

Program



6th International Conference on Optical Angular Momentum
12-17 June 2022
Tampere University, Finland

	Sunday 12.06.22	Monday 13.06.22	Tuesday 14.06.22	Wednesday 15.06.22	Thursday 16.06.22	Friday 17.06.22
08:45-09:00		Registration				Concluding Remarks
09:00-09:25		Opening Remarks	Sonja Franke-Arnold University of Glasgow, UK	Daniel Leykam Institute for Basic Science, South Korea	Filippo Cardano Università di Napoli Federico II, Italy	Danilo Gomes Pires Duke University, USA
09:25-09:50		Cornelia Denz Universität Münster, Germany	Ferdinand Schmidt-Kaler University of Mainz, Germany	Fabio Biancalana Heriot-Watt University, UK	Jonathan Leach Heriot-Watt University, UK	Tyler Neely University of Queensland, Australia
09:50-10:05		Igor Meglinski University of Oulu, Finland	Christian Schmiegelow Universidad de Buenos Aires, Argentina	Takashige Omatsu Chiba University, Japan	Jietai Jing East China Normal University, China	Robert Bennet University of Glasgow, UK
10:05-10:20		Payvand Arjmand Université Paris Cité, France	Andrei Afanasev George Washington University, USA	Enrique Galvez Colgate University, USA	Mujtaba Zahidy Technical University of Denmark, Denmark	Andreas Norrman University of Eastern Finland, Finland
10:20-10:50		Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
10:50-11:15		Qiwen Zhan University of Shanghai for Science & Technology, China	Marcus Huber Technical University Vienna, Austria	Lixiang Chen Xiamen University, China	Vincenzo Grillo Istituto di Nanoscienze CNR, Italy	Jamal Berakdar Martin-Luther University, Germany
11:15-11:40		Howard Milchberg University of Maryland, USA	Ebrahim Karimi University of Ottawa, Canada	Jacquiline Romero University of Queensland, Australia	Raphael Dahan Technion, Israel	Joel Carpenter University of Queensland, Australia
11:40-12:05		Alison Yao University of Strathclyde, UK	Bereneice Sephton University of Witwatersrand, South Africa	Mehul Malik Heriot-Watt University, UK	Dmitry Pushin University of Waterloo, Canada	Miguel Alonso CNRS, Aix Marseille University, France
12:05-12:30		Peter Banzer Universität Graz, Austria	Siddharth Ramachandran Boston University, USA	Mark T. Busk Colorado School of Mines, USA	Konstantin Bliokh RIKEN, Japan	Peter Mekhail University of Glasgow, UK
12:30-14:00	arrival	Lunch	Lunch	Lunch	Lunch	Lunch
14:00-14:25		Jaroslav Kysela IQOQI Vienna, Austria	Jian Wang HUST - University of Science & Technology, China	Poster Session	<u>Panel Discussion</u> David Andrews , University of East Anglia, UK Mohamed Babiker , University of York, UK Stephen Barnett , University of Glasgow, UK Sir Micheal Berry , University of Bristol, UK Miles Padgett , University of Glasgow, UK Halina Rubinsztein-Dunlop , University of Queensland, Australia	Mark Dennis University of Birmingham, UK
14:25-14:50		Girish Kulkarni University of Ottawa, Canada	Flavio Capotondi Elettra (Synchrotron), Italy			Jörg Götze University of Glasgow, UK
14:50-15:15		Antonio Khoury Universidade Federal Fluminense, Brazil	Martin Lavery University of Glasgow, UK			Kayn Forbes University of East Anglia, UK
15:15-15:30		Alba de la Heras Universidad de Salamanca, Spain	Vincenzo D'Ambrosio Università di Napoli Federico II, Italy			Emilio Pisanty King's College London, UK
15:30-16:00		Coffee Break	Coffee Break			Coffee Break
16:00-16:25		Etienne Brasselet University of Bordeaux, France	Alexander Szameit Universität Rostock, Germany	Robert Cameron University of Strathclyde, UK	departue	
16:25-16:50		Gianluca Ruffato University of Padova, Italy	Ritesh Agarwal University of Pennsylvania, USA	Gabriel Molina Terriza Donostia International Physics Centre, Spain		
16:50-17:15		Federico Capasso Harvard university, USA	Alan Willner University of Southern California, USA	Benjamin J. McMorran University of Oregon, USA		
17:15-17:30			Thierry Ruchon Université Paris-Saclay, France			
18:00-20:00		Poster Session				
social events	Welcome Reception (start 19:00)		Sauna Party (departure to venue by bus 18:00, start at venue 18:15, return to campus by bus at around 22:00)	Enjoying Tampere	Boat Trip & Conference Dinner (walk to harbour 17:30, departure at harbour by boat 18:00, return to harbour at around 23:00)	

Invited talks

Ritesh Agarwal	On-chip OAM photodetectors: topological light meets topological materials
Miguel Alonso	Geometry and topology in 3D Polarization
Peter Banzer	SuperPixels – Phase and Polarization Sensitive Cameras Based on Integrated Photonics
Jamal Berakdar	Generation of structured fields via Spintronic THz emitters
Fabio Biancalana	Non-perturbative, fully quantum formulation of nonlinear optics in 2D media: the holographic principle
Konstantin Bliokh	Momentum and Angular Momentum of Sound, Water, and Plasma Waves
Etienne Brasselet	Spin-independent geometric self-focusing of light driven by the photon spin
Robert Cameron	How to knot microwaves
Federico Capasso	3D Structuring of Light with Metaoptics
Flavio Capotondi	Applications of XUV – OAM beams to image transient dynamics of plasmonic nanostructures and magnetic vortex
Filippo Cardano	Ultra-long photonic quantum walks via spin-orbit metasurfaces
Joel Carpenter	Time reversed optical waves by arbitrary vector spatiotemporal field generation
Lixiang Chen	The Radial Momentum of Light
Raphael Dahan	Tunable Photon-Induced Spatial Modulation of Free Electron Wavepackets
Mark Dennis	Skyrmionic Hopfions: particle-like twisted topologies in light
Cornelia Denz	Topology in three-dimensionally structured light
Kayn Forbes	Chirality and optical activity of twisted light
Sonja Franke-Arnold	Shape-shifting cold atoms with vector light
Greg Gbur	Vortices and OAM in Partially Coherent Beams
Vincenzo Grillo	Electrostatic OAM generation, detection and ghost imaging in electron microscopy
Jörg Götte	Paraxial Skyrmionic Beams
Marcus Huber	High-dimensional entanglement for quantum communication
Ebrahim Karimi	Structured Photons – Their Application in Quantum Photonics
Mercedeh Khajavikhan	Direct Generation of Tunable Orbital Angular Momentum Beams in Microring Lasers with Broadband Exceptional Points
Antonio Khoury	Spin to orbital angular momentum transfer in nonlinear wave mixing
Girish Kulkarni	A classical model of spontaneous parametric down-conversion
Jaroslav Kysela	Engineering high-dimensional quantum entanglement via path identity
Martin Lavery	Environmental and Fibre Sensing with Structured Light
Jonathan Leach	Efficiently sorting overlapping quantum states of light
Daniel Leykam	Singular Optics: From a Data Science Perspective
Mark T. Lusk	The Geometric Phase of Entanglement for Trapped Optical Vortices and Its Interpretation as an Information Measure
Mehul Malik	Transport and Manipulation of High-Dimensional Entanglement through a Complex Medium

Benjamin J. McMorran	Quantum Interactions with Structured Electrons
Peter Mekhail	3D Time-of-Flight Imaging using Ultra-thin Endoscopy
Howard Milchberg	Spatio-temporal optical vortex (STOV) pulses: propagation and OAM conservation
Gabriel Molina Terriza	Classical and Quantum scattering of vortex beams from small particles
Tyler Neely	DMD-based optical traps for stirring-up and observing Bose-Einstein condensate superfluid dynamics
Danilo Gomes Pires	Knots of darkness in turbulent media
Dmitry Pushin	Integrating structured wave techniques into neutron sciences
Siddharth Ramachandran	High Dimensional Quantum Sources with Optical Fibers
Gianluca Ruffato	Control of structured wavefields with conformal transformations
Jacquiline Romero	Hiding Ignorance Using High Dimensions
Ferdinand Schmidt-Kaler	Ion wavepackets interacting with vortex laser beams
Bereneice Sephton	Teleporting high-dimensional OAM states
Alexander Szameit	Nonlinear Photonic Topological Insulators
Jian Wang	Tailoring Optical Angular Momentum with Fibers and Chips: Devices and Applications
Alan Willner	Advances in Utilizing OAM Multiplexing for Communication Systems in the THz and Mid-IR Frequency Bands
Alison Yao	Structuring light for controlled propagation of optical and atomic solitons
Qiwen Zhan	Spatiotemporal Sculpturing of Ultrashort Pulses

Contributed talks

Andrei Afanasev	Angular Momentum and Polarization Transfer from the Twisted Light to Atoms
Payvand Arjmand	Compressive STED Microscopy with Speckles
Robert Bennet	A condensate of light as a sensor of chirality
Vincenzo D'Ambrosio	Ultra-sensitive measurement of transverse displacements with linear photonic gears
Alba de la Heras	Nonlinear up-conversion of scalar and vectorial vortices through high harmonic generation
Enrique Galvez	Einstein Beams: Light beams following gravitationally-lensed trajectories
Jietai Jing	OAM multiplexed quantum entanglement and quantum teleportation
Igor Meglinski	Orbital Angular Momentum for Biomedical Diagnosis and Tissues Characterization
Andreas Norrman	Spin structures in random three-dimensional polarization states
Takashige Omatsu	Optical vortex induced forward transfer for printed electronics and photonics
Emilio Pisanty	Three-dimensional polychromatic knots and skyrmionic textures via tightly-focused beams
Thierry Ruchon	Magnetic Helicoidal Dichroism with XUV Light Carrying Orbital Angular Momentum
Christian Schmiegelow	Transfer of optical orbital angular momentum to the transverse motion of the center of mass of a single trapped ion
Mujtaba Zahidy	Recent development of OAM mode generation for quantum communication