FOR THZ APPLICATIONS**

**Guillermo Carpintero**, Universidad Carlos III de Madrid, Spain

Asrin Piroutiniya, Muhsin Ali, Ashish Kumar, Alejandro Rivera-Lavado, David de Felipe,

Lars Liebermeister, Philipp Winklhofer, Guillermo Carpintero

**POSTER BOARD # 25**

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**INTEGRATED THIN-FILM LITHIUM NIOBATE RECEIVER FOR BOTH FREQUENCY DEMULTIPLEXING AND MODULATION DE-CHIRPING FUNCTIONS IN DUAL-BAND RADAR**

**Fang Zou**, Tianfu Xinglong Lake Laboratory, China (People's Republic of)

Yongtao Du, Ningyuan Zhong, Xihua Zou, Fang Zou, Wenlin Bai, Xiaojun Xie,

Wei Pan, Lianshan Yan

**POSTER BOARD # 27**

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# Thursday, October 16 - Jeudi 16 octobre

## COFFEE BREAK AND TH3 - POSTER SESSION 2

15:15 - 16:45 CCQ URBAN SPACE VIA HALL 310

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### FREE-STANDING POLARIZATION-SENSITIVE TERAHERTZ FSS: FABRICATION AND CHARACTERIZATION

**Redwan Ahmad**, École de technologie supérieure (ÉTS), Canada  
Redwan Ahmad, Xavier Ropagnol, François Blanchard

POSTER BOARD #02

### LOW NOISE PHOTONIC MILLIMETER-WAVE GENERATION IN A COHERENT DUAL-FREQUENCY BRILLOUIN LASER OSCILLATOR

**Junyi Yuan**, Beijing University of Posts and Telecommunications, Republic of China  
Junyi Yuan, Hui Liu, Huanhuan Shi, Tian Zhang, Jian Dai, Kun Xu

POSTER BOARD #04

### MICROWAVE PHOTONIC IQ MIXER FOR LONG-DISTANCE TRANSMISSION BASED ON POLARIZATION MULTIPLEXING

**Han Xu**, Nanjing University of Aeronautics and Astronautics, China (People's Republic of)  
Han Xu, Xiaoyu Wang, Zhenzhou Tang, Shilong Pan

POSTER BOARD #06

### IMPROVING ASE-BASED OPTOELECTRONIC OSCILLATOR PERFORMANCE USING A CHIRP-LIKE SLICING APPROACH

**Zhuoran Wang**, McGill University, Canada  
Zhuoran Wang, Santiago Bernal, David Plant, Lawrence R. Chen

POSTER BOARD #08

### BROADBAND TUNABLE HYBRID OPTICAL FREQUENCY COMB BASED ON KERR SOLITON AND OPTO-ELECTRONIC OSCILLATIONS

**Renzhen Yan**, Beijing Institute of Technology, China (People's Republic of)  
Renzhen Yan, Xu Hong, Bin Wang, Weifeng Zhang

POSTER BOARD #10

### ON-CHIP PARALLEL OPTICAL CONVOLUTION ACCELERATOR BASED ON A COUPLING-TUNED MICRO-DISK RESONATOR CROSSBAR ARRAY

**Lizhi Liu**, Beijing Institute of Technology, China (People's Republic Of)  
Lizhi Liu, Bin Wang, Weifeng Zhang

POSTER BOARD #12

### DETERMINISTIC-FREQUENCY OPTOELECTRONIC SYNTHESIZER ARCHITECTURE USING INJECTION-LOCKED OSCILLATORS

**Basel Chihabi**, Carleton University, Canada  
Basel Chihabi, Jim Wight, Rony Amaya  
**Student Award finalist**

POSTER BOARD #14

**EXPERIMENTAL ANALYSIS OF OPTICAL PARAMETRIC AMPLIFICATION  
IN SILICON WAVEGUIDE**

**Yue Wu**, Beijing University of Posts and Telecommunications,  
China (People's Republic of)

Yue Wu, Jiabin Cui, Xinyan Zhang, Yanxia Tan, Guo-Wei Lu, Yuefeng Ji, Kunpeng Zhai,  
Sha Zhu, Ninghua Zhu, Huashun Wen

**POSTER BOARD #16**

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**BROADBAND LINEARLY FREQUENCY-MODULATED SIGNAL GENERATION BASED ON  
BIAS SWITCHING OF MZM**

**Zheng Wang**, Beijing University of Posts and Telecommunications,  
China (People's Republic of)

Zheng Wang, Ying Xu, Xukai Ji, Feifei Yin, Yitang Dai, Kun Xu

**POSTER BOARD #18**

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**ULTRA-WIDEBAND RECONFIGURABLE RADAR WAVEFORM GENERATION BASED ON  
OPTICAL RECIRCULATING FREQUENCY SHIFTER LOOP**

**Kunlong Li**, Beijing Institute of Technology, China (People's Republic of)  
Kunlong Li, Bin Wang, Weifeng Zhang

**POSTER BOARD #20**

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**A MULTI-WAVELENGTH MICROWAVE PHOTONIC TRANSPONDER FOR FUTURE  
SYNTHETIC APERTURE RADAR SATELLITE FORMATIONS**

**Josef Ydreborg**, German Aerospace Center (DLR), Germany  
Josef Ydreborg, Sigurd Huber, Gerhard Krieger

**POSTER BOARD #22**

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**SCALABLE MICROWAVE PHOTONIC FILTERS WITH A 100 GHZ FREE SPECTRAL RANGE  
BASED ON AN ELECTRO-OPTIC OPTICAL FREQUENCY COMB**

**Minhyup Song**, Electronics and Telecommunications Research Institute, South Korea  
Youngjin Jung, Minje Song, Hyunjong Choi, Jaeseong Kim, Taehyun Lee, Minhyup Song

**POSTER BOARD #24**

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