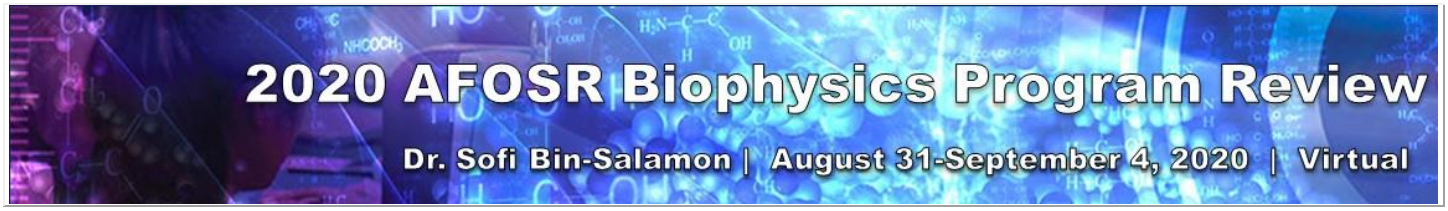
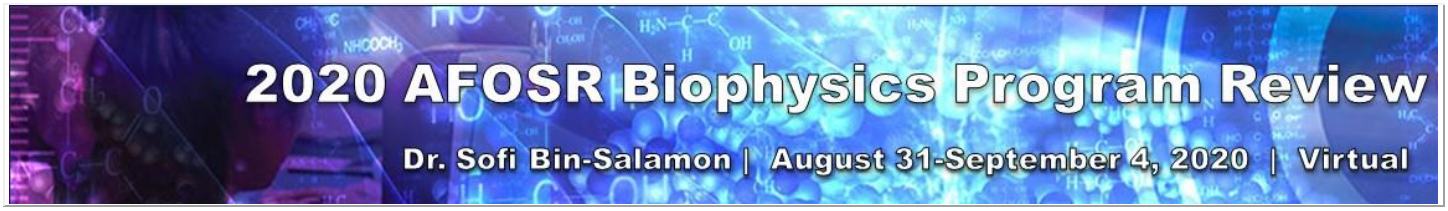


Day 1 - Monday, 31 August 2020

TIME	TOPIC	SPEAKER
0820-0850	**Login**	
0850-0900	Introduction	**Dr. Sofi Bin-Salamon** Program Manager Air Force Office of Scientific Research
0900-0930	Shining Light on the Neuroimmune Interface	**Prof. Mark Hutchinson** School of Medicine University of Adelaide
0930-1000	Elucidating the Cellular and Sub-Cellular Dynamics during Electromagnetic Modulation of the Nervous System	**Prof. Anita Mahadevan-Jansen** Department of Biomedical Engineering Vanderbilt University
1000-1030	Directed Electromagnetic Perturbation and Quantum Biological Effects in Retinal Cells and Networks using Coherent Control of Femtosecond Optical Pulses	**Prof. Stephen Boppart** Beckman Institute University of Illinois Urbana-Champaign
1030-1100	**BREAK**	
1100-1130	Three-dimensional Brain In Vitro Models via Electrofluidodynamics	**Dr. Vincenzo Guarino** Institute of Polymers, Composites and Biomaterials National Research Council of Italy
1130-1200	Graphene Microfluidics for Dynamic Electron Microscopic Imaging	**Prof. Xiaocheng Jiang** Biomedical Engineering Tufts University
1200-1230	3D Printing of Simulated Gut Environment for Brain-Gut Axis Research	**Prof. Zhijian Pei** Department of Industrial and Systems Engineering Texas A&M University **Prof. Hongmin Qin** Department of Biology Texas A&M University
1230-1330	**LUNCH**	
1330-1400	Nano-electronic Probes of Mitochondrial Function	**Prof. Peter Burke** Dept. of Electrical Engineering and Computer Science University of California, Irvine
1400-1430	Detail Mechanism of the Visual Process	**Prof. Peter Rentzepis** Dept. of Electrical and Computer Engineering Texas A&M University

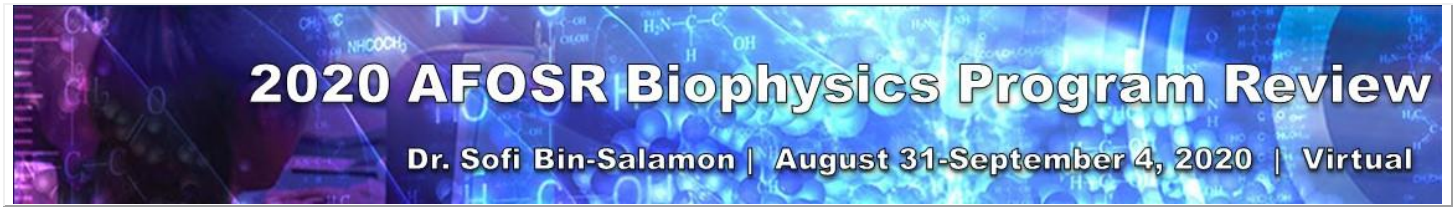
1430-1500	Biophysics of Neuromodulation by Rapid Deposition of Energy	**Dr. Christopher Valdez** 711th Human Performance Wing Air Force Research Laboratory
1500-1530	**BREAK**	
1530-1600	Cell Membrane Dynamics in Infrared Nerve Stimulation and Blocking	**Prof. Michelle Sander** Dept. of Electrical & Computer Engineering Boston University
1600-1630	Development of 3D Cell Culture Systems for Evaluating Real-time Stimulation and Sensing Techniques	**Prof. Sally McArthur** Department of Biomedical Engineering Swinburne University of Technology
1630-1700	Smart Sensor Systems for Human Health and Environmental Applications	**Dr. Gary Hunter** Lead, Intelligent Systems Hardware National Aeronautics and Space Administration – Glenn Research Center
1700	**MEETING ADJOURNED**	



Day 2 - Tuesday, 1 September 2020

TIME	TOPIC	SPEAKER
0800-0830	**Login**	
0830-0900	Blending Engineering and Physics into Biomedical Research	**Prof. Larry Nagahara** Associate Dean for Research Johns Hopkins University
0900-0915	Building Australia's Research Data Commons	**Ms. Rosie Hicks** Chief Executive Officer Australian Research Data Commons
0915-0945	Using innovative science and technology to solve major challenges – *How Australia's national science agency delivers impact using breakthrough science and engineering*	**Dr. Cathy Foley** Chief Scientist Commonwealth Scientific and Industrial Research Organisation
0945-1015	The National Research Council of Italy - Integration of knowledge for successful international collaborative initiatives	**Prof. Luigi Ambrosio** Director, Institute of Polymers, Composites & Biomaterials National Research Council of Italy
1015-1030	**BREAK**	
1030-1100	Challenges and Opportunities in the Defense Sector	**Colonel (AF) Alessio Grasso** Director, Territorial Technical Office – Naples Directorate for Air Armaments & Airworthiness Secretariat General of Defence Italian Ministry of Defence
1100-1130	South Africa's Response to COVID 19	**Dr. Makhapa Makhafola** Executive Director, Richards Bay Campus University of Zululand
1130-1200	Advanced Manufacturing Program	**Dr. Khershed Cooper** Program Director National Science Foundation
1200-1215	How to Foster, Grow and Nurture Innovation Ecosystems: the GW Accelerate National and International Experiences	**Mr. Giulio Busulini** Senior Advisor for International Programs George Washington University - OIE
1215-1300	**LUNCH**	
1300-1330	Sub-Diffraction Temperature Mapping of Protein Interconversions	**Prof. Somin Lee** Department of Biomedical Engineering University of Michigan

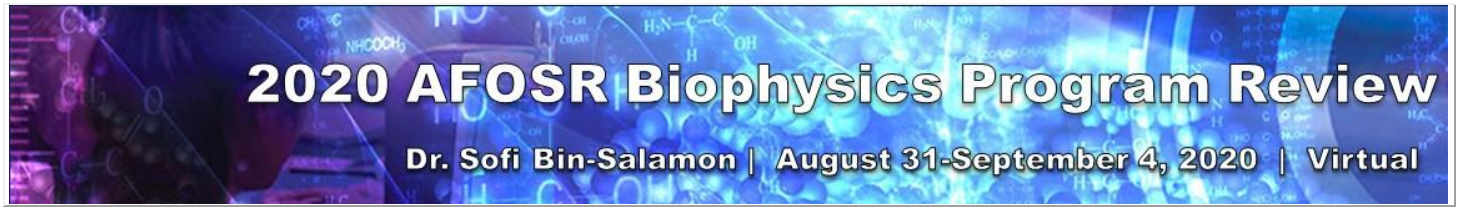
1330-1350	Quantum Coherence and Quantum Interactions in Microtubules and Surrounding Environment	**Prof. Vladislav Yakovlev** Department of Biomedical Engineering Texas A&M University
1350-1410	Enhanced Sensitivity with Quantum Light for Absorption Measurements	**Prof. Girish Agarwal** Department of Physics and Astronomy Texas A&M University
1410-1430	New Measurement Strategies for Enhanced Spatial Resolution of Trace Amounts of Bio-materials	**Prof. Marlan Scully** Department of Physics and Astronomy Texas A&M University
1430-1500	Multiscale Electrical Mapping of Biosystems	**Prof. Jinglei Ping** Mechanical and Industrial Engineering University of Massachusetts Amherst
1500-1530	**BREAK**	
1530-1600	Understanding the “Mission Versatility” of Membrane Proteins via Nanoscopic Imaging	**Prof. Qian Chen** Department of Materials Science University of Illinois Urbana-Champaign
1600-1630	Quantum Correlation Microscopy: Progressing Nanoscopy	**Prof. Andrew Greentree** Department of Physics Royal Melbourne Institute of Technology
1630-1700	Hybrid Diamond Materials for Quantum Biosensing Applications	**Prof. Brant Gibson** Department of Physics Royal Melbourne Institute of Technology
1700	**MEETING ADJOURNED**	



Day 3 - Wednesday, 2 September 2020

TIME	TOPIC	SPEAKER
0800-0830	**Login**	
0830-0900	Free-electron-mediated Modifications of Biomolecules – from Physical Indicators to Molecular Mechanisms	**Dr. Norbert Linz** Institute of Biomedical Optics University of Lübec
0900-0930	Multimodal Sensing of Free-electron-mediated Modifications of Biomolecules Targeted by Metallic Nanoparticles	**Dr. Xiao-Xuan Liang** Institute of Biomedical Optics University of Lübeck
0930-1000	Photon Budgeting for Non-invasive Two-photon Optical Biopsy of Retinal Fluorophores	**Prof. Alfred Vogel** Institute of Biomedical Optics University of Lübeck
1000-1015	**BREAK**	
1015-1035	Multi-Disciplinary University Research Initiative: Nanoelectropulse-Induced Electromechanical Signaling and Control of Biological Systems	**Prof. Andrei Pakhomov** Frank Reidy Center for Bioelectrics Old Dominion University
1035-1055	The Interplay of Excitation and Electroporation in Nanosecond Pulse Stimulation	**Prof. Andrei Pakhomov** Frank Reidy Center for Bioelectrics Old Dominion University
1055-1135	Electrostimulated Transmembrane traffic 1. Nanosecond Field Reversal Distinguishes Cell Membranes from Lipid Vesicles 2. Molecular Simulations of Lipid Pore Response to Picosecond Field Reversal	**Prof. Thomas Vernier** Department of Computer Science Old Dominion University **Ms. Federica Castellani** Department of Computer Science Old Dominion University
1135-1205	Identifying the Membrane Protein Targets for nsPEF-Induced Pore Formation and Cell Death	**Prof. Olga Pakhomova** Frank Reidy Center for Bioelectrics Old Dominion University
1205-1300	**LUNCH**	
1300-1325	Nanosecond Pulse Generations and Method of Delivery for CANCAN	**Prof. Shu Xiao** Department of Electrical and Computer Engineering Old Dominion University
1325-1405	Cancellation of Cellular Responses in Excitable Adrenal Chromaffin Cells requires Ultrashort Bipolar Nanosecond Electric Pulses	**Prof. Gale Craviso** **Prof. Josette Zaklit** School of Medicine University Nevada Reno
1405-1435	Synergistic Effects of nsEP Interactions and Observation of "invisible" Effects of nsEP Interactions with Living Cells	**Prof. Vladislav Yakovlev** Department of Biomedical Engineering Texas A&M University

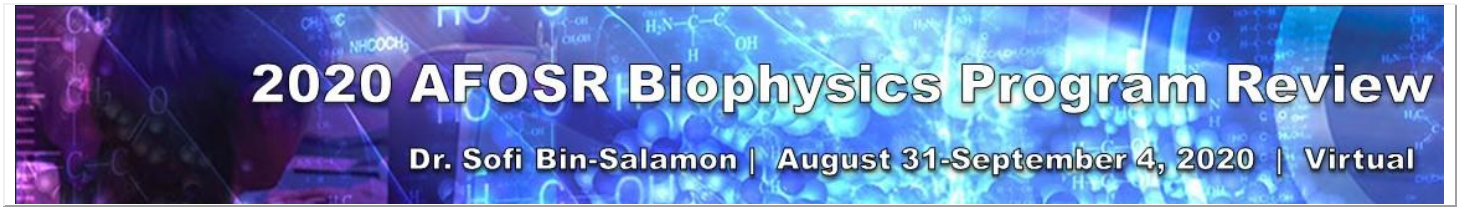
1435-1445	MURI Summary	**Prof. Andrei Pakhomov** Frank Reidy Center for Bioelectrics Old Dominion University
1445-1500	**BREAK**	
1500-1530	Lessons Learned from a Tissue Engineered 3D Model of the Glial Scar	**Dr. Ana Pêgo** Institute of Biomedical Engineering i3S/University of Porto
1530-1600	Developing a Predictive, Multi-scale Understanding of Energy-Utilizing Polymers	**Prof. Holly Goodson** Department of Chemistry University of Notre Dame
1600-1630	Autonomous Enzyme-Powered Nanomotors and Micropumps: Transport and Collective Behavior	**Prof. Ayusman Sen** Department of Chemistry Pennsylvania State University
1630-1700	Influence of Hydration and Protein Collective Motions on Biological Activities	**Prof. Vinh Nguyen** Department of Physics Virginia Tech University
1700	**MEETING ADJOURNED**	



Day 4 - Thursday, 3 September 2020

TIME	TOPIC	SPEAKER
0800-0830	**Login**	
0830-0900	Ion-doped Apatite Nanoparticles with Intelligent Biofunctionalities and Biocide Ability	**Dr. Anna Tampieri** Director, Institute of S&T for Ceramics National Research Council of Italy
0900-0920	Shedding Light in Brain Microdomains	**Dr. Valentina Benfenati** Institute of Synthesis and Photoreactvity National Research Council of Italy
0920-0940	Forest of Disordered Gold Covered Silicon Nanowires: A Versatile Platform for Interfacing Cells	**Dr. Annalisa Convertino** Institute for Microelectronics and Microsystems National Research Council of Italy
0940-1000	Water Transport in Brain Cells: Aquaporin-4 Supramolecular Structure Transition Regulates Adhesion, Migration and Differentiation Dynamics of Brain Astrocytes	**Prof. Grazia Paola Nicchia** Department of Bioscience, Biotechnology and Biopharmaceutics University of Bari
1000-1015	**BREAK**	
1015-1035	MURI: Cells and Cell Groups as Coupled Biochemical, Electrical, and Mechanical Systems	**Prof. Wolfgang Losert** Department of Physics University of Maryland
1035-1055	Excitable Systems in Cells - Precise Control of Cell Signals and Excitability	**Prof. Peter Devreotes** Department of Cell Biology Johns Hopkins University
1055-1115	Esotaxis – Experiments and Modeling	**Prof. John Fourkas** Department of Chemistry and Biochemistry University of Maryland
1115-1130	Electric Field (EF) Guidance of Biochemical and Biomechanical Signals	**Ms. Qixin Yang** Department of Physics University of Maryland
1130-1200	EF Driven Regulation of ERK Signaling to Control Cell Fate and Collective Behavior	**Prof. Min Zhao** Department of Dermatology University of California Davis
1200-1300	**LUNCH**	
1300-1320	ERK Signaling: Toward Precision Measurement and Control of Cell Behavior	**Prof. Quan Qing** Department of Physics Arizona State University

1320-1335	*In-Vivo* Electric Field Control of Cells	**Prof. Patrick Kanold** Department of Biology University of Maryland **Prof. Quan Qing** Department of Physics Arizona State University
1335-1350	New Charge and Voltage Sensors	**Mr. Tatsat Banerjee** Department of Cell Biology Johns Hopkins University
1350-1405	Voltage and Cytoskeletal Imaging of Electrically Excitable Cells	**Mr. Sylvester Gates** Department of Physics University of Maryland
1405-1420	EF Control of Neuronal Cells	**Prof. Min Zhao** Department of Dermatology University of California Davis
1420-1430	MURI Summary	**Prof. Wolfgang Losert** Department of Physics University of Maryland
1430-1445	Decoding Astrocyte Natural Rhythms: Impact of Actin and Channel Protein Dynamics across Scales	**Dr. Kate O'Neil** Department of Physics University of Maryland
1445-1500	**BREAK**	
1500-1530	Fundamental Biophysics Investigations on Upconversion Nanoparticles Modified Photoreceptive Composite Architectures for Enhanced Quantum Optoelectronics	**Prof. Shashank Priya** Materials Science and Engineering Pennsylvania State University
1530-1600	Colour Sensitive Organic Semiconductor Pixelated Photosenstive Device	**Prof. Thomas Brown** Department of Electronic Engineering University of Rome, Tor Vergata
1600-1630	Optimising Lanthanide Nanoparticle Design and Growth for Increased near-IR to Visible Upconversion Efficiency	**Prof. James Piper** Department of Physics and Astronomy Macquarie University
1630-1700	Improving Optical Measurement and Trapping using Quantum Mechanics	**Prof. Warwick Bowen** Department of Physics University of Queensland
1700	**MEETING ADJOURNED**	



Day 5 - Friday, 4 September 2020

TIME	TOPIC	SPEAKER
0800-0830	**Login**	
0830-0845	AFOSR International Initiatives	**Dr. Misoon Mah** International Program Manager Air Force Office of Scientific Research
0845-0900	US – Italy S&T Cooperation	**Dr. Stefano Lami** Science Counselor Embassy of Italy to the United States
0900-0930	The University of Bologna and the US: Perspectives and Opportunities for Innovation	**Prof. Beatrice Fraboni** Rector's Delegate for International Relations with North America and Europe University of Bologna
0930-1000	Bringing Ideas to the Market: the Impact Driven Approach in the CNR Research Area in Bologna	**Dr. Roberto Zamboni** Director, Institute for Organic Synthesis and Photoreactivity National Research Council of Italy
1000-1030	Opportunities to Enrich your Research and Innovation Journey: Enrich in the USA	**Ms. Claire Chen** Director, Global Initiatives National Council of University Research Administrators **Ms. Johanna Füllmann** Senior Scientific Officer German Aerospace Center (DLR)
1030-1100	**BREAK**	
1100-1130	International Research Collaborations at Texas A&M Engineering	**Prof. Dimitris Lagoudas** Senior Associate Dean for Research Texas A&M University
1130-1200	Exploring New Biophysical Processes with Quantum Entanglement	**Prof. Theodore Goodson** Department of Chemistry University of Michigan
1200-1230	NCI Sensor Science – An Update	**Dr. Jeffrey Buchsbaum** Medical Officer and Program Director National Cancer Institute, NIH
1230-1330	**LUNCH**	
1330-1400	Universal Quantum Standards for Stochastic Biophysics	**Prof. James Brozik** Department of Chemistry Washington State University
1400-1430	Multidimensional Spectroscopic Probes of Heme Protein Functionality at Molecular and Cellular Scales	**Prof. Jennifer Ogilvie** Department of Physics University of Michigan

1430-1500	Quantum Coherence and Dynamics in Biological Processes: Molecular Isomerization in Vision	**Prof. Paul Brumer** Department of Chemistry University of Toronto
1500-1530	**BREAK**	
1530-1600	Using Human Stem Cells to Vascularized Organoids	**Prof. Sharon Gerecht** Department of Biomedical Engineering Johns Hopkins University
1600-1630	Biophysics of Intracellular Traffic: Linking Molecular Cues of Cytoskeletal Regulation and Extracellular Vesicle and Exosome Production	**Prof. Ravi Radhakrishnan** Department of Bioengineering University of Pennsylvania
1630-1700	Opportunities to engage with the Basic Research Office	**Dr. Ololade Fatunmbi** Program Scientist, SAINC Basic Research Office Office of the Under Secretary of Defense (R&E)
1700-1710	Closing	**Dr. Sofi Bin-Salamon** Program Manager Air Force Office of Scientific Research
1710	**MEETING CONCLUSION**	