

Optical Manufacturing and Testing XII

Monday - Wednesday 20 - 22 August 2018

Conference Sessions At A Glance

SHOW | HIDE

- 1: Optical Components, Designs, and Systems I
- 2: Optical Components, Designs, and Systems II
- 3: Optical Manufacturing I
- 4: Optical Manufacturing II
Posters-Monday
- 5: Optical Manufacturing III
- 6: Optical Manufacturing IV
- 7: Optical Testing I
- 8: Shape Measurement And Deflectometry: Joint Session with Conferences
10742 and 10749
Optomechanical/Instrument Technical Group Event
- 9: Optical Testing II
- 10: Optical Testing III

Important Dates

SHOW | HIDE

Abstract Due:
7 February 2018

Author Notification:
16 April 2018

Manuscript Due Date:
25 July 2018

Conference Committee

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Conference Chairs

[Ray Williamson](#), Ray Williamson Consulting (United States)
[Dae Wook Kim](#), College of Optical Sciences, The Univ. of Arizona (United States)
[Rolf Rascher](#), Hochschule Deggendorf (Germany)

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MONDAY 20 AUGUST

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Session 1: Optical Components, Designs, and Systems I

Monday 20 August 2018
 8:20 AM - 10:00 AM
 Location: Conv. Ctr. Room 25A

Session Chair: [Ray Williamson](#), Ray Williamson Consulting (United States)

Cryogenic optical and mechanical test result of a 1.5-meter lightweighted ULE mirror assembly


Paper 10742-1
 Time: 8:20 AM - 8:40 AM
 Author(s): Ron Eng, NASA Marshall Space Flight Ctr. (United States)

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Advanced mirror technology development (AMTD) II modal test of a 1.5-m ultra-low expansion slumped mirror

Paper 10742-2
 Time: 8:40 AM - 9:00 AM

Author(s): Joseph B. Knight, H. Philip Stahl, Frank Tsai, Adam Burt, Andy Singleton, Ron Hunt, Russel Parks, Alex McCool, Brendan Sontag, NASA Marshall Space Flight Ctr. (United States)


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Evaluation of changes in physical properties of low thermal expansion ceramics and glass induced by radiation

Paper 10742-4

Time: 9:00 AM - 9:20 AM

Author(s): Haruka Ueno, Tomohiro Kamiya, Tadahito Mizutani, Japan Aerospace Exploration Agency (Japan)


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Study on polishing characteristics of cordierite ceramics for ultra-lightweight and thermally stable mirror applications

Paper 10742-5

Time: 9:20 AM - 9:40 AM

Author(s): Tomohiro Kamiya, Japan Aerospace Exploration Agency (Japan); Tadahito Mizutani, Japan Aerospace Exploration Agency (Japan)


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Dimensional stability of conventional and newly considered ceramic mirror substrate materials under realistic thermal and ionizing radiation environments imposed on spaceborne payloads

Paper 10742-6

Time: 9:40 AM - 10:00 AM

Author(s): Tony B. Hull, The Univ. of New Mexico (United States); Antoine Carré, Guenter Weidmann, Thomas Westerhoff, SCHOTT AG (Germany)

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Coffee Break 10:00 AM - 10:50 AM

Session 2: Optical Components, Designs, and Systems II

Monday 20 August 2018

10:50 AM - 12:10 PM

Location: Conv. Ctr. Room 25A

Session Chair: [Robert E. Parks](#), Optical Perspectives Group, LLC (United States)

Fabrication and testing technologies for 4m SiC mirror

(Canceled)

Paper 10742-7

Time: 10:30 AM - 10:50 AM

Author(s):

Preparation of yttria-doped nanocrystalline zirconia with tunable optical properties

Paper 10742-3

Time: 10:50 AM - 11:10 AM

Author(s): Gottlieb Uahengo, Yasuhiro Kodera, Javier E. Garay, Univ. of California, San Diego (United States)


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Effect of post-deposition annealing on the microstructure and optical properties of silicon films

Paper 10742-9

Time: 11:10 AM - 11:30 AM

Author(s): Baojian Liu, Weibo Duan, Daqi Li, Deming Yu, Dingquan Liu, Shanghai Institute of Technical Physics of the Chinese Academy of Sciences (China)


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Development of a SWIR optical system for surveillance

Paper 10742-10

Time: 11:30 AM - 11:50 AM

Author(s): JungHyun Kim, Jeon Ku Park, Soo Min Park, Topins Co. (Korea, Republic of); Hyun Chul Choi, Korea Aerospace University Ubiquitous Technology Application Center (Korea, Republic of); Hyun Kyu Kim, Topins Co., Ltd. (Korea, Republic of)


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Design and fabrication of thin-film coatings for advanced radiation imager onboard new-generation geostationary meteorological satellite

Paper 10742-11

Time: 11:50 AM - 12:10 PM

Author(s): Weibo Duan, Daqi Li, Baojian Liu, Deming Yu, Dingquan Liu, Shanghai Institute of Technical Physics of the Chinese Academy of Sciences (China)

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Lunch Break 12:10 PM - 1:40 PM

Session 3: Optical Manufacturing I


Monday 20 August 2018
1:40 PM - 3:00 PM
Location: Conv. Ctr. Room 25A

Session Chair: [Peter J. de Groot](#), Zygo Corporation (United States)


New approach to optical assembly and cementing

Paper 10742-12
Time: 1:40 PM - 2:00 PM
Author(s): Robert E. Parks, Optical Perspectives Group, LLC (United States)
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Surface finish and diamond tool wear when machining PMMA and PC optics

Paper 10742-14
Time: 2:00 PM - 2:20 PM
Author(s): Charan Bodlapati, Thomas Dow, Anthony Wong, Kenneth Garrard, North Carolina State Univ. (United States)
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Ductile mode single point diamond turning (SPDT) of binderless tungsten carbide molds

Paper 10742-15
Time: 2:20 PM - 2:40 PM
Author(s): Marius Doetz, Olaf Dambon, Fritz Klocke, Fraunhofer-Institut für Produktionstechnologie IPT (Germany); Christian Vogt, Rolf Rascher, Technische Hochschule Deggendorf (Germany); Oliver W. Föhnle, FISBA AG (Switzerland)
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Process window analysis of ductile mode machining of binderless tungsten carbide molds

Paper 10742-16
Time: 2:40 PM - 3:00 PM
Author(s): Marius Doetz, Ji Eun Lee, Olaf Dambon, Fritz Klocke, Fraunhofer-Institut für Produktionstechnologie IPT (Germany); Eckhard Langenbach, Oliver W. Föhnle, FISBA AG (Switzerland)
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Coffee Break 3:00 PM - 3:30 PM

Session 4: Optical Manufacturing II


Monday 20 August 2018
3:30 PM - 4:50 PM
Location: Conv. Ctr. Room 25A

Session Chair: [Oliver W. Föhnle](#), FISBA AG (Switzerland)


Scalability of the precision glass molding process for an efficient optics production

Paper 10742-17
Time: 3:30 PM - 3:50 PM
Author(s): Gang Liu, Jan-Helge Staasmeyer, Tim Grunwald, Olaf Dambon, Fraunhofer-Institut für Produktionstechnologie IPT (Germany)
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Simulation of MSF-errors using Fourier transformation

Paper 10742-19
Time: 3:50 PM - 4:10 PM
Author(s): Mario Pohl, Uwe Bielke, Rainer Börret, Hochschule Aalen (Germany); Rolf Rascher, Hochschule Deggendorf Technologicampus Teisnach (Germany); Olga Kukso, Technische Hochschule Deggendorf (Germany)
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From turning to grinding: ductile machining with gPVA

Paper 10742-30
Time: 4:10 PM - 4:30 PM
Author(s): Christian Vogt, Technische Hochschule Deggendorf (Germany); Oliver W. Föhnle, FISBA AG (Switzerland); Rolf Rascher, Technische Hochschule Deggendorf (Germany); Marius Doetz, Olaf Dambon, Fritz Klocke, Fraunhofer-Institut für Produktionstechnologie IPT (Germany)
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Investigation on the performance of fluid jet polishing using shear thickening slurry

Paper 10742-21
Time: 4:30 PM - 4:50 PM
Author(s): Pengfei Sun, Jian Li, Lianxin Zhang, Zhongyu Wang, Tao Zhou, Rui Ke, China Academy of Engineering Physics (China)
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Session PMon: Posters-Monday

Monday 20 August 2018
 5:30 PM - 7:30 PM
 Location: Conv. Ctr. Room 20C

Conference attendees are invited to view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions. Poster authors, view poster presentation guidelines at <http://spie.org/OPPosterGuidelines>.


Analytical simulation of swing arm profilometer to capture mid-spatial frequency of aspheric surface

(Canceled)

Paper 10742-41
 Time: 5:30 PM - 7:30 PM
 Author(s):


High-temperature measurements of AION using a CO₂ laser

Paper 10742-49
 Time: 5:30 PM - 7:30 PM
 Author(s): Armando Arends, Air Force Research Lab. (United States), UES, Inc. (United States); Woo-Yong Jang, Air Force Research Lab. (United States), Univ. of Dayton Research Institute (United States); James Park, Air Force Research Lab. (United States); Robert Schueler, Air Force Research Lab. (United States), Univ. of Dayton Research Institute (United States); Christopher A. Rosenbury, Air Force Research Lab. (United States), UES Inc. (United States); Augustine Urbas, Air Force Research Lab. (United States)

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Spherical optical surface defects digitizing evaluation system

Paper 10742-51
 Time: 5:30 PM - 7:30 PM
 Author(s): Yihui Zhang, Fan Wu, Yongying Yang, Jian Bai, Huiting Chai, Yao Li, Zhejiang Univ. (China)

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Design of the compact off-axis four-mirror optical system with conformal fairing

Paper 10742-52
 Time: 5:30 PM - 7:30 PM
 Author(s): Qi Li, Song Xu, Kun Yu, Jinyan Kan, RongSheng Qiu, Shanghai Aerospace Control Technology Institute (China)

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Development of the structural scheme of an amateur portable projection device for a premise design

Paper 10742-53
 Time: 5:30 PM - 7:30 PM
 Author(s): Diana O. Nurpeisova, Nadezhda D. Tolstoba, ITMO Univ. (Russian Federation)

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Modern optics drawings: translating from American MIL drawings to ISO 10110

Paper 10742-54
 Time: 5:30 PM - 7:30 PM
 Author(s): Eric Herman, Zygo Corporation (United States); Richard Youngworth, Riyo LLC (United States); Dave Aikens, Savvy Optics Corp. (United States)

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Characterization of the microlithography and mercury drop methods to generate PDI's

Paper 10742-55
 Time: 5:30 PM - 7:30 PM
 Author(s): Alex Zenteno, Fermín Salomón Granados-Agustín, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Daniel Aguirre-Aguirre, Univ. Nacional Autónoma de México (Mexico); Brenda Villalobos-Mendoza, Ctr. de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional (Mexico); María Elizabeth Percino-Zacarias, Pedro Rosales, Alejandro Comejo-Rodríguez, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico)

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The polarization effects of the pumping source of a ring tunable wavelength laser Er-doped fiber

Paper 10742-57
 Time: 5:30 PM - 7:30 PM
 Author(s): Karla E. Contreras-Vallejo, Julián M. Estudillo-Ayala, Roberto Rojas-Laguna, Univ. de Guanajuato (Mexico); Diana Tentori-Santacruz, Ctr. de Investigación Científica y de Educación Superior de Ensenada B.C. (Mexico); Daniel Jáuregui-Vázquez, Juan Carlos Hernández-García, Juan Manuel Sierra-Hernández, José David Filoteo-Razo, Univ. de Guanajuato (Mexico)

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Wavefront calculation from backscattering phase in a rough optical grid

Paper 10742-58
 Time: 5:30 PM - 7:30 PM
 Author(s): Javier Munoz-Lopez, Jorge Castro-Ramos, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico)

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Methods to define circular off-axis aspheric segment mirrors

Paper 10742-60
 Time: 5:30 PM - 7:30 PM
 Author(s): Jeong-Yeol Han, Korea Astronomy and Space Science Institute (Korea, Republic of); Sukmock Lee, INHA Univ. (Korea, Republic of)


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Three wagons method applied: optimization of level of surface roughness within ductile mode grinding of tungsten carbide molds

Paper 10742-61

Time: 5:30 PM - 7:30 PM


Author(s): Marius Doetz, Fraunhofer-Institut für Produktionstechnologie IPT (Germany); Oliver W. Föhnle, FISBA AG (Switzerland); Fritz Klocke, Olaf Dambon, Fraunhofer-Institut für Produktionstechnologie IPT (Germany); Eckhard Langenbach, FISBA AG (Switzerland)

[Add To My Schedule](#) **Study of the photoanisotropic properties of polarization-sensitive compositions based on organic chromophore salts with various alkali metals**

Paper 10742-62

Time: 5:30 PM - 7:30 PM


Author(s): Irakli Chaganava, Institute of Cybernetics (Georgia), Georgian State Teaching University of Physical Education and Sport (Georgia); Roin Chedia, Ivane Javakhishvili Tbilisi State Univ. (Georgia); Qi-Huo Wei, Liquid Crystal Institute, Kent State University (United States)

[Add To My Schedule](#) **Thermal and mechanical properties of tellurite glasses for mid-IR molded glass lens applications**

Paper 10742-63

Time: 5:30 PM - 7:30 PM


Author(s): Linganna Kadathala, Jung-Hwan In, June Park, JuHyeon Choi, Korea Photonics Technology Institute (Korea, Republic of)

[Add To My Schedule](#) **Investigation of surface quality of a photosensitive resin with beam quality and diffraction element**

Paper 10742-64

Time: 5:30 PM - 7:30 PM


Author(s): Tayler Evans, Hossein Alisafae, Rose-Hulman Institute of Technology (United States)

[Add To My Schedule](#) **Photoelasticity measurement study of large aperture lightweight mirror**

Paper 10742-65

Time: 5:30 PM - 7:30 PM

Author(s): Yi-Kai Huang, Po-Hsuan Huang, Jer Ling, National Space Organization (Taiwan)

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TUESDAY 21 AUGUST[Show All Abstracts](#)

**Session 5:
Optical Manufacturing III**

Tuesday 21 August 2018

8:20 AM - 10:00 AM

Location: Conv. Ctr. Room 25A

Session Chair: [Rolf Rascher](#), Technische Hochschule Deggendorf (Germany)

Fabrication of SiC lightweight off-axis aspheric mirrors using robot polishing technology**(Canceled)**

Paper 10742-59

Time: 8:20 AM - 8:40 AM


Author(s):

Manufacturing of a large, extreme freeform, conformal window with robotic polishing

Paper 10742-23

Time: 8:40 AM - 9:00 AM


Author(s): Daniel R. Brooks, Matthew Brunelle, Timothy Lynch, Kate Medicus, Optimax Systems, Inc. (United States)

[Add To My Schedule](#) **Ductile grinding of tungsten carbide molds applying standard CNC machines**

Paper 10742-24

Time: 9:00 AM - 9:20 AM

Author(s): Christian Vogt, Technische Hochschule Deggendorf (Germany); Oliver W. Föhnle, FISBA AG (Switzerland); Rolf Rascher, Technische Hochschule Deggendorf (Germany); Marius Doetz, Olaf Dambon, Fritz Klocke, Fraunhofer-Institut für Produktionstechnologie IPT (Germany)

[Add To My Schedule](#) **Influence analysis of nozzle position in fluid jet polishing**

Paper 10742-25

Time: 9:20 AM - 9:40 AM


Author(s): Zhongyu Wang, Lianxin Zhang, Pengfei Sun, Jian Li, China Academy of Engineering Physics (China)

[Add To My Schedule](#) **Influence of alkaline slurry on the processing performance of fluid jet polishing**

Paper 10742-26

Time: 9:40 AM - 10:00 AM

Author(s): Jian Li, Pengfei Sun, Zhongyu Wang, Lianxin Zhang, Rui Ke, China Academy of Engineering Physics (China)

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Coffee Break 10:00 AM - 10:30 AM

Session 6: Optical Manufacturing IV

Tuesday 21 August 2018
10:30 AM - 11:50 AM
Location: Conv. Ctr. Room 25A


Session Chair: [Dae Wook Kim](#), College of Optical Sciences, The Univ. of Arizona (United States)

Modern optics drawings: the journey from MIL to ANSI to ISO drawing formats

Paper 10742-27

Time: 10:30 AM - 10:50 AM

Author(s): Eric Herman, Zygo Corporation (United States); Richard Youngworth, Riyo LLC (United States); Dave Aikens, Savvy Optics Corp. (United States)


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Precision glass molding of freeform optics

Paper 10742-28

Time: 10:50 AM - 11:10 AM

Author(s): Dustin Gurganus, Joseph D. Owen, Brian S. Dutterer, The Univ. of North Carolina at Charlotte (United States); Spencer Novak, Alan Symmons, LightPath Technologies, Inc. (United States); Matthew A. Davies, The Univ. of North Carolina at Charlotte (United States)


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Digitalized glass optics production

Paper 10742-29

Time: 11:10 AM - 11:30 AM

Author(s): Jan-Helge Staasmeyer, Gang Liu, Olaf Dambon, Fraunhofer-Institut für Produktionstechnologie IPT (Germany)


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Improved performance of CMP processes through targeted adjustment of polishing slurry and polish pad

Paper 10742-20

Time: 11:30 AM - 11:50 AM

Author(s): Christian J. Trum, Sebastian Sitzberger, Rolf Rascher, Technische Hochschule Deggendorf (Germany)

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Lunch/Exhibition Break 11:50 AM - 1:30 PM

Session 7: Optical Testing I

Tuesday 21 August 2018
1:30 PM - 3:10 PM
Location: Conv. Ctr. Room 25A


Session Chair: [Jessica Nelson](#), Optimax Systems, Inc. (United States)

Sensitivity study of transverse translation diverse phase retrieval for freeform metrology

Paper 10742-31

Time: 1:30 PM - 1:50 PM

Author(s): Aaron Michalko, James R. Fienup, Univ. of Rochester (United States)


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Model-based uncertainty evaluation for absolute form metrology

Paper 10742-32

Time: 1:50 PM - 2:10 PM

Author(s): Haiyang Quan, Institute of Optics and Electronics (China)


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Three surface method of stylus error compensation for aspherical lens measurement in a 3D contact profilometry

Paper 10742-33

Time: 2:10 PM - 2:30 PM

Author(s): Yasunari Nagaike, Toshiaki Kumagai, Olympus Corp. (Japan); Kenichi Hibino, National Institute of Advanced Industrial Science and Technology (Japan)


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Polarization point diffraction interferometry based on an even aspheric quarter-wave plate

Paper 10742-34

Time: 2:30 PM - 2:50 PM

Author(s): Yao Li, Yuankai Chen, Yongying Yang, Jian Bai, Zhejiang Univ. (China)


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On the metrology of MSF errors after grinding

Paper 10742-44

Time: 2:50 PM - 3:10 PM

Author(s): Olga Kukso, Rolf Rascher, Technische Hochschule Deggendorf (Germany); Rainer Börret, Mario Pohl, Hochschule Aalen (Germany)

[Add To My Schedule](#) **Coffee Break 3:10 PM - 3:40 PM****Session 8:
Shape Measurement And Deflectometry: Joint Session with Conferences 10742 and 10749**

Tuesday 21 August 2018

3:40 PM - 5:30 PM


Location: Conv. Ctr. Room 25A

Session Chairs: [Ray Williamson](#), Ray Williamson Consulting (United States) ; [Katherine Creath](#), Optineering (United States), The Univ. of Arizona (United States)**High-resolution 3D shape deformation, displacement and strain measurement for robotic flapping wings (Invited Paper)**

Paper 10749-14

Time: 3:40 PM - 4:10 PM


Author(s): Beiwen Li, Iowa State Univ. of Science and Technology (United States)

[Add To My Schedule](#) **Grey-level coding for structured-light illumination systems**

Paper 10749-15

Time: 4:10 PM - 4:30 PM


Author(s): Konstantinos Falaggis, Rosario Porras-Aguilar, The Univ. of North Carolina at Charlotte (United States)

[Add To My Schedule](#) **Model-free optical surface reconstruction from deflectometry data**

Paper 10742-36

Time: 4:30 PM - 4:50 PM


Author(s): Logan R. Graves, Heejoo Choi, College of Optical Sciences, The Univ. of Arizona (United States); Wenchuan Zhao, Institute of Optics and Electronics (China); Chang Jin Oh, College of Optical Sciences, The Univ. of Arizona (United States); Peng Su, ASML US, Inc. (United States); Tianquan Su, KLT-Tencor Corp. (United States); Dae Wook Kim, College of Optical Sciences, The Univ. of Arizona (United States)

[Add To My Schedule](#) **Characterization of the interpolation bias in the analysis of deflectometry measurement data**

Paper 10749-16

Time: 4:50 PM - 5:10 PM


Author(s): Ali Pouya Fard, Angela Davies, The Univ. of North Carolina at Charlotte (United States)

[Add To My Schedule](#) **Characterization of an aspherical surface with null screens using exact ray tracing**

Paper 10742-37

Time: 5:10 PM - 5:30 PM

Author(s): Diana Nallely Castán-Ricaño, Fermín Salomón Granados-Agustín, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Maximino Avendaño Alejo, Univ. Nacional Autónoma de México (Mexico); María Elizabeth Percino-Zacarías, Alejandro Comejo-Rodríguez, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico)

[Add To My Schedule](#) **Optomechanical/Instrument Technical Group Event**

Tuesday 21 August 2018

8:00 PM - 10:00 PM

Location: Marriott Marquis, Palomar

This is the annual meeting of the premier group of optomechanical engineers that design and analyze the world's optical instruments and systems. The featured speaker will be Kent Weed, Director of Engineering of II-VI Optical Systems. His subject will be the design and testing of a high-performance secondary mirror focus mechanism which is intended for the CAESAR Space Mission which is part of NASA's New Frontiers programs. Following Kent, the floor will be open for other agenda items and a workshop session. Anyone who wishes to put an item on the agenda should contact Al Hatheway at ah@ahinc.com.

WEDNESDAY 22 AUGUST[Show All Abstracts](#)**Session 9:
Optical Testing II**

Wednesday 22 August 2018
 9:00 AM - 10:00 AM
 Location: Conv. Ctr. Room 25A

Session Chair: Olaf Dambon, Fraunhofer-Institut für Produktionstechnologie IPT (Germany)

Sensitivity and tolerance analysis of 2D Profilometer for TMT primary mirror segments

Paper 10742-38

Time: 9:00 AM - 9:20 AM

Author(s): Vineeth Valsan, S. Sriram, Alikhan Basheer, Janani Varadhachari, G.C. Anupama, Indian Institute of Astrophysics (India)


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Chebyshev gradient polynomials for high resolution surface and wavefront reconstruction

Paper 10742-40

Time: 9:20 AM - 9:40 AM

Author(s): Maham Aftab, James H. Burge, Greg A. Smith, Logan R. Graves, Chang Jin Oh, Dae Wook Kim, College of Optical Sciences, The Univ. of Arizona (United States)

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**A simple measurement system for large convex hyperbolic mirrors
 (Canceled)**

Paper 10742-43

Time: 9:40 AM - 10:00 AM

Author(s):

Coffee Break 10:00 AM - 10:30 AM

**Session 10:
 Optical Testing III**

Wednesday 22 August 2018
 10:30 AM - 11:50 AM
 Location: Conv. Ctr. Room 25A


Session Chair: [Ray Williamson](#), Ray Williamson Consulting (United States)

Metrology of injection molded polymer optics for a commercial VR system

Paper 10742-45

Time: 10:30 AM - 10:50 AM

Author(s): Matthew Kyrish, Jeanette Miller, Margaret Fraelich, Oscar Lechuga, Richard Claytor, Nelson Claytor, Fresnel Technologies Inc. (United States)


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Characterization of a transmissive spatial light modulator using four different wavelengths

Paper 10742-46

Time: 10:50 AM - 11:10 AM

Author(s): Nayeli Perez-Esquivel, Fermín Salomón Granados-Agustín, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Brenda Villalobos-Mendoza, Ctr. de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional (Mexico); Daniel Aguirre-Aguirre, Univ. Nacional Autónoma de México (Mexico); María Elizabeth Percino-Zacarias, Alejandro Cornejo-Rodríguez, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico)


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3D simulation for scatter light distribution of optical surface defects

Paper 10742-47

Time: 11:10 AM - 11:30 AM

Author(s): Huiting Chai, Pengfei Zhang, Yongying Yang, Jian Bai, Yihui Zhang, Zhejiang Univ. (China)

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Improvements in the scanning long-wave optical test system

Paper 10742-48

Time: 11:30 AM - 11:50 AM

Author(s): Hyemin Yoo, Greg A. Smith, Chang Jin Oh, Andrew E. Lowman, Matthew Dubin, College of Optical Sciences, The Univ. of Arizona (United States)

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