International Online Conference on
Holography Meets Advanced Manufacturing
20 - 22 February 2023
Conference Schedule

Day 1: Monday, February 20, 2023	**HOLOGRAPHY**	
Time: Eastern European Time (EET). **Please check the time differences!** https://www.timeanddate.com/worldclock/		
09:00 – 09:15	Virtual Conference Window will open	
09:15 – 09:30	Introduction	Prof. Vijayakumar Anand
09:30 – 09:40	Welcome Note	Prof. Toomas Plank and Prof. Indrek Jogi
09:40 – 10:05	Opening talk "Optics in Estonia: Research and Innovation Highlights"	Prof. Peeter Saari
10:10 – 10:55	Keynote - Advanced Imaging methods Using Coded Aperture Digital Holography	Prof. Joseph Rosen
Session 1 – H1. Holography – Chair Prof. Vijayakumar Anand & Daniel Smith		
11:00 – 11:20	Incoherent digital holography for multidimensional motion-picture imaging	Dr. Tatsuki Tahara
11:25 – 11:45	Synchrotron-FTIR Technique to Underpin the Future of Advanced Manufacturing Technology and Its Applications at Australian Synchrotron	Dr. Jitraporn (Pimm) Vongsvivut
11:50 – 12:10	3D and see-through light-field display using digitally printed holographic screen	Prof. Jackin Boaz Jessie
12:15 – 12:35	Manipulating Light with Micro and Nano-Optics and holographic techniques	Prof. Shanti Bhattacharya

12:40 – 13:00	Digital Polarization holography: Challenges and opportunities	Prof. Rakesh Kumar Singh
13:05 – 13:25	Information Security: An Optical Approach	Prof. Ravi Kumar
Session 2 – H2. Holography Chair Dr. Vinoth Balasubramani & Andrei-Ioan Bleahu		
13:30 – 13:50	Role of Deep Learning in Optical Imaging	Prof. Inbarasan Muniraj
13:55 – 14:15	Sapphire Diffractive Axicon milled with Femtosecond Laser Ablation for Imaging Applications	Daniel Smith (Poster Presentation)
14:20 – 14:40	Lensless hyperspectral phase retrieval via alternating direction method of multipliers and spectral proximity operators	Dr. Igor Shevkunov
14:45 – 15:05	Quantitative analysis of illumination and detection corrections in adaptive light sheet fluorescence microscopy	Dr. Mani Ratnam Rai
15:10 – 15:30	Depth Resolved Imaging by Digital holography via Sample-shifting	Prof. Suhas Veetil
17:30 – 17:50	Spin-orbit modal shaping of vortex beams	Prof. Etienne Brasselet
17:55 – 18:15	Light Sheet Fluorescence Microscopy using Incoherent Light Detection	Prof. Mariana Potcoava
Poster Presentations Session Chairs Prof. Vijayakumar Anand & Dr. Vinoth Balasubramani		
15:45 – 18:00 (10 minutes for presentation + 2 minutes for Questions)		
15:45 – 16:00	Single Shot Lensless Interferenceless Phase Imaging of Biochemical Samples Using Synchrotron Near Infrared Beam	Molong Han

16:00 – 16:15	Digital Fourier transform holography using a beam displacer	Mohit Rathor
16:15 – 16:30	Field of view enhancement of dynamic holographic displays using algorithms, devices, and systems: A review	Monika Rani
16:30 – 16:45	Holography with incoherent light	Akanksha Gautam
16:45 – 17:00	An asymmetric optical cryptosystem using physically unclonable functions in the Fresnel domain	Vinny Cris M
17:00 – 17:15	Techniques to expand the exit pupil of Maxwellian display: A review	Rajveer Kaur
17:15 – 17:30	Imaging incoherent target using Hadamard basis patterns	Tanushree Karmakar
18:15 – 18:20	Closing Remarks	
End of the Day 1		

Day 2: Tuesday, February 21, 2023 ADVANCED MANUFACTURING		
Time: Eastern European Time (EET). **Please check the time differences!** **https://www.timeanddate.com/worldclock/**		
09:00 – 09:15	Virtual Conference Window will open	
09:15 – 09:35	Opening Remarks & Welcome Note	Dr. Soon Hock Ng
09:40 – 10:25	Keynote - Ultra-short laser pulses as material synthesis and lithography tool	Prof. Saulius Juodkazis
Session 1 – AM1. Advanced Manufacturing Chair Dr. Soon Hock Ng & Daniel Smith		
10:30 – 10:50	3D Auxetic Metamaterials as Scaffolds for Tissue Engineering	Prof. Maria Farsari
10:55 – 11:15	Heavy-duty and high-performance 3D micro-optics made by laser additive manufacturing	Prof. Mangirdas Malinauskas

11:20 – 11:40	Femtosecond laser printing of form birefringent polymeric nanostructures	Prof. Vygantas Mizeikis
11:45 – 12:05	Knobs for tuning the physical properties of atom-thin graphene layers	Prof. Manu Jaiswal
12:10 – 12:30	Efficient generation of higher harmonics from nonlinear metasurfaces and its applications	Dr. Aravind P. Anthur
Session 2 – AM2. Advanced Manufacturing Chair Prof. Kaupo Kukli & Andrei-Ioan Bleahu		
12:35 – 12:55	The Optical Drill: twisted beams	Prof. Darius Gailevicius
13:00 – 13:20	Photon-Induced Structural and Surface Engineering for Advanced Manufacturing of Nanoscale Material	Dr. Jagadeesh Suriyaprakash
13:25 – 13:45	Mirror-less Laser action enabled by Energy Transfer from a conjugated oligomer donor to Chromeno-quinoline acceptor	Prof. Saradh Prasad
13:50 – 14:10	M2 factor of conically refracted Gaussian beams	Dr. Erko Jalviste
Poster Presentations Session Chairs Prof. Kaupo Kukli & Dr. Soon Hock Ng		
14:30 – 17:00 (10 minutes for presentation + 2 minutes for Questions)		
14:30 – 14:45	3D scaffolds via Multi-Photon Polymerization as a co-culture system for application in peripheral nervous system	Antonis Kordas
14:45 – 15:00	Investigation of Memristor-based neural networks on Pattern recognition	Gayatri Routhu
15:00 – 15:15	Additive micro-/nano manufacturing of non-sensitized SZ2080TM employing femtosecond-laser VIS-light oscillator	Antanas Butkus
15:15 – 15:30	An Efficient Designing of IIR Filter for ECG Signal Classification Using MATLAB	Manjula Nandi

15:30 – 15:45	Fabrication and analysis of 3D low THz metamaterials	Savvas Papamakarios
15:45 – 16:00	Advanced driver fatigue detection by integration of OpenCV, DNN module and deep learning	Muzammil Parvez M
16:00 – 16:15	Design and simulation of a low power and high speed Fast Fourier Transform for medical image compression	Ernest Ravindran R S
16:15 – 16:30	Analysis of 22nm Memristor based Inverter and Universal Gates using ANN Model	Kota Bhagya Chandrika
16:30 – 16:45	Optimization of Placement And Routing For Alu Using Reinforcement Learning Algorithm	Eppala shashi Kumar reddy
17:00 – 17:05	Closing Remarks	
End of the Day 2		

Day 3: Wednesday, February 22, 2023	**INDUSTRY APPLICATIONS**	
Time: Eastern European Time (EET). **Please check the time differences!** **https://www.timeanddate.com/worldclock/**		
09:00 – 09:15	Virtual Conference Window will open	
09:15 – 09:30	Opening Remarks	Dr. Amudhavel Jayavel
09:30 – 09:40	Welcome Note	Mrs. Tiia Lillemaa
09:40 – 10:25	Keynote - Mapping the path from idea to economically scalable application in 3D imaging and sensing	Prof. Heli Valtna
Session 1 – IA1. Industry Applications Chair Dr. Amudhavel Jayavel & Andrei-Ioan Bleahu		
10:30 – 10:50	New medical imaging: Physics, Medical Need and Commercial Viability	Dr. Zoltan Vilagosh
10:55 – 11:15	Holography and its significance in trauma management and anorectal surgeries - An eye-opener!	Dr. Scott Arockia Singh

11:20 – 11:40	Imaging pitfalls and diagnostic inhibitions in various imaging modalities of head and neck region	Dr. Durgadevi B
11:45 – 12:05	Holography and its clinical implications in Urology - A overview	Dr. Deepak David
Session 2 – IA2. Industry Applications Chair Dr. Amudhavel Jayavel & Shivasubramanian Gopinath		
12:10 – 12:30	Light for life – Optical spectroscopy in clinical settings	Dr. Shree Krishnamoorthy
12:35 – 12:55	Challenges in Burns Management - A Burns Surgeon's expectation from Modern-day Technology	Dr. Mohammed Imran Khan
13:00 – 13:20	Cone beam tomography - Challenges and optimization	Prof. Dr. Milling Tania
13:25 – 13:45	Holography in bladder cancer and Renal stones	Dr. Priyadarshini D
Poster Presentations Session Chairs Dr. Amudhavel Jayavel & Dr. Viktor Palm		
14:00 – 17:00 (10 minutes for presentation + 2 minutes for Questions)		
14:00 – 14:15	Study of a pH-sensitive Hologram for Biosensing Applications	Komal Sharma
14:15 – 14:30	Enhancing phase measurement by factor of two in the stokes correlation	Amit Yadav
14:30 – 14:45	Hologram opens new learning door for postgraduate students- An academic view point	Dr. Thivagar M
14:45 – 15:00	Design of Low Power Phase Locked Loop	Chandra Keerthi Pothina
15:00 – 15:15	Holographic technology as a new pain-reducing solution for Children	Anneli Kolk

15:15 – 15:30	Verification of SoC using Advanced Verification Methodology	Pranuti Pamula
15:30 – 15:45	Correction of Focusing Errors of a Refractive Lens Using Lucy Richardson-Rosen Algorithm	Andrei-Ioan Bleahu
15:45 – 16:00	Implementation of Content-Based Image Retrieval Using Artificial Neural Networks	Sarath Yenigalla
16:00 – 16:15	Design and simulation of a low-power and high-speed Fast Fourier Transform for medical image compression	Ernest Ravindran R S
16:15 – 16:30	Best Poster Presentations Announcement for Days 1, 2 & 3	
16:30 – 16:45	Closing Remarks	
End of the Conference		