



## 7th International Workshop on Speciality Optical Fibers and their Applications

Adelaide Convention Centre, Adelaide, Australia

11-16 December 2022

Program (version 4) - check website for updates

Sunday 11th December 2022	
TIME	ACTIVITY
10:00AM-3:00PM	ANFF Workshop   The University of Adelaide
9:00AM-4:00PM	3D Printing Workshop (\$20)   The University of Adelaide
3:00PM-7:30PM	Registration   Adelaide Convention Centre
6:00PM-7:30PM	Welcome Reception   Adelaide Convention Centre

Monday 12th December 2022	
TIME	ACTIVITY
8:30AM-9:00AM	Welcome to country / VIP address
9:00AM-9:45AM	AIP Plenary 1: Donna Strickland
9:45AM-10:30AM	AIP Plenary 2: Ania Bleszynski Jayich
10:30AM-11:00AM	Morning Tea
11:00AM-12:30PM	<b>WSOF Session 1: Advanced fabrication I</b> <b>Session chair: Heike Ebendorff-Heidepriem</b>
11:00AM	John Ballato   Clemson University, USA (Keynote Talk) Molten core fiber fabrication: Opening up the Periodic Table
11:30AM	Clarissa Harvey   Royal Institute of Technology, Sweden (Invited Talk) Laser-based drawing of optical fiber
12:00PM	Gang-Ding Peng   UNSW Sydney, Australia (Invited Talk) Silica Optical Fibres via 3D Printing Technologies
12:30PM-2:00PM	Lunch
2:00PM-3:30PM	<b>WSOF Session 2: Fibre sensing I</b> <b>Session chair: Michel Dignonnet</b>
2:00PM	Alessandro Tuniz   The University of Sydney, Australia (Invited Talk) Sensing Figures of Merit for Terahertz Photonic Light Cages
2:30PM	Chern Yang Leong   Hong Kong Polytechnic University, Hong Kong S.A.R. Polymer Fiber Bragg Grating-embedded Artificial Skin for Tactile Force Detection and Contact Localization of Robotic Fingers
2:45PM	Lauren McQueen   University of Queensland, Australia Fibre-based Optomechanical Acoustic Sensing
3:00PM	Jonathan Hedger   The University of Adelaide, Australia Interrogation of distributed feedback fibre laser over 100 km
3:15PM	Darcy Smith   The University of Adelaide, Australia Exploiting complex light transmission in multimode optical fibre for distributed sensing
3:30PM-4:00PM	Afternoon Tea
4:00PM-5:15PM	<b>WSOF Session 3: Fibre lasers I</b> <b>Session chair: Clemence Jollivet</b>
4:00PM	Stuart Jackson   Macquarie University, Australia (Invited Talk) Can we produce high power visible light using doped silicate fibre?
4:30PM	Nikita Simakov   DST Group, Australia Characterisation of Erbium-Doped DFB Lasers Pumped Resonantly at 1480 – 1540 nm
4:45PM	Georgia Bolingbroke   The University of Adelaide, Australia A 10 W narrow-linewidth thulium fibre master oscillator power amplifier
5:00PM	Ryszard Buczynski   Institute of Microelectronics and Photonics, Poland Active Nanostructured Core Fiber for Two-Color Fiber Laser
7:30PM-8:30PM	AIP Public Lecture: Tamara Davis

Tuesday 13th December 2022	
TIME	ACTIVITY
9:00AM-9:45AM	AIP Plenary 3: Jeremy O'Brien
9:45AM-10:30AM	AIP Plenary 4: Bob Coecke
10:30AM-11:00AM	Morning Tea
11:00AM-12:30PM	<b>WSOF Session 4: Advanced fabrication II</b> <b>Session chair: John Ballato</b>
11:00AM	Francois Chenard   IRflex, USA (Keynote Talk) Hollow-Core Fibers for the Rise of Industrial Innovations
11:30AM	Wade Hawkins   Clemson University, USA (Invited Talk) Fabrication and Properties of Intrinsically Low Nonlinearity Optical Fibers
12:00PM	Francois Chenard   IRflex, USA Mid-Infrared Polarization-Maintaining Photonic Crystal Fiber
12:15PM	Xuanzhao Pan   The University of Adelaide, Australia 3D printing Bullseye glass preform for fibre drawing
12:30PM-2:00PM	Lunch
2:00PM-3:30PM	<b>WSOF Session 5: Online/hybrid session</b> <b>Session chair: Clarissa Harvey</b>
2:00PM	Svetlana Aleshkina   Dianov Fiber Optics Research Center, Russia (Invited Talk) Specialty optical fibers for dispersion management in the spectral ranges of normal and anomalous material dispersion
2:30PM	Yingying Wang   Jinan University, China (Invited Talk) Polarization-Maintaining Anti-Resonant Hollow-Core Fiber
3:00PM	Junxiang Zhang   Tianjin University, China Efficient 2.8 $\mu\text{m}$ Er <sup>3+</sup> -doped ZBLAN fiber laser pumped at 1.7 $\mu\text{m}$
3:15PM	Yunjiang Rao   University of Electronic Science and Technology of China, China 200 km-long single-ended random fiber laser and sensor with ULLF
3:30PM-4:00PM	Afternoon Tea
4:00PM-5:30PM	<b>WSOF Session 6: Fibre sensing II</b> <b>Session chair: Heike Ebendorff-Heidepriem</b>
4:00PM	Ryszard Buczynski   University of Warsaw, Poland (Invited Talk) Volumetric integration of nanodiamonds in optical fiber cores
4:30PM	Kandeel Mukhtar   The University of Adelaide, Australia Fiber Based Polarization Insensitive Optical Coherence Tomography System
4:45PM	Marco Capelli   RMIT University, Australia Remote magnetometry with fluorescent microdiamonds incorporated in optical fibres
5:00PM	Andreas Ioannou   Cyprus University of Technology, Cyprus Design of scintillator-based dosimeters using femtosecond laser processed polymer optical fibers for radiation measurement
5:15PM	Adam Wojciechowski   Jagiellonian University, Poland Optical fibers with NV nanodiamonds end-face coating for magnetic field sensing and imaging
5:30PM-7:00PM	<b>WSOF Poster Session</b>

**Wednesday 14th December 2022**

TIME	ACTIVITY
9:00AM-9:45AM	AIP Plenary 5: Laura Greene
9:45AM-10:30AM	AIP Plenary 6: Jirina Stone
10:30AM-11:00AM	Morning Tea
11:00AM-12:30PM	<b>WSOF Session 7: Nonlinear effects</b> <b>Session chair: Stuart Jackson</b>
11:00AM	Jonathan Hu   Baylor University, USA (Invited Talk) Tradeoff between the Brillouin and transverse mode instabilities in high-power fiber amplifiers
11:30AM	Kabish Wisal   Yale University, USA Transverse Mode Instability Mitigation with Multimode excitation in Fiber Amplifiers
11:45AM	Zane Peterkovic   University of South Australia, Australia Efficient third harmonic generation: phase compensation using inter-fibre spacing
12:00PM	Kabish Wisal   Yale University, USA Suppressing Stimulated Brillouin Scattering in Multimode Fibers with High Output Beam Quality
12:15PM	Shuen Wei   The University of Adelaide, Australia Simultaneous beam shaping and suppression of simulated Brillouin scattering by adjusting the input wavefront in a multimode
12:30PM-2:00PM	Lunch
2:00PM-5:30PM	<a href="#">WSOF Networking Function</a> <a href="#">Barrister Block (\$70.00, registration required)</a>
7:00PM-9:00PM	<b>Conference Dinner (TBC)</b>

Thursday 15th December 2022	
TIME	ACTIVITY
9:00AM - 9:45AM	AIP Plenary 7: Noah Finkelstein
9:45 AM - 10:30AM	AIP Plenary 8: Rana Adhikari
10:30 AM- 11:00AM	Morning Tea
11:00AM - 12:30PM	<b>WSOF Session 8: Fibre lasers II</b> <b>Session chair: Francois Chenard</b>
11:00AM	Alex Hemming   Defence Science and Technology, Australia (Keynote Talk) Advances in High Power Fibre Lasers for Defence and Dual Use Applications
11:30AM	Clemence Jollivet   Coherent-Nufern, USA (Invited Talk) High Performance Large-Mode Area Double-Clad Fibers for kW Power Scaling of Fiber Lasers from 1 to 2.1 $\mu\text{m}$
12:00PM	Adam Gambell   Defence Science and Technology Group, Australia Development of components and processes for power scaling of diode-pumped metal coated optical fibre amplifiers
12:15PM	Samuel Legge   Australian National University, Australia Scalable All-Fiber Coherent Beam Combination Using Digital Control
12:30PM-2:00PM	Lunch
2:00PM-3:30PM	<b>WSOF Session 9: Advanced techniques</b> <b>Session chair: Ryszard Buczynski</b>
2:00PM	Michel Digonnet   Stanford University, USA (Invited Talk) Optically Cooled Yb-Doped Silica Fiber Lasers
2:30PM	Daniel Dahl   University of Queensland, Australia How to Build a High Performance MPLC: From Simulation to Fabrication
2:45PM	Md. Istiaque Reja   The University of Adelaide, Australia Machine Learning for Pressure Sensing Using Pure Silica Microstructured Optical Fiber Based Specklegram Sensor
3:00PM	Haoran Ren   Monash University, Australia An achromatic metafiber for focusing and imaging across the entire telecommunication range
3:15PM	Garry Berkovic   Soreq NRC, Israel Comparison of Radiation-Induced-Attenuation in Pure Silica Core and F-doped Silica fibres
3:30PM-4:00PM	Afternoon Tea
4:00PM-5:30PM	<b>WSOF Session 10: Fibre sensing III</b> <b>Session chair: Gang-Ding Peng</b>
4:00PM	Jingxian Cui   Hong Kong Polytechnic University, Hong Kong S.A.R. Large Range Torsion Sensor Based on Twin-Core Polymeric Optical Fibre
4:15PM	Erik Schartner   The University of Adelaide, Australia Multipoint fibre Bragg grating sensors for industrial temperature monitoring
4:30PM	Kyriacos Kalli   Cyprus University of Technology, Cyprus Selectively tuning the temperature and humidity sensitivity of CYTOP fibre Bragg grating sensors
4:45PM	Krzysztof Wilczyński   InPhoTech, Poland Metal-coated optical fiber embedment in WAAM aluminium parts for distributed temperature sensing
5:00PM	Luke Pollock   UNSW Canberra, Australia Embedding Fibre Sensors in 3D Printed Lightweight Aircraft Structures
5:15PM	<b>WSOF Closing Ceremony</b>
5:30PM-7:00PM	Poster Session (no WSOF posters)

Friday 16th December 2022	
TIME	ACTIVITY
9:00AM - 10:30AM	No WSOF sessions
10:30 AM- 11:00AM	Morning Tea
11:00AM - 11:45AM	AIP Plenary 9: Stefan A. Maier
11:445AM - 12:30PM	AIP Plenary 10: Tracy Slatyer
12:30PM - 1:00PM	<b>Conference close</b>

WSOF Posters	
1	Thomasina Zaengle   Clemson University, USA Volatile Crystalline Semiconductor Core Fibers
2	Miranda Stone   Clemson University, USA Compositionally Manipulating Nonlinearities in Novel Optical Fibers Based on the Molten Core Method
3	Mary Ann Cahoon   Clemson University, USA On the evolution of nanoparticles in nanoparticle-doped optical fibers
4	Jiaying Wang   University of New South Wales, Australia Increasing silica loading in fibre preform fabrication by 3D DLP printing
5	Jing Kong   University of New South Wales, Australia UV Absorber Effect on DLP Printing of Silica Optical Fibre Preforms
6	Wen Qi Zhang   University of South Australia, Australia Fibre optic hydrophone based on pressure sensitive microstructured optical fibre
7	Bhaswar Dutta Gupta   University of Auckland, New Zealand Modelling of Nonlinear Amplifier in the Mid-IR Region
8	Wen Qi Zhang   University of South Australia, Australia Spontaneous high efficiency third harmonic generation in optical fibres
9	Lu Zhang   Tianjin University, China Over 200 mW single-frequency Tm-doped fiber ring laser at 2.05 $\mu\text{m}$
10	Ori Henderson-Sapir   The University of Adelaide, Australia Suppressing stimulated Brillouin scattering and speckle effects by adjusting the seed laser wavefront in a high-power multi-mode fibre amplifier system
11	Shuo Li   RMIT University, Australia Preferential coupling of NV nanodiamond to doped fibre and spliced SMF
12	Dinusha Gunawardena   The Hong Kong Polytechnic University, Hong Kong SAR Regenerated Polymer Optical Fibre Bragg Gratings for Cochlear Implantation
13	Anna Radionova   The University of Adelaide, Australia Visualization of glass flow during extrusion to track glass deformations
14	Andreas Ioannou   Cyprus University of Technology, Cyprus Simulating power cable damage through monitoring temperature of multimode optical fibres with a state-of-the-art distributed sensing instrument
15	Krzysztof Wilczyński   InPhoTech, Poland Technology evaluation of low loss all-fiber fanouts for multicore fibers
16	Jobaida Akhtar   The University of Adelaide, Australia Investigation of the Extrusion Parameters for Tellurite Optical Fibres