

AOIM2013

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Book of abstracts

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Mr

Prof. FORBES, Andrew ¹

¹ CSIR

Corresponding Author: aforbes1@csir.co.za

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Imaging the expression of Channelrhodopsin-2 as a directly light-gated cation-selective membrane channel in HEK 293 cells

Dr. EL-HUSSEIN M.KAMEL, Ahmed ¹

¹ *The National Institute of Laser Enhanced Science, Cairo University*

Corresponding Author: a.el-husseiny@niles.edu.eg

Session IX: Space / 3

-Strehl ratio, divergence, M2 factor –What is good for describing the propagation of a diffracted laser beam?

Author: Prof. AIT-AMEUR, Kamel ¹

Co-Authors: Mr. BOUBAHA, Boualem ²; Mr. NAIDOO, Darryl ³; Dr. GODIN, Thomas ¹; Dr. BENCHEIKH, Abdelhalim ⁴; Dr. FROMAGER, Michael ¹; Prof. FORBES, Andrew ³

¹ *CIMAP-ENSICAEN, Caen, France*

² *Faculté de Physique-USTHB, Algiers*

³ *NLC-CSIR, Pretoria*

⁴ *LOA, Sétif, Algeria*

Corresponding Author: kamel.aitameur@ensicaen.fr

Session VI: Vision / 4

Dynamic plenoptic perception with adaptive mirror

Mr. MOURA, Thiago D. O. ¹; Mr. AMARAL, Felipe T. ¹; Prof. DE LIMA MONTEIRO, Davies W. ²

¹ *Graduate Program in Electrical Engineering - Federal University of Minas Gerais - Av. Antônio Carlos 6627, 31270-901, Belo Horizonte, MG, Brazil*

² *Associate Professor - OptMA_lab - DEE/UFMG Electrical Engineering Department, Av. Antonio Carlos, 6627 - Pampulha, 31270-010 - Belo Horizonte - MG*

Corresponding Author: thiagodaniel_moura@hotmail.com

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Imaging of solid aerosols produced by optical catapulting

Author: Mr. MOHAMED, Mahmoud ¹

Co-Authors: Mr. FERNANDEZ-BRAVO, Angel ²; Dr. FORTES, Francisco Javier ²; Prof. ABDEL HARITH, Mohamed ¹; Prof. LASERNA, Javier ²

¹ *The National Institute of Laser Enhanced Science*

² *Department of Analytical Chemistry, Faculty of Sciences, University of Malaga, Spain*

Corresponding Author: mahmoudstar@gmail.com

Session VI: Vision / 6

The use of Zernike and Q-Polynomials combined for the Representation of Intraocular-Lens Topologies

Mr. CARVALHO, Luiz ¹; Dr. DAVIES W. DE LIMA, Monteiro ¹; Mr. COSTA, Rodolfo ¹

¹ *Graduate Program in Electrical Engineering - Federal University of Minas Gerais*

Corresponding Author: rodolfocosta@cpdee.ufmg.br

Session VI: Vision / 7

Aberration correction with adaptive optics for lowering the threshold energy for femtosecond laser induced optical breakdown in a water based eye model

Author: Mrs. HANSEN, Anja ¹

Co-Authors: Mr. GÉNEAUX, Romain ¹; Mr. GÜNTHER, Axel ¹; Mr. KRÜGER, Alexander ¹; Mr. RIPKEN, Tammo ¹

¹ *Laser Zentrum Hannover e.V.*

Corresponding Author: a.hansen@lzh.de

Session IX: Space / 8

Adaptive Optics in Astronomy: deblurring the atmosphere

Author: Dr. BUCKLEY, David ¹

Co-Authors: Ms. CATALA, Laure ²; Dr. CRAWFORD, Steven ²; Dr. PICKERING, Timothy ²

¹ *Southern African Large Telescope*

² *SAAO*

Corresponding Author: dibnob@sao.ac.za

Session III: Wavefront Sensing Techniques / 9

Modal decomposition for wavefront reconstruction

Author: Mr. SCHULZE, Christian ¹

Co-Authors: Mr. NAIDOO, Darryl ²; Mr. FLAMM, Daniel ¹; Prof. FORBES, Andrew ²; Dr. DUPARRÉ, Michael ¹

¹ *Institute of Applied Optics, Abbe Center of Photonics, Friedrich Schiller University Jena, Germany*

² *Council for Scientific and Industrial Research, National Laser Centre*

Corresponding Author: christian.schulze@uni-jena.de

Session II : Imaging and Microscopy / 10

Layer-oriented adaptive optics for extended objects

Author: Dr. KELLERER, Aglae ¹

Co-Author: Prof. MYERS, Richard ¹

¹ *Durham University*

Corresponding Author: a.n.c.kellerer@durham.ac.uk

Session VII : Imaging and Microscopy / 11

Adaptive optics for multi-photon microscopy using direct and sensorless measurement

Author: Mr. VAN WERKHOVEN, Tim ¹

Co-Authors: GERRITSEN, Hans ²; KELLER, Christoph ¹; Mr. ANTONELLO, Jacopo ³; TRUONG, Hoa ²; VERHAEGEN, Michel ³

¹ *Leiden Observatory, Leiden University*

² *Molecular Biophysics, Utrecht University*

³ *Delft University of Technology, Delft Center for Systems and Control*

Corresponding Author: werkhoven@strw.leidenuniv.nl

Session IX: Space / 12

Overview and perspectives of Active and Adaptive Optics for Space Optical Applications

Mr. HALLIBERT, Pascal ¹

¹ *ESA-ESTEC*

Corresponding Author: pascal.hallibert@esa.int

Session VII : Imaging and Microscopy / 13

Constrained optimisation for fast wavefront sensorless adaptive optics in microscopy

Author: Mr. ANTONELLO, Jacopo ¹

Co-Authors: Prof. VERHAEGEN, Michel ¹; Mr. VAN WERKHOVEN, Tim ²; Prof. GERRITSEN, Hans ²; Prof. KELLER, Christoph ³

¹ DCSC, Delft University of Technology

² Molecular Biophysics, Utrecht University

³ Leiden Observatory, Leiden University

Corresponding Author: j.antonello@tudelft.nl

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Propagating aberrated laser beams

Author: Dr. MAFUSIRE, Cosmas ¹

Co-Author: Prof. FORBES, Andrew ¹

¹ CSIR National Laser Centre

Corresponding Author: cmafusire@csir.co.za

Session VII : Imaging and Microscopy / 15

Active spatial polarization control for microscope objectives

Author: Mr. SCHAAL, Frederik ¹

Co-Authors: Ms. WEIDENFELD, Susanne ²; Mr. RUTLOH, Michael ³; Prof. STUMPE, Joachim ³; Dr. JETTER, Michael ²; Prof. MICHLER, Peter ²; Mr. PRUSS, Christof ¹; Prof. OSTEN, Wolfgang ¹

¹ Universität Stuttgart, Institut für Technische Optik, Germany

² Universität Stuttgart, Institut für Halbleiteroptik und Funktionelle Grenzflächen, Germany

³ Universität Potsdam, Institut für Chemie, Germany

Corresponding Author: schaal@ito.uni-stuttgart.de

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Biomedical applications of optics

Author: Dr. MTHUNZI, Patience ¹

Co-Authors: Ms. KHANYILE, Thulile ²; Mr. HE, Kuang ³; Mr. NGCOBO, Sandile ²; Prof. FORBES, Andrew ²; Prof. PAPATHANASOPOULOS, Maria ⁴; Dr. WARNER, Jamie ³

¹ CSIR - NLC

² National Laser Center, CSIR

³ Department of Materials, University of Oxford

⁴ Department of Molecular Medicine and Haematology, University of the Witwatersrand Medical School

Corresponding Author: pmthunzi@csir.co.za

Session III: Wavefront Sensing Techniques / 17

Impact of wavefront aberrations in ultrafast nonlinear optics

Author: Dr. BORREGO-VARILLAS, Rocio ¹

Co-Authors: Dr. R. VÁZQUEZ DE ALDANA, Javier ²; Dr. ROMERO, Carolina ³; Dr. ALONSO, Benjamín ⁴; Mr. VALLE, Francisco ³; Dr. SOLA, Íñigo ⁵; Dr. MENDOZA-YERO, Omel ⁶; Dr. BUENO, Juan M. ⁷; Prof. ROSO, Luis ³

¹ *Universitat Jaume I, Universidad de Salamanca*

² *Universidad de Salamanca*

³ *Centro de Láseres Pulsados (CLPU)*

⁴ *Universidad de Salamanca*

⁵ *Universidad de Salamanca*

⁶ *Universitat Jaume I*

⁷ *Universidad de Murcia*

Corresponding Author: rociobv@usal.es

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Free-motion measurement of the beam propagation factor by means of a spatial light modulator.

Author: Mr. PÉREZ VIZCAÍNO, Jorge ¹

Co-Authors: Dr. MARTÍNEZ LEÓN, Lluís ¹; Dr. TAJAHUERCE, Enrique ¹; Dr. MENDOZA YERO, Omel ¹; Dr. LANCIS, Jesús ¹; Dr. MARTÍNEZ CUENCA, Raúl ¹

¹ *Universidad Jaume I*

Corresponding Author: jvizcain@uji.es

Session IV: Adaptive Control / 19

Multi-conjugated adaptive optics for intense femtosecond lasers

Author: Dr. CHERIAUX, Gilles ¹

Co-Authors: Dr. VEDRENNE, Nicolas ²; Dr. MICHAU, vincent ²

¹ *Laboratoire d'Optique Appliquée*

² *ONERA-DOTA*

Corresponding Author: gilles.cheriaux@ensta.fr

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Computational Testbench and Flow Chart for Wavefront Sensors

Mrs. ABECASSIS, Úrsula ¹; Dr. DE LIMA MONTEIRO, Davies W. ²; Dr. P. SALLES, Luciana ²; Mr. BORGES, Euler ²; Ms. STANIGHER, Rafaela ²

¹ *Department of Electronics and Telecommunications, Instituto Federal do Amazonas – IFAM*

² *Department of Electrical Engineering Universidade Federal de Minas Gerais – UFMG, Brazil*

Corresponding Author: ue.ursula@gmail.com

Session II : Imaging and Microscopy / 22

High resolution in-vivo imaging of the mouse retina using an adaptive optics system with MEMS segmented piston/tip/tilt deformable mirror.

Author: Dr. ZAWADZKI, Robert J. ¹

Co-Authors: Mr. JIAN, Yifan ²; Prof. WERNER, John S. ¹; Dr. SARUNIC, Marinko ²; Prof. PUGH, Edward N. ¹

¹ *UC Davis*

² *Simon Fraser University*

Corresponding Author: rjzawadzki@ucdavis.edu

Seesion I : AO in Lasers / 24

Recent advances in high-power fundamental mode thin-disk lasers using intra-cavity deformable mirrors

Author: Mr. PIEHLER, Stefan ¹

Co-Authors: Ms. WEICHEL, Birgit ¹; Dr. VOSS, Andreas ¹; Dr. ABDOU AHMED, Marwan ¹; Prof. GRAF, Thomas ¹

¹ *Institut für Strahlwerkzeuge, Universität Stuttgart*

Corresponding Author: stefan.piebler@ifsw.uni-stuttgart.de

Session IV: Adaptive Control / 25

Characterization and application of a deformable mirror for pulse shaping in the Mid-Infrared

Author: Mr. CARTELLA, Andrea ¹

Co-Authors: Mr. CERULLO, Giulio ²; Mr. CAVALLERI, Andrea ³; Mr. BONORA, Stefano ⁴; Mr. MANZONI, Cristian ⁵; Mr. FÖRST, Michael ¹

¹ *Max-Planck Institute for the Structure and Dynamics of Matter, Center for Free Electron Laser Science, University of Hamburg, Luruper Chaussee, 149, 22761 Hamburg, Germany*

² *Dipartimento di Fisica - Politecnico di Milano, Piazza L. Da Vinci 32, 20133Milano, Italy*

³ *Max-Planck Institute for the Structure and Dynamics of Matter, Center for Free Electron Laser Science, University of Hamburg, Luruper Chaussee, 149, 22761 Hamburg, Germany*

⁴ *CNR-IFN, LUXOR, via Trasea 7, 35131, Padova, Italy*

⁵ *CNR-IFN, Piazza L. Da Vinci 32, 20133Milano, Italy*

Corresponding Author: stefano.bonora@dei.unipd.it

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Modal deformable mirror optimization in sensorless Optical Coherence Tomography

Author: Dr. BONORA, Stefano ¹

Co-Authors: Dr. ZAWADZKI, Robert ²; Dr. JONES, Steven ³; Dr. JOHN, Werner ²

¹ CNR-IFN

² Vision Science and Advanced Retinal Imaging Laboratory (VSRI) and Department of Ophthalmology & Vision Science, UC Davis, 4860 Y Street, Ste. 2400, Sacramento, CA 95817, USA

³ Lawrence Livermore National Laboratory, 6000 East Avenue, Livermore, CA 94550

Corresponding Author: stefano.bonora@dei.unipd.it

Session IV: Adaptive Control / 27

Ultrafast time compensated monochromator with deformable diffraction gratings

Authors: Dr. BONORA, Stefano ¹; Dr. FRASSETTO, Fabio ²

Co-Authors: Dr. BRUSATIN, Giovanna ³; Dr. DELLA GIUSTINA, Gioia ³; Dr. ZANCHETTA, Erika ³; Dr. STAGIRA, Salvatore ⁴; Dr. VOZZI, Caterina ⁴; Dr. POLETTI, Luca ²

¹ CNR-IFN

² National Council for Research of Italy – Institute of Photonics and Nanotechnologies, via Trasea 7, IT-35131 Padova, Italy

³ Industrial Engineering Department, University of Padova, Via Marzolo 9, 35131 Padova, Italy

⁴ Politecnico di Milano – Department of Physics and National Council for Research of Italy – Institute of Photonics and Nanotechnologies, p.zza L. Da Vinci 32, IT-20133 Milano, Italy

Corresponding Author: stefano.bonora@dei.unipd.it

Session IV: Adaptive Control / 28

High resolution wavefront control using a photocontrolled deformable mirror in closed loop

Author: Dr. BONORA, Stefano ¹

Co-Authors: Dr. BORTOLOZZO, Umberto ²; Dr. RESIDORI, Stefania ²; Dr. COBURN, Derek ³; Dr. DAINTY, Chris ³; Dr. LUCIANETTI, Antonio ⁴; Mr. PILAR, Jan ⁴; Dr. MOCEK, Thomas ⁴

¹ CNR-IFN

² INLN, Université de Nice-Sophia Antipolis, CNRS, Valbonne, France

³ National University of Ireland, Applied Optics Group, Galway, Ireland

⁴ Institute of Physics AS CR, Na Slovance 2, 182 21 Prague, Czech Republic

Corresponding Author: stefano.bonora@dei.unipd.it

Session VIII : Spatial Light Modulators / 29

All-digital holographic tool for real-time mode excitation and ~analysis in optical waveguides

Author: Mr. FLAMM, Daniel ¹

Co-Authors: Mr. SCHULZE, Christian ¹; Mr. NAIDOO, Darryl ²; Dr. SCHROETER, Siegmund ³; Prof. FORBES, Andrew ⁴; Dr. DUPARRÉ, Michael ¹

¹ *Institute of Applied Optics, University Jena*

² *Council for Scientific and Industrial Reseach, Pretoria and University of KwaZulu-Natal*

³ *Institute of Photonic Technology, Jena*

⁴ *Council for Scientific and Industrial Reseach, Pretoria and University of KwaZulu-Natal,*

Corresponding Author: pdm@uni-jena.de

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Utilizing speckle decorrelation for tomographic wavefront sensing (with one wavefront sensor)

Author: Dr. BHARMAL, Nazim ¹

Co-Author: Dr. KELLERER, Aglaé ¹

¹ *University of Durham*

Corresponding Author: n.a.bharmal@dur.ac.uk

Session IX: Space / 31

Manufacturing and Testing of Unimorph Deformable Mirrors for Space Telescopes

Author: Mr. RAUSCH, Peter ¹

Co-Authors: Dr. VERPOORT, Sven ¹; Prof. WITTRÖCK, Ulrich ¹

¹ *University of Applied Sciences Muenster*

Corresponding Author: rausch@fh-muenster.de

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Optical Design and Optimization of Adaptive Automobile Headlight with Liquid Optical Element and Freeform

Prof. FANG, YiChin ¹

¹ *Head of Department*

Corresponding Author: yfang@nkfust.edu.tw

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Compensation of the two-stage phase-shifting algorithms with respect to detuning and harmonics

Author: Dr. MALACARA-DOBLADO, Daniel ¹

Co-Authors: Dr. TELLEZ-QUIÑONES, Alejandro ²; Dr. GARCIA-MARQUEZ, Jorge Luis ¹

¹ *Centro de Investigaciones en Optica, A. C.*

² *Instituto Politecnico Nacional*

Corresponding Author: dmalacdo@cio.mx

Session VII : Imaging and Microscopy / 35

Correction for distortions in holographic nanointerferometers

Author: Prof. VENEDIKTOV, Vladimir ¹

Co-Authors: Ms. PASECHNIK, Irina ¹; Prof. PUL'KIN, Sergey ¹

¹ *St.-Petersburg State University*

Corresponding Author: vlad.venediktov@mail.ru

Session V: AO Techniques / 36

Adaptive Lenses for Displays & Vision

Prof. LOVE, Gordon ¹

¹ *Durham University*

Corresponding Author: g.d.love@durham.ac.uk

Session V: AO Techniques / 37

Results on the high power testing of screen-printed deformable mirrors

Author: Dr. REINLEIN, Claudia ¹

Co-Authors: Mr. APPELFELDER, Michael ¹; Mr. GOY, Matthias ¹

¹ *Fraunhofer IOF, Jena*

Corresponding Author: claudia.reinlein@iof.fraunhofer.de

Session VII : Imaging and Microscopy / 38

Advances in adaptive optics nonlinear microscopy for applications in medical and life sciences

Dr. BUENO, Juan M. ¹

¹ *Universidad de Murcia*

Corresponding Author: bueno@um.es

Session X: Propagation and Turbulance / 39

Adaptive Optics for Horizontal Propagation Applications

Author: Dr. RESTAINO, Sergio ¹

Co-Authors: Dr. ANDREWS, Jonathan ¹; Dr. MARTINEZ, Ty ¹; Dr. CHRISTOPHER, Wilcox ¹

¹ *Naval Research Laboratory, Remote Sensing Division*

Corresponding Author: sergio.restaino@nrl.navy.mil

Session VI: Vision / 41

Dynamic generation of scattering for high resolution adaptive optics in the eye

Author: Dr. FERNANDEZ, Enrique-Josua ¹

Co-Authors: Mr. ARIAS, Augusto ¹; Prof. ARTAL, Pablo ¹

¹ *Universidad de Murcia*

Corresponding Author: enriquej@um.es

Session VIII : Spatial Light Modulators / 42

Phase generation in white light with a 6-Pi Liquid Crystal on Silicon (LCoS) device

Author: Dr. PRIETO, Pedro ¹

Co-Authors: Dr. FERNANDEZ, Enrique Josua ¹; Mr. CHIRRE, Emmanuel ¹; Prof. ARTAL, Pablo ¹

¹ *Lab Optica, IUI Optica y Nanofisica, U Murcia*

Corresponding Author: pegrito@um.es

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A parametric study of the contributing factors influencing femtosecond pulse shape transfer via difference frequency mixing.

Author: Ms. BOTHA, Nicolene ¹

Co-Authors: Dr. BOTHA, Lourens ¹; Dr. UYS, Hermann ¹

¹ *NLC*

Corresponding Author: gnicbotha@gmail.com

Session V: AO Techniques / 44

Design optimization of an actuator pattern for a unimorph deformable mirror

Author: Mr. APPELFELDER, Michael ¹

Co-Authors: Dr. REINLEIN, Claudia ²; Dr. BECKERT, Erik ²; Dr. EBERHARDT, Ramona ²; Prof. TÜNNERMANN, Andreas ²

¹ *Friedrich Schiller Univ. of Jena, Inst. of App. Physics*

² *Fraunhofer Inst. for Applied Optics and Precision Engineering*

Corresponding Author: michael.appelfelder@iof.fraunhofer.de

Session V: AO Techniques / 45

Large Scale Deformable Mirror Based on Bimorph and Stack Actuators

Author: Dr. SAMARKIN, Vadim ¹

Co-Authors: Prof. KUDRYASHOV, Alexis ¹; Mr. ALEXANDROV, Alexander ¹; Dr. RUKOSUEV, Aleksey ¹

¹ *Active Optics NightN Ltd.*

Corresponding Author: samarkin@nightn.ru

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Wide field wavefront sensing on extended scenes and possible applications

Author: Dr. RAGAZZONI, Roberto ¹

¹ *INAF - Astronomical Observatory of Padova - Italy*

Corresponding Author: roberto.ragazzoni@oapd.inaf.it

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Localization and image reconstruction of inclusions embedded in biological tissue (turbid media) by means of adaptive optical system

Author: Mr. GALAKTIONOV, Ilya ¹

Co-Author: Prof. KUDRYASHOV, Alexis ²

¹ *Student*

² *Head of laboratory*

Corresponding Author: ilya_galaktionov@activeoptics.ru

Session IV: Adaptive Control / 48

Real-time high speed adaptive optical system for imaging and laser beam control

Author: Prof. KUDRYASHOV, Alexis ¹

Co-Authors: Dr. SAMARKIN, Vadim ²; Dr. RUKOSUEV, Alexey ²; Mr. NIKITIN, Alexander ³

¹ *Head of the Lab*

² *Senior Researcher*

³ *Researcher*

Corresponding Author: kud@activeoptics.ru

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Artificial model of human eye aberrations proceeded in real-time

Author: Ms. LYLOVA, Anna ¹

Co-Author: Prof. KUDRYASHOV, Alexis ²

¹ *Student*

² *Head of laboratory*

Corresponding Author: ann_lylova@activeoptics.ru

Session V: AO Techniques / 50

Recent Advances in MEMS Deformable Mirror Technology

Mr. BIERDEN, paul ¹

¹ *boston micromachines*

Corresponding Author: pab@bostonmicromachines.com

Session II : Imaging and Microscopy / 51

Superpenetration Multiphoton Microscopy Enabled Through MEMS DM Technology

Mr. BIERDEN, paul ¹

¹ *boston micromachines*

Corresponding Author: pab@bostonmicromachines.com

Session VIII : Spatial Light Modulators / 52

A novel technique to generate and temporally shape multiple pulsed laser beams using 2D-SLMs

Author: Mr. SPANGENBERG, Dirk-Mathys ¹

Co-Authors: Prof. ROHWER, Erich ²; Dr. NEETLING, Pieter ²

¹ *University of Stellenbosch*

² *Stellenbosch University*

Corresponding Author: dieduin@gmail.com

Session II : Imaging and Microscopy / 59

ADAPTIVE OPTICS FROM MICROSCOPY TO NANOSCOPY

Dr. MARTIN, Booth ¹

¹ *University of Oxford*

Corresponding Author: martin.booth@eng.ox.ac.uk

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Shaping ultrafast pulsed beams in space and time with programmable spatial light modulators

Author: Dr. LANCIS, JESUS ¹

Co-Authors: Dr. MENDOZA-YERO, Omel ¹; Dr. MINGUEZ-VEGA, Gladys ¹; Mr. PÉREZ-VIZCAINO, Jorge ¹

¹ *Universitat Jaume I*

Corresponding Author: lancis@uji.es

Session I : AO in Lasers / 64

Achieving the highest intensity from the Orion Laser Facility

Dr. HOPPS, Nicholas ¹

¹ *AWE plc*

Corresponding Author: nick.hopps@gmail.com

Session X: Propagation and Turbulance / 65

Quantum Communications along Optical Links with Strong Turbulence

Author: Prof. PAOLO, Villoresi ¹

Co-Author: IVAN CAPRARO, DAVIDE BACCO, ALBERTO DALL'ARCHE, DAVIDE MARANGON, FRANCESCA GERLIN, ANDREA TOMAELLO, GIUSEPPE VALLONE

¹ *Department of Information Engineering, University of Padova,*

Corresponding Author: brian.masara@saip.org.za

Session VI: Vision / 66

Functional Imaging of Single Cells in the Living Eye

Prof. WILLIAMS, David ¹

¹ *Dean for Research in Arts, Science, and Engineering Director, Center for Visual Science William G. Allyn Professor of Medical Optics*

Corresponding Author: brian.masara@saip.org.za

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Welcome Remarks

Corresponding Author: aforbes1@csir.co.za

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Corresponding Author: kud@activeoptics.ru

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Basics of wavefront sensing

Corresponding Author: sergio.restaino@nrl.navy.mil

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Basics of liquid crystals and their use in AOs:

Corresponding Author: aforbes1@csir.co.za

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Corresponding Author: pablo@um.es

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Biomedical imaging with AOs

Corresponding Author: g.d.love@durham.ac.uk

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AOs and microscopy

Corresponding Author: martin.booth@eng.ox.ac.uk

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Turn key AO systems

Corresponding Author: pab@bostonmicromachines.com

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AOs in ultrafast and ultrahigh power lasers

Corresponding Author: lancis@uji.es

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AOs in high precision materials

Corresponding Author: martin.booth@eng.ox.ac.uk

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Wavefront correction in large-scale glass laser LFEX

Author: Prof. JITSUNO, Takahisa ¹

Co-Authors: MORIO, N ¹; MIYANAGA, N ¹

¹ *Institute of Laser Engineering, Osaka University, JAPAN*

Corresponding Author: brian.masara@saip.org.za

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Real-time dynamic control of laser modes

Author: Mr. NGCOBO, Sandile ¹

Co-Authors: Prof. FORBES, Andrew ¹; Dr. LITVIN, Igor ²; Mrs. BURGER, Liesl ³

¹ *CSIR*

² *CSIR NLC*

³ *National Laser Centre*

Corresponding Author: sngcobo@csir.co.za

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Quantum communication with OAM entangled photons

Author: Mr. HAMADOU IBRAHIM, Alpha ¹

Co-Authors: Prof. FORBES, Andrew ²; Prof. KONRAD, Thomas ³; Ms. MCLAREN, Melanie ²; Dr. ROUX, Filippus ⁴

¹ *CSIR, National Laser Center*

² *CSIR*

³ *UKZN*

⁴ *CSIR National Laser Centre*

Corresponding Author: aibrahim@csir.co.za

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Producing Kaleidoscope Modes using the Digital Laser

Author: Ms. BURGER, L ¹

Co-Author:

¹ *CSIR - NLC*

Corresponding Author: lburger1@csir.co.za

