

MMS 2024

The 27th World Micromachine Summit

Quantum semiconductor microtechnologies: novelty and re-emergence



26 – 29 May 2024



Gold Coast, Australia

SPONSORS

EXPERIENCE
GOLDCOAST.



Day 1

Sunday, 26 May 2024

18:00-21:00 Registration & Welcome Reception
at NOSH Restaurant, Bar & Terrace

Day 2

Monday, 27 May 2024

8:30-9:00 Registration & Morning Tea/Coffee

Official Opening & Country Review Sessions

Session Chair: Mariusz Martyniuk

9:00-9:30 Official Opening Address & Country Review for Australia

Chennupati Jagadish, The Australian Academy of Science

9:30-9:50 Queensland - The Quantum State

Grant Woollett, Queensland Government

9:50-10:10 Country Review - Canada

Gordon Harling, CMC Microsystems

10:10-10:30 Morning Tea Break

Country Review Sessions

Session Chair: Luis Fonseca

10:40-11:00 Country Review - China

Chang Honglong, Northwestern Polytechnical University

11:00-11:20 Country Review - Germany

Thomas Otto, TU Chemnitz/Fraunhofer ENAS

11:20-11:40 Country Review - Japan

Toshihiro Itoh, The University of Tokyo

11:40-12:00 Photo session

12:00-13:30 Lunch

Country Review Sessions

Session Chair: Dzung Dao

13:30-13:50 Country Review - Poland

Rafal Walczak, Wroclaw University of Science and Technology

13:50-14:10 Country Review - Romania

Carmen Moldovan, National Institute for R&D in Microtechnologies (IMT)

14:10-14:30 Country Review - Singapore

Guangya Zhou, National University of Singapore

14:30-14:50 Country Review - Spain

Luis Fonseca, National Center of Microelectronics (CNM-CSIC)

14:50-15:10 Country Review - UK

Nicholas Harris, University of Southampton

15:10-15:30 Country Review - Vietnam

Van Hieu Nguyen, Vietnam National University

15:30-16:00 Afternoon Tea Break

Country Review Sessions

Session Chair: Adrian Dinescu

16:00-16:20 The right infrastructure gets the right results - the ANFF perspective

Jane Fitzpatrick, Australian National Fabrication Facility (ANFF)

16:20-16:40 The Australian Semiconductor Sector and opportunities for collaboration

Nadia Court, Semiconductor Sector Service Bureau (S3B)

18:30-22:30 Summit Buffet Dinner

at NOSH Restaurant, Bar & Terrace

8:30-9:00 Registration & Morning Tea/Coffee

Technical Sessions

Session Chair: Nicholas Harris

9:00-9:20 Sensing with MEMS at Griffith University

Dzung Dao, Griffith University, Australia

9:20-9:40 Self-assembly enabling technologies for quantum applications

Sandra Bermejo Broto, Universitat Politècnica de Catalunya (UPC), Spain

9:40-10:00 Quantum Overview in Germany

Torsten Thieme, DEAXO GmbH

10:00-10:30 Morning Tea Break

Technical Sessions

Session Chair: Sandra Bermejo Broto

10:40-11:00 Quantum optomechanics for precision sensing

Warwick Bowen, The University of Queensland, Australia

11:00-11:20 On-chip integrated micromechanically tunable photonics

Guangya Zhou, National University of Singapore, Singapore

11:20-11:40 Integrating Diffractive Optics with Trapped Ions for Quantum Applications

Erik Streed, Griffith University, Australia

11:40-12:00 Tunable thermo-phototronic effect in unintentionally doped n-3C-SiC/p-Si heterostructure

Hung Nguyen, University of Southern Queensland, Australia

12:00-13:30 Lunch

Meeting of Chief Delegates

Technical Sessions

Session Chair: Guangya Zhou

13:30-13:50 Applications of System on Chip (SoC) architectures for quantum technologies

Javier Galindo Guarch, Instituto Tecnológico de Aragón (ITA), Spain

13:50-14:10 The development of chip- scale atomic clock using quantum interference

Munehisa Takeda, MEMS System Development Center, Japan

14:10-14:30 Low thermal budget thick Polysilicon for MEMS and CMOS-MEMS integration

Aron Michael, UNSW Sydney, Australia

14:30-14:50 Nano-Opto-Electro-Mechanical Systems (NOEMS) and Quantum Technology Engineering

Yoshishige Tsuchiya, University of Southampton, UK

14:50-15:10 Size Isn't Everything: Geometric Tuning in Polycyclic Aromatic Hydrocarbons and Its Implications for Carbon Nanodots

James Scott, Griffith University, Australia

15:10-15:30 All-optical nanoscale temperature sensing on microelectronics using diamond color centers

Trong Toan Tran, University of Technology Sydney, Australia

15:30-16:00 Afternoon Tea Break

Technical Sessions

Session Chair: Gordon Harling

16:00-16:20 Fabrication of FDSOI transistors for quantum computing- semiconductor microtechnologies at IMT Bucharest

Adrian Dinescu, National Institute for R&D in Microtechnologies, Romania

16:20-16:40 Ultra-Thin 3C-SiC Films on Large Diameter Si Wafers

Sima Dimitrijevic, Griffith University, Australia

16:40-17:00 Micromachining of silicon carbide materials for enhanced biosensing

Toan Dinh, University of Southern Queensland, Australia

18:30-22:30 Summit Gala Dinner

at Australian Outback Spectacular

Day 4

Wednesday, 29 May 2024

| | |
|------------|---|
| 8:30-9:00 | Morning Meetup |
| 9:00-13:00 | Local Industry Visits EM Solutions & Silanna Depart from the conference venue (in Gold Coast) at 9:00 am Industry visits (in Brisbane) finish by 1:00 pm Return to the conference venue in Gold Coast (optional) |
| 13:00 | Summit Closing |

Layout of the venue

Level 2, Mantra on View Surfers Paradise
22 View Ave, Surfers Paradise, QLD 4217, Australia

