
NEWRAD
BOULDER 2020
14th International Conference
on New Developments and
Applications in Optical
Radiometry (NEWRAD 2020)
University of Colorado Boulder
June 23-26, 2020

Tuesday, 23 June 2020, UMC Glenn Miller Ballroom, University of Colorado

Time	Title	Author and Affiliation
8am	Coffee, Registration	
9:20	Opening Remarks	Marla Dowell, John Lehman, NIST
9:40	Broadband absolute radiometers for far infrared sensing	Chris Yung, NIST, USA
10:10	Cantilever-based photoacoustic detection of electromagnetic radiation	Sucheta Sharma, Aalto, Finland
10:30	Differential spectral responsivity measurements of large bifacial solar cells	Petri Kärhä, Aalto, Finland
10:50	Break	
11:20	Application of a Tuneable Pulsed Laser for Spectral Responsivity Measurements of UV Radiometers Based on Wide-Bandgap Photodiodes	Saulius Nevas, PTB, Germany
11:40	A fast AC mode measurement system for detector response and spatial uniformity characterization	Ping-Shine Shaw, NIST, USA
12:00	Lunch	
13:10	SI traceable space climate observing system	Bruce Wielicki, NASA, USA
13:40	Traceable Radiometry Underpinning Terrestrial- and Helio- Studies (TRUTHS): Enabling a Space-based Climate and Calibration Observatory - An ESA Earth Watch mission	Nigel Fox, NPL, UK
14:00	The reduced background calibration facility 2 for infrared detectors, cameras and sources	Christian Monte, PTB, Germany
14:20	Experience with the radiometric traceability concept for the Network for Detection of Mesospheric Change (NDMC)	Max Reiniger, PTB, Germany
14:40	Measurements of absolute, SI traceable lunar irradiance with the airborne Lunar Spectral Irradiance (air-LUSI) Mission	Steve Brown, NIST, USA
15:00	Break	
15:30	The STAR-CC-OGSE system for pre-flight sensor calibration	Paul Green, NPL, UK
15:50	The HyperSpectral Imager for Climate Science (HySICS) on the CLARREO Pathfinder Mission	Greg Kopp, LASP, USA
16:10	ARCSTONE:Calibration of Lunar Spectral Reflectance from Space	Constantine Lukashin, NASA, USA
16:30	A Simple Method of UV Stray Light Correction for Field Spectrometers in Ground Validation Sites	Ling Li, NIM, China
16:50	Posters/Social Event	
19:00	End	

Wednesday, 24 June 2020, UMC Glenn Miller Ballroom, University of Colorado

Time	Title	Author and Affiliation
8am	Coffee, Registration	
9:00	Novel perfect blackbody sheet having nano-precision surface microtextures for a planar standard radiator	Kuniaki Amemiya, AIST, Japan
9:30	A Lens-free InGaAs-Radiation Thermometer with improved Detectivity at 1.6 µm to cover the Temperature Range from 80 °C to 962 °C	Ingmar Müller, PTB, Germany
9:50	Spectral Irradiance Measurement Based on Large-area WC-C Fixed Point Blackbody	Yanfei Wang, NIM, China
10:10	A Blackbody for Calibration of Hemispherical Infrared Detectors	Moritz Feierabend, PTB, Germany
10:30	Break	
11:00	Calibrating Gravitational Wave Interferometers: A Review with Astrophysical Implications	Jeff Kissel, LIGO, USA
11:20	System analysis of ILMD-based LID measurement systems using Monte Carlo simulation	Markus Katona, KIT, Germany
12:00	Lunch	Scientific Committee Meets
13:00	Posters	
14:20	Three-dimensional modelling of photodiode responsivity	Jarle Gran, JV, Norway
14:50	Optical power scale realization using the predictable quantum efficient detector	Kinza Maham, Aalto, Finland
15:10	Electrical-Substitution Fourier Transform Spectrometry for Absolute Calibration of Detector Responsivity	J.E. Neira, NIST, USA
15:30	Towards 1 W, High Accuracy, Absolute Radiometer	Florian Stuker, METAS, CH
15:50	Break	
16:20	Planar Absolute Radiometer for Room Temperature for Replacing NIST's 50-Year-Old Detector Standard	Anna Vaskuri, NIST, USA
16:40	Quantum efficiency of Predictable Quantum Efficient Detector in the ultraviolet region	Mikhail Korpusenko, Aalto, Finland
17:00	Recent Progress on Calibration of Spectroradiometers using Tunable Lasers	Yuqin Zong, NIST, USA
17:20	Near Infrared Spectral Responsivity Realization based on Cryogenic Radiometer	Xu Nan, NIM, China

Thursday, 25 June 2020, UMC Glenn Miller Ballroom, University of Colorado

Time	Title	Author and Affiliation
8am	Coffee, Registration	
9:00	Production and Characterization of Optics and Coatings with Extremely Low Losses and High Reflectivity	Ramin Lalezari, FiveNine, USA
9:30	A facility for measuring the BSSRDF	Pablo Santafe, CSIC, Spain
9:50	Improving multiphoton spectroscopy standards through the creation of an accurate, high-throughput spectrometer facility	Charles Stark, NICH, Estonia
10:10	Advocating a statistical definition for the BRDF	Gael Obein, LNE-Cnam, France
10:30	Effects of rotation errors on goniometric measurements	Ellie Molloy, MSL, New Zealand
10:50	Break	
11:20	SI traceable electrostatic balance to measure laser power	Stefan Schlamminger, NIST, USA
11:50	Optical power measurements via photon momentum and its comparison with SI-traceable reference methods	Suren Vasilyan, TU Ilmenau, Germany
12:10	HALO – High Amplification Laser-pressure Optic	Alexandra Artusio-Glimpse, NIST, USA
12:30	Lunch	
13:30	Posters	
14:40	Nanowire-based Sources of Non-classical Light	R.L. Williams, NRC, Canada
15:10	Calibration of silicon single-photon avalanche diode detectors using a narrow-bandwidth quantum emitter	Hristina Georgieva, PTB, Germany
15:30	Pilot study on the detection efficiency measurement of InGaAs/InP single-photon detectors	Marco Lopez, PTB, Germany
15:50	Break	
16:20	Molecule-based single photon source for quantum radiometry	Stefan Kück, PTB, Germany
16:40	Calibration of free-space and fiber-coupled single-photon detectors	Thomas Gerrits, NIST, USA
17:00	Bus to Social Event (ending 20:00)	

Friday, 26 June 2020, NIST Auditorium and LASP Tours, 325 Broadway, Boulder, CO

Time	Title	Author and Affiliation
8am	Registration/Coffee	
9:00	TSIS Solar Spectral Irradiance Measurements	Odele Coddington, LASP, USA
9:30	Spectroradiometric Calibration of Bright Stars, Vega and Sirius	John Woodward, NIST
9:50	Compact total irradiance monitor flight demonstration	Dave Harber, LASP, USA
10:10	Break	
10:40	Traceability of Solar and Lunar Direct Irradiances Measured with Precision Filter Radiometers	Natalia Kouremeti, PMOD, CH
11:00	Design and Development of a Tuneable Portable Radiation Source for In Situ Characterisation of Dobson Spectrometers	Marek Smid, CMI, Czech R.
11:20	Stray-Light Correction Methodology for the Precision Solar Spectroradiometer	Julian Gröbner, PMOD, CH
11:40	Closing Remarks and Tour Instructions	Julian Gröbner, John Lehman
12:00	Box Lunch at NIST	
13:00	Travel to LASP and NIST Tours	
16:40	END	