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2018

TECHNICAL PROGRAM

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Conferences and Courses

19-23 August 2018

Exhibition

21-23 August 2018

San Diego Convention Center
San Diego, California, USA

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CONFERENCE 10765

4:40 pm: **The operations plan for the Mercury radiometer and thermal infrared imaging spectrometer (MERTIS) on its way to Mercury**, Alessandro Maturilli, Jörn Helbert, Mario D'Amore, Indhu Varatharajan, Deutsches Zentrum für Luft- und Raumfahrt e.V. (Germany); Harald Hiesinger, Karin Bauch, Westfälische Wilhelms-Universität Münster (Germany) [10765-15]

5:00 pm: **Data processing of the Mercury radiometer and thermal infrared imaging spectrometer (MERTIS) onboard Bepi Colombo**, Mario D'Amore, Joern Helbert, Alessandro Maturilli, Indhu Varatharajan, Deutsches Zentrum für Luft- und Raumfahrt e.V. (Germany); Bernd Ulmer, Ingenieurbüro Ulmer (Germany); Thomas Säuberlich, Rainer Berlin, Gisbert Peter, Deutsches Zentrum für Luft- und Raumfahrt e.V. (Germany); Harald Hiesinger, Westfälische Wilhelms-Universität Münster (Germany); Santa Martinez, Inaki Ortiz de Landaluce, Mauro Casale, European Space Astronomy Ctr. (Spain) [10765-16]

5:20 pm: **Acousto-optic infrared imaging spectrometer for close-up sensing of planetary surfaces**, Denis Belyaev, Space Research Institute (Russian Federation); Konstantin Yushkov, Sergey Anikin, National Univ. of Science and Technology "MISIS" (Russian Federation); Yuri Dobrolenskiy, Space Research Institute (Russian Federation); Aleksander Laskin, AdlOptica Optical Systems GmbH (Germany); Vladimir Molchanov, National Univ. of Science and Technology "MISIS" (Russian Federation); Sergey Potanin, M.V. Lomonosov Moscow State Univ. (Russian Federation); Oleg Korabiev, Space Research Institute (Russian Federation); Oleg Makarov, National Univ. of Science and Technology "MISIS" (Russian Federation) [10765-17]

TUESDAY 21 AUGUST

SESSION 5

LOCATION: CONV. CTR. ROOM 31B . . TUE 8:30 AM TO 10:20 AM

Enabling Technologies, Simulations, and Data Processing

Session Chairs: **Marija Strojnik-Scholl**, Centro de Investigaciones en Óptica, A.C. (Mexico); **Maureen S. Kirk**, Texas A&M Univ. (USA)

8:30 am: **Optical and electrical measurements of T2SL mid-wave and long-wave infrared focal plane arrays** (*Invited Paper*), Sarath D. Gunapala, David Z. Ting, Sir B. Rafol, Sam A. Keo, Arezou Khoshakhlagh, Cory J. Hill, Brian J. Pepper, Edward M. Luong, Jason M. Mumolo, John K. Liu, Jet Propulsion Lab. (USA) [10765-18]

9:00 am: **Image stabilization for an airborne infrared spectrometer**, Alisha Vira, Smith College (USA); Jenna Samra, Harvard Univ. (USA); Peter Cheimets, Edward DeLuca, Samuel Fedeler, Giora Guth, Vanessa Marquez, Smithsonian Astrophysical Observatory (USA) [10765-19]

9:20 am: **Infrared simulation and implementation of virtual ocean scene**, Xueqi Chen, Guohua Gu, Minjie Wan, Nanjing Univ. of Science and Technology (China) [10765-20]

9:40 am: **Multifractal streetlight analysis from outer space at night**, Ivan Moreno, Univ. Autónoma de Zacatecas (Mexico) [10765-21]

10:00 am: **Land surface temperature and emissivity retrieval from MSG-SEVIRI daily time-series thermal infrared data**, Yonggang Qian, Ning Wang, Academy of Opto-Electronics (China); Lingling Ma, Yongguang Zhao, Academy of Opto-Electronics (China); Zhiming Chen, Mingdong Jing, Inner Mongolia North Heavy Industries Group Corp. Ltd. (China); Lingli Tang, Academy of Opto-Electronics (China); Chuanrong Li, Academy of Opto-Electronics (China) [10765-22]

Coffee Break Tue 10:20 am to 10:50 am

SESSION 6

LOCATION: CONV. CTR. ROOM 31B . . TUE 10:50 AM TO 12:10 PM

Systems, Subsystems, and Experiments

Session Chair: **Sarath D. Gunapala**, Jet Propulsion Lab. (USA)

10:50 am: **Multiwavelength polarization measurement based on a dual rotating polarizer arrangement**, David I. Serrano-García, Jorge Luis Flores Nuñez, Guillermo García Torales, Univ. de Guadalajara (Mexico) [10765-23]

11:10 am: **Ex-vivo characterization of human healthy colon and colorectal cancer by multispectral Mueller polarimetric imaging and its polar decomposition**, Azael Mora-Núñez, Univ. de Guadalajara (Mexico); Geminiano Martínez-Ponce, Marija Strojnik, Ctr. de Investigaciones en Óptica, A.C. (Mexico); Guillermo García Torales, Luis Bernache-Santana, Beethoven Bravo-Medina, Anuar Beltrán-González, Univ. de Guadalajara (Mexico) [10765-24]

11:30 am: **The current design of Lapan's IR camera module**, Bustanul Arifin, Irwan Priyanto, Andi Mukhtar Tahir, Indonesia National Institute of Aeronautics and Space (Indonesia) [10765-25]

11:50 am: **Review on generation of THz waves based on nonlinear optical approach**, Pengda Hong, LD Nuwave (USA); Eric Hong, Phase I (China); Yujie J. Ding, LD Nuwave (USA); Jiyuan Lin, Phase I (China); Wenbin Ye, Shenzhen Univ. (China) [10765-26]

Lunch/Exhibition Break Tue 12:10 pm to 1:40 pm

SESSION 7

LOCATION: CONV. CTR. ROOM 31B . . . TUE 1:40 PM TO 4:40 PM

Mid-Infrared Devices for Sensing

Session Chair: **Sven Höfling**, Julius-Maximilians-Universität Würzburg (Germany)

1:40 pm: **QCL and ICL frequency combs for miniaturized sensors** (*Invited Paper*), Benedikt Schwarz, Johannes Hillbrand, Maximilian Beiser, Technische Universität Wien (Austria); Marco Piccardo, Paul Chevalier, Harvard Univ. (USA); Anne Schade, Julius-Maximilians-Universität Würzburg (Germany); Hermann Detz, CEITEC - Central European Institute of Technology (Czech Republic) and Technische Universität Wien (Austria); Aaron M. Andrews, Gottfried Strasser, Technische Universität Wien (Austria); Federico Capasso, Harvard Univ. (USA); Sven Höfling, Julius-Maximilians-Universität Würzburg (Germany) [10765-27]

2:10 pm: **Optimization of the active region of interband cascade lasers emitting in the MIR** (*Invited Paper*), Grzegorz Sek, Krzysztof Ryczko, Wrocław Univ. of Science and Technology (Poland) [10765-28]

2:40 pm: **Mid-infrared interband cascade lasers for sensing** (*Invited Paper*), Anne Schade, Julius-Maximilians-Universität Würzburg (Germany); Robert Weih, nanoplus GmbH (Germany); Julian Scheuermann, Marc Fischer, Caroline Kistner, Johannes Koeth, nanoplus Nanosystems and Technologies GmbH (Germany); Sven Höfling, Julius-Maximilians-Universität Würzburg (Germany) [10765-29]

Coffee Break Tue 3:10 pm to 3:40 pm

3:40 pm: **Mid-infrared detectors based on resonant tunneling diodes and interband cascade structures** (*Invited Paper*), Andreas Pfennig, Georg Knebl, Anne Schade, Julius-Maximilians-Universität Würzburg (Germany); Robert Weih, Julius-Maximilians-Universität Würzburg (Germany) and nanoplus Nanosystems and Technologies GmbH (Germany); Andreas Bader, Manuel Meyer, Sebastian Krüger, Julius-Maximilians-Universität Würzburg (Germany); Florian Rothmayr, Julius-Maximilians-Universität Würzburg (Germany) and nanoplus Nanosystems and Technologies GmbH (Germany); Caroline Kistner, Johannes Koeth, nanoplus Nanosystems and Technologies GmbH (Germany); Martin Kamp, Fabian Hartmann, Lukas Worschech, Julius-Maximilians-Universität Würzburg (Germany); Sven Höfling, Julius-Maximilians-Universität Würzburg (Germany) and Univ. of St. Andrews (United Kingdom) [10765-30]

4:10 pm: **Mid-IR laser-based gas analyzers for process control, emission and safety monitoring applications** (*Invited Paper*), Pawel Kluczyński, Airoptic Sp. z o.o. (Poland); Mateusz Straszewski, Krzysztof Siembab, Airoptic (LTD) (Poland) [10765-31]

ROOM: CONV. CTR. ROOM 31B 4:40 PM TO 4:50 PM

Concluding Remarks

Session Chairs: **Marija Strojnik**, Centro de Investigaciones en Óptica, A.C. (Mexico); **Maureen S. Kirk**, Texas A&M Univ. (USA)