



**VIRTUAL
EVENT
OPENING**

**20
FEB**

AGENDA*
Plenary Sessions



Time	Session Title	Speaker	Track Area
9:30 AM – 10:00 AM	Welcome & Opening Remarks	Kayri M. Cherena Caraballo, EIT, PMP President, Institute of Computer Engineers College of Engineers and Land Surveyors of Puerto Rico	--
10:00 AM – 11:00 AM	Designing the Future of Healthcare Simulation: Innovation at the Intersection of Functionality and Patient-Centered Solutions	Hector Mejia Design Director - Virtual Simulation & Learning / DesignOps Laerdal Medical Copenhagen, Denmark	<i>Augmented Reality & Virtual Reality</i> <i>English Language</i>
11:00 AM – 12:00 PM	Beyond Maintenance: Engineering Resilience and Innovation with Global CMMS Systems	William Morales Rivera Associate Director, Global Reliability Excellence Bristol Myers Squibb New Brunswick, New Jersey	<i>Healthcare Software Solutions, Biopharmaceutical & Smart Implantable Technologies</i>
12:00 PM – 1:00 PM	Virtual Lunch Break		
1:00 PM – 2:00 PM	Revolutionizing Cardiac Care: Engineering Innovations in Leadless Pacemakers with a Case Study on Micra AV2	Wilhelm Denizard Ramsamy, PE Sr. Product Specialist CRM, CAS Central LATAM Medtronic, Puerto Rico Bogotá, Colombia	<i>Healthcare Software Solutions, Biopharmaceutical & Smart Implantable Technologies</i>
2:00 PM – 3:00 PM	Meet the World's Leading Digital Cognitive Assessment Tool	Liya Safina Digital Design & Innovation Director AR/VR Design Lead Google XR Honolulu, Hawaii	<i>Augmented Reality & Virtual Reality</i> <i>English Language</i>
3:00 PM – 3:30 PM	Closing Remarks & Q&A	Kayri M. Cherena Caraballo, EIT, PMP President, Institute of Computer Engineers College of Engineers and Land Surveyors of Puerto Rico	--

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VIRTUAL
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Time	Session Title	Speaker(s)
8:00 AM – 9:00 AM	Registration & Welcome Coffee	Event Staff
9:00 AM – 9:15 AM	Opening Remarks	Kayri M. Cherena Caraballo, EIT, PMP President, Institute of Computer Engineers College of Engineers and Land Surveyors of Puerto Rico
9:15 AM – 10:15 AM	<i>Plenary Session</i> Driving Innovation in Healthcare through Collaborative Engineering	Ricardo Bravo Pérez, PhD Director, Department of Biomedical Engineering Polytechnic University of Puerto Rico
10:15 AM – 11:15 AM	<i>Plenary Session</i> Beyond Limits: Harnessing Supercomputing to Revolutionize Medical Discoveries	Wilson Rivera Gallego, PhD Associate Director, Computer Science and Engineering Department University of Puerto Rico Author of the book Sustainable Cloud and Energy Services: Principles and Practice
11:15 AM – 11:30 PM	<i>Transition to Parallel Keynote Tracks</i>	
11:30 AM – 12:30 PM	<i>AM Parallel Keynote Tracks</i> Emerging Innovations in Medical Solutions	Refer to the Detailed Agenda for AM Parallel Keynote Tracks on Emerging Innovations in Medical Solutions. <i>Full session details for each track can be found in the accompanying document.</i>
12:30 PM – 1:30 PM	Networking Lunch	Discover cutting-edge research and innovative solutions at our Research Poster Presentation Session, where ideas meet collaboration and inspire future advancements.
1:30 PM – 2:00 PM	Research Poster Presentation	
2:00 PM – 4:00 PM	<i>PM Parallel Keynote Tracks</i> Emerging Innovations in Medical Solutions	Refer to the Detailed Agenda for PM Parallel Keynote Tracks on Emerging Innovations in Medical Solutions. <i>Full session details for each track can be found in the accompanying document.</i>
4:10 PM - 4:30 PM	<i>Plenary Session</i> Closing Remarks & Q&A	Kayri M. Cherena Caraballo, EIT, PMP President, Institute of Computer Engineers College of Engineers and Land Surveyors of Puerto Rico

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AGENDA

EMERGING INNOVATIONS IN MEDICAL SOLUTIONS – AM PARALLEL VIRTUAL TRACKS



Time	Big Data, Precision Medicine & HPC	Cybersecurity & Data Privacy	Healthcare Software Solutions, Biopharmaceutical, Smart Implantable Technologies, & AR/VR	Robotics & BioOptimatics	AI & ML	Bioengineering
11:30 AM – 12:30 PM	<p>Harnessing Big Data for Precision Medicine: Transforming Healthcare with Scalable Technology</p> <p>Guillermo Caicedo Senior Azure Data & AI Specialist Microsoft Puerto Rico</p>	<p>Securing the Future of Digital Health: Cyber TTX for Resilience in AI-Driven Diagnostics, IoMT Devices, and Patient Data Systems</p> <p>Omar A. Rivera Merced Cyber Security Specialist Threat Management and Security Advisory Services Evertec Inc.</p>	<p>The Application of Human Factors and Systems Engineering in Digital Health Solutions</p> <p>Samuel A. Bonet Olivencia, PhD Assistant Professor Industrial Engineering Department University of Puerto Rico, Mayaguez Campus</p>	<p>Revolutionizing Rehabilitation: The Role of Robotic Technology in Transforming Patient Care</p> <p>Stephanie Harrison Cruz Occupational Therapist SER de Puerto Rico</p>	<p>Patient Care -Operationalizing AI in Digital Pathology: Leveraging 3D Imaging and AI-Driven Cytology for Transformative Patient Outcomes in Oncology</p> <p>Mariano De Socarraz Founder and CEO CorePlus Servicios Clinicos y Patológicos, LLC.</p>	<p>Optimizing a design for additive manufacturing: A case study on total knee replacement prostheses</p> <p>Laura Herrera Cruz M.Sc. Candidate in Industrial Engineering Department University of Puerto Rico at Mayagüez</p> <p>Oscar Marcelo Suárez, PhD Professor & Coordinator Materials Science & Engineering Graduate Program Professor of the Bioengineering Graduate Program Department of Materials Science and Engineering University of Puerto Rico-Mayagüez</p>



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EMERGING INNOVATIONS IN MEDICAL SOLUTIONS – PM PARALLEL VIRTUAL TRACKS



Time	Big Data, Precision Medicine & HPC	Cybersecurity & Data Privacy	Healthcare Software Solutions, Biopharmaceutical, Smart Implantable Technologies, & AR/VR	Robotics & BioOptimatics	AI & ML	Bioengineering
1:30 PM – 2:30 PM	<p>Beyond Diagnosis: Engineering Predictive AI Models for Personalized Therapeutic Interventions in Real-Time</p> <p>Abiel Roche-Lima, MSc., PhD Assistant Professor University of Puerto Rico Medical Science Campus (MSC) Principal Investigator of the ARL Biomedical Data Science Lab and Director of the Integrated Informatics Services (IIS) core (part of the Center for Collaborative Research in Health Disparities (CCRHD), MSC, UPR</p>	<p>Intelligence in Action: Leveraging Cyber Threat Intelligence to Protect Medical Innovation and Patient Safety</p> <p>Melvin González Contreras Cyber Threat Intelligence and Incident Response Lead Evertec Inc.</p>	<p>Engineering Beyond Interfaces: Advanced User Experience and Software Solutions for Transforming Patient Care</p> <p>Gladys Gonzalez Quesada, PE Digital Solutions Wizard Ciracet Corp.</p>	<p>Applications in Bioengineering and Biomedical Engineering for patients with physical injuries.</p> <p>Cindy M. Zelada Quiroz M.Sc. Candidate in Bioengineering and Biomedical Engineering University of Puerto Rico at Mayagüez</p> <p>Eduardo I. Ortiz Rivera, PhD, SMIEEE, MSEE Professor Electrical and Computer Engineering Department University of Puerto Rico at Mayagüez</p>	<p>Revolutionizing Clinical Trials with AI: Advanced Strategies for Patient Recruitment, Retention, and Engagement in Complex Healthcare Landscapes</p> <p>Andrés Calle, MSc Co-Founder President AppLivio</p>	<p>Development of a SERS substrate based on ZnO nanostructured fibers for environmental sensing applications</p> <p>Adrián Camacho Berrios, PhD Assistant Professor Chemistry and Physics Department University of Puerto Rico – Ponce</p> <p>Oscar Marcelo Suárez, PhD Professor & Coordinator Materials Science & Engineering Graduate Program Professor of the Bioengineering Graduate Program Department of Materials Science and Engineering University of Puerto Rico-Mayagüez</p>
2:30 PM – 3:30 PM	<p>Data-Driven Innovation in Healthcare: Accelerating Solutions with High-Performance Computing</p> <p>Wilson Rivera Gallego, PhD Associate Director, Computer Science and Engineering Department University of Puerto Rico Author of the book Sustainable Cloud and Energy Services: Principles and Practice</p>	<p>From Legacy Systems to IoMT: A Cybersecurity Masterclass on Defending Healthcare’s Digital Frontier</p> <p>José Arroyo Cruz, PhD</p>	<p>Revolutionizing Healthcare: The Power of Engineering to Transform Patient Lives</p> <p>Lizzette López Rodríguez, PT, DPT Director of Rehabilitation SER de Puerto Rico</p>	<p>BioOptimatics: an Integrated Approach to the Analysis of Multiple Arrays</p> <p>Clara E. Isaza Brando, PhD Assistant Professor Biology Department University of Puerto Rico at Mayagüez Director of The Applied Optimization Group</p> <p>Mauricio Cabrera-Ríos, PhD Professor & Co-Director of The Applied Optimization Group Department of Industrial Engineering / Graduate Program in Bioengineering University of Puerto Rico at Mayagüez</p>	<p>Artificial Intelligence & Machine Learning: Shaping the Future of Medical Diagnostics</p> <p>Victor Velázquez, PE GenAI/ML Specialist North, Latin America & Caribbean Amazon Web Services (AWS)</p>	<p>Novel nanostructured materials for microbial control through magnetic removal</p> <p>Boris Rentería-Beleño, PhD Environmental Engineering University of Puerto Rico-Mayagüez</p> <p>Oscar Marcelo Suárez, PhD Professor & Coordinator Materials Science & Engineering Graduate Program Professor of the Bioengineering Graduate Program Department of Materials Science and Engineering University of Puerto Rico-Mayagüez</p>



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EMERGING INNOVATIONS IN MEDICAL SOLUTIONS – PARALLEL **VIRTUAL TRACKS***



**BIG DATA, PRECISION MEDICINE
& HIGH-PERFORMANCE COMPUTING (HPC) IN HEALTHCARE**



ROBOTICS & BIOOPTIMATICS



CYBERSECURITY & DATA PRIVACY



**ARTIFICIAL INTELLIGENCE (AI) &
MACHINE LEARNING (ML) IN MEDICAL SOLUTIONS**



**HEALTHCARE SOFTWARE SOLUTIONS,
BIOPHARMACEUTICALS,
SMART IMPLANTABLE TECHNOLOGIES,
AUGMENTED REALITY (AR) & VIRTUAL REALITY (VR)**



BIOENGINEERING

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