



C-202

SIDIM 2026 Itinerary per room

Day	Time	Speaker / Talk
		MODERATOR: DAVID TORRES NÚÑEZ
Friday (February 27)	3:00–3:30	Alejandro M. Ouslan <i>Modeling Spatial Dependence: A Simulation-Based Comparison of Parametric and Semi-Parametric Approaches</i>
Friday (February 27)	3:30–4:00	David Torres Núñez <i>Bayesian Peaks-Over-Threshold Modeling for Category-5 Hurricane Risk in Puerto Rico</i>
Friday (February 27)	4:00–4:30	
Friday (February 27)	4:30–5:00	Fernando E. Betancourt Vélez <i>Multiple Comparison and Parsimony in Objective Bayesian Analysis</i>
Friday (February 27)	5:00–5:30	Jeison Vargas <i>Extensions to the Relative Risk of Rounding for Additional Discrete Distributions</i>



C-202

SIDIM 2026 Itinerary per room

Day	Time	Speaker / Talk
		MODERATOR: MARÍA-EGLÉE PÉREZ
Saturday (February 28)	8:30–9:00	Jeremis Morales-Morales <i>Modelación y análisis de datos del sistema eléctrico y su vínculo con la actividad económica de Puerto Rico</i>
Saturday (February 28)	9:00–9:30	María-Eglée Pérez <i>Limiting the Shrinkage for the Exceptional by Objective Robust Bayesian Analysis: “Clemente Problem” revisited</i>
Saturday (February 28)	9:30–10:00	Luis Raúl Pericchi <i>Bounds on Intrinsic Bayes Factors and Least Favorable Intrinsic Priors for General Statistical Hypothesis Testing</i>
		MODERATOR: LUIS RAÚL PERICCHI
Saturday (February 28)	3:00–3:30	Mario Marazzi Santiago <i>Developing an infrastructure at the University of Puerto Rico to promote and support research with restricted-use data through the Federal Statistical Research Data Center (FSRDC) network of the U.S. Census Bureau</i>
Saturday (February 28)	3:30–4:00	Anthony S. Bustos-Espinosa <i>Modeling and prediction of antimicrobial resistance in tuberculosis using Neural Ordinary Differential Equations</i>
Saturday (February 28)	4:00–4:30	
Saturday (February 28)	4:30–5:00	



C-204

SIDIM 2026 Itinerary per room

Day	Time	Speaker / Talk
		MODERATOR: FRANCHESKA LEBRON
Friday (February 27)	3:00–3:30	Anasofía Colón Santiago <i>Automated Generation of Capture The Flag Competitions for Beginners</i>
Friday (February 27)	3:30–4:00	Andrés Ramos Rodríguez <i>Zorzal: Una aplicación web geoespacial para visualizar la gentrificación en Puerto Rico</i>
Friday (February 27)	4:00–4:30	Cesar F. Bolaños Revelo <i>Compression Robustness of a Family of Video Watermark Arrays Based on Composition</i>
Friday (February 27)	4:30–5:00	Diego Rodriguez <i>Comparing Gaussian Processes Regression Methods for Very Large Datasets: Fixed Rank Kriging vs. Modern Sparse Approximations</i>
Friday (February 27)	5:00–5:30	Francheska Lebron <i>A Quantum-Classical Hybrid AI Model Based on Transfer Learning For Sargassum Image Classification</i>



C-204

SIDIM 2026 Itinerary per room

Day	Time	Speaker / Talk
MODERATOR: IVELISSE RUBIO		
Saturday (February 28)	8:30–9:00	Manuel E. Amaya-Marín <i>Cubic Boolean functions fixed by the Dihedral group</i>
Saturday (February 28)	9:00–9:30	Mario Jacobo Motiño Palma <i>On the transient of boolean dynamical systems</i>
Saturday (February 28)	9:30–10:00	Ivelisse Rubio <i>Construction of Linear Fractional Transformations With a Prescribed Cycle Length</i>
MODERATOR: ANGY CORONEL-SUÁREZ		
Saturday (February 28)	3:00–3:30	Emmanuel J. Morales Butler <i>On the effectiveness of Spectral Kurtosis Estimators in detecting RFI in Radio Astronomy Data from the Arecibo 12m Telescope</i>
Saturday (February 28)	3:30–4:00	Gabriela Farfan-Enriquez <i>A Self-Supervised Learning Approach to the Detection and Mitigation of Radio Frequency Interference in Radio Data</i>
Saturday (February 28)	4:00–4:30	Juan G. Lebron Medina <i>Pulsar Scintillation</i>
Saturday (February 28)	4:30–5:00	Angy Coronel-Suárez <i>Conocimiento profesional para enseñar matemáticas: el caso del concepto matemático de función</i>



C-206

SIDIM 2026 Itinerary per room

Day	Time	Speaker / Talk
		MODERATOR: BRADLY RIVERA-MUÑOZ
Friday (February 27)	3:00–3:30	Jhoana P. Romero-Leiton <i>A Continuum of Bacterial Coexistence Equilibrium States Sustains mcr-Mediated Colistin Resistance at the Human-Animal Interface: A Case Study in Rural Regions of Ecuador</i>
Friday (February 27)	3:30–4:00	Bradly Rivera-Muñoz <i>Machine Learning Analysis of Natural Disaster Impact on Mathematics Education in Puerto Rico</i>
Friday (February 27)	4:00–4:30	Carlos R. Vásquez Echevarría <i>Agent-Centered Architecture for Socratic Tutoring in Scientific Skills Development</i>
Friday (February 27)	4:30–5:00	Johan Pérez Umaña <i>Una unidad didáctica para el abordaje de la demostración matemática para su abordaje en la formación inicial de profesores de matemática</i>
Friday (February 27)	5:00–5:30	José P. Calderón <i>Assessing the effect of mock exams on precalculus I performance using generalized linear mixed models</i>



C-206

SIDIM 2026 Itinerary per room

Day	Time	Speaker / Talk
		MODERATOR: OSCAR Y. CASTRILLON-VELANDIA
Saturday (February 28)	8:30–9:00	Manuel M. Aguilera <i>Problem-Solving Process of a Deaf-Mute Student at a Rural School in Honduras</i>
Saturday (February 28)	9:00–9:30	Oscar Y. Castrillon-Velandia <i>Determinants of First-Semester Academic Performance: A Comprehensive Analysis of Incoming University Students</i>
Saturday (February 28)	9:30–10:00	Ollantay Medina <i>Exploring New Forms of Learning Assessment in the AI Era</i>
		MODERATOR: YAMILY COLÓN NEGRÓN
Saturday (February 28)	3:00–3:30	Rafael Martínez Planell <i>El efecto del uso de CalcPlot3D para la enseñanza de las derivadas parciales en diferentes contextos educativos</i>
Saturday (February 28)	3:30–4:00	Rubiela Sanchez Penagos <i>Task-Based Proposal: Using Chess to Develop Random and Variational Thinking in Secondary Education</i>
Saturday (February 28)	4:00–4:30	Yamily Colón Negrón <i>Uso del cómic como recurso interdisciplinario para potenciar la integración de destrezas matemáticas y lingüísticas</i>
Saturday (February 28)	4:30–5:00	Yency E. Choque Dextre <i>Modeling Students Perceived Utility of Mathematics in Large-Scale Assessments: An IRT-GRM and SEM Approach</i>



A-227

SIDIM 2026 Itinerary per room

Day	Time	Speaker / Talk
		MODERATOR: JOSUÉ A. RUIZ RODRIGUEZ
Friday (February 27)	3:00–3:30	John G. Wilson Negroni <i>Visualizing Preventive Healthcare Engagement through Clinical Testing Utilization in the Puerto Rican Population</i>
Friday (February 27)	3:30–4:00	Josué A. Ruiz Rodriguez <i>Graph-Based Algorithms for Testing Convexity of 2DNF</i>
Friday (February 27)	4:00–4:30	Luis M. Fontán Rodríguez <i>Incorporating Agentic AI Models in Personalized Gamification</i>
Friday (February 27)	4:30–5:00	Luke Meyers <i>On the Generalization of Deep Feature Learning of Honey Bee Reidentification</i>
Friday (February 27)	5:00–5:30	Maria D. Gonzalez-Lima <i>Using Support Vector Machines to predict patient responses to transcranial photobiomodulation (tPBM) treatment</i>



A-227

SIDIM 2026 Itinerary per room

Day	Time	Speaker / Talk
MODERATOR: MICHAEL ÁLVAREZ		
Saturday (February 28)	8:30–9:00	Maria C. León-Cartagena <i>Machine learning models focused on spectrophotometry for the chemical detection of urea concentrations</i>
Saturday (February 28)	9:00–9:30	Javier Osorio <i>A Low-Cost Approach for Sports Performance Assessment Using Computer Vision and Artificial Intelligence Tools</i>
Saturday (February 28)	9:30–10:00	Néstor A. Martínez Rivera <i>A Real-Time, Interactive Web Application for Automated Behavioral Monitoring of Honeybees</i>
MODERATOR: ELIO RAMOS COLÓN		
Saturday (February 28)	3:00–3:30	Elio Ramos Colón <i>El interior de las cosas: visualización volumétrica utilizando ray marching</i>
Saturday (February 28)	3:30–4:00	Freddy Bello <i>SUMMIT: Microservices Application to Forecast and Optimizing network operations using machine learning for temporary IT infrastructure in high-demand scenarios</i>
Saturday (February 28)	4:00–4:30	Nicole M. Ramirez-Mulero <i>DanceSketch: Providing Choreography Scripting Capabilities in EarSketch</i>
Saturday (February 28)	4:30–5:00	Pablo U. Torres Arroyo <i>Visualization Dashboard of Bee Foraging Behavior in Flower Patch Assays using D3.js</i>



A-229

SIDIM 2026 Itinerary per room

Day	Time	Speaker / Talk
		MODERATOR: CARLOS J. CORRADA BRAVO
Friday (February 27)	3:00–3:30	Victor Manuel Salcedo-Rosero <i>Fast–slow dynamics in a mathematical model for the fentanyl overdose epidemic</i>
Friday (February 27)	3:30–4:00	Alejandro Colón Dávila <i>Dynamics of MRSA in Hospital Settings: Mathematical Modeling of Healthcare Worker-Mediated Transmission Pathways</i>
Friday (February 27)	4:00–4:30	Andrea V. Nieves-Rivera <i>The Relevance of Compound Events in Bee Traffic Monitoring</i>
Friday (February 27)	4:30–5:00	Carlos J. Corrada Bravo <i>Dual Ensemble Machine Learning System for Real-Time Hydrometeorological Event Prediction in Puerto Rico</i>
Friday (February 27)	5:00–5:30	Henry A. Molina <i>Diagnostic tools for mixed models with inflation of zeros</i>



A-229

SIDIM 2026 Itinerary per room

Day	Time	Speaker / Talk
MODERATOR: LÁZARO CABÁN CABRERA		
Saturday (February 28)	8:30–9:00	Carlos A. Vázquez De Jesús <i>Battery Materials Discovery For Energy Storage Using M3GNET, Deep learning and DFT</i>
Saturday (February 28)	9:00–9:30	Carlos Andres Peluffo Silva <i>Optimization of Academic Schedules Using Genetic Algorithms: Development of a Web Application for University Courses at UPRM</i>
Saturday (February 28)	9:30–10:00	Lázaro Cabán Cabrera <i>Fraction of B-meson decays in J/ψ yields at midrapidity in proton-proton collisions at relativistic heavy ion collider energies of 200 and 510 giga-electronvolts</i>
MODERATOR: MIGUEL E. CRUZ MOLINA		
Saturday (February 28)	3:00–3:30	Luis E. Cardoso Paez <i>Gauss-Lobatto Method for Nuclear Reactivity Calculation</i>
Saturday (February 28)	3:30–4:00	Miguel E. Cruz Molina <i>Applications of Our Generalized W-HITS to Gene Regulatory Networks</i>
Saturday (February 28)	4:00–4:30	Nelson J. Moreira <i>A compartmental model of HIV dynamics with virological suppression and optimization of antiretroviral therapy</i>
Saturday (February 28)	4:30–5:00	



A-231

SIDIM 2026 Itinerary per room

Day	Time	Speaker / Talk
		MODERATOR: SHIRLEY Y. HUANCA OCHOA
Friday (February 27)	3:00–3:30	Samidha <i>An Information Theoretic Based Deep Learning Model Based on Remote Sensing for Sargassum Detection and Estimation Along the Coasts of Puerto Rico</i>
Friday (February 27)	3:30–4:00	Sergio D. Rodríguez De Jesús <i>Chase-escape with Conversion on the Complete Graph</i>
Friday (February 27)	4:00–4:30	Shirley Y. Castro-Martínez <i>Aplicación del algoritmo Hierarchical risk parity en la construcción de portafolios para index tracking</i>
Friday (February 27)	4:30–5:00	Shirley Y. Huanca Ochoa <i>Socioeconomic and environmental factors in dengue malaria coinfection in Nariño, Colombia (2016–2024): a mathematical modeling approach</i>
Friday (February 27)	5:00–5:30	Victor A. Pineda <i>Parametric Study of the Bouc-Wen Model for Nonlinear Systems</i>



February 27-28, 2026

A-231

SIDIM 2026 Itinerary per room

Day	Time	Speaker / Talk
MODERATOR: R. ARCE-NAZARIO		
Saturday (February 28)	8:30–9:00	Arnaldo Cruet Rivera <i>The Actuarial Profession</i>
Saturday (February 28)	9:00–9:30	Sona Tau Estrada Rivera <i>Multidimensional Periodic Costas Arrays</i>
Saturday (February 28)	9:30–10:00	R. Arce-Nazario <i>The 5-cube cut number, cut-complexes, and a vertex coloring game</i>
MODERATOR: MOISES DELGADO		
Saturday (February 28)	3:00–3:30	Mia I. Gonzalez-Ramirez <i>Friendship factorization and its irreducible divisor graph</i>
Saturday (February 28)	3:30–4:00	Moises Delgado <i>17 years since the Conjecture of Exceptional APN functions</i>
Saturday (February 28)	4:00–4:30	Osmin Ariel Rodríguez Flores <i>Bases para ideales de anillos de polinomios sobre un dominio de ideales principales (PID)</i>
Saturday (February 28)	4:30–5:00	



A-233

SIDIM 2026 Itinerary per room

Day	Time	Speaker / Talk
		MODERATOR: EUGENIO GUERRERO-RUIZ
Friday (February 27)	3:00–3:30	Arlin Alvarado <i>An LDG-Based Computational Framework for Variational Optical Flow Estimation</i>
Friday (February 27)	3:30–4:00	Henry Cortez Portillo <i>Fractional Evolutions Systems: resolvent families and duality</i>
Friday (February 27)	4:00–4:30	Eugenio Guerrero-Ruiz <i>On the Distribution of Functionals of One Dimensional Brownian Motion via a Feynman–Kac Approach</i>
Friday (February 27)	4:30–5:00	Liliana K. Esquivel <i>A Riemann–Hilbert approach to the existence results for the Benjamin Ono equation on a half-line</i>
Friday (February 27)	5:00–5:30	Pablo V. Negrón-Marrero <i>Deformations of rotating disks under self gravitation and variable rotational frequency</i>



February 27-28, 2026

A-233

SIDIM 2026 Itinerary per room

Day	Time	Speaker / Talk
		MODERATOR: ISTVÁN MEZÖ
Saturday (February 28)	8:30–9:00	
Saturday (February 28)	9:00–9:30	István Mezö <i>A metric space defined on set partitions</i>
Saturday (February 28)	9:30–10:00	Jose A. Ortega <i>On the Problem of the Inscribed and Circumscribed Hyperellipsoid and Hyperrectangle</i>
		MODERATOR: RAFAEL APARICIO
Saturday (February 28)	3:00–3:30	Kevin-David Silva Pérez <i>Elliptic Problems on Ramified Domains with Fractal Boundary</i>
Saturday (February 28)	3:30–4:00	Carlos Carvajal-Ariza <i>The generalized anisotropic dynamical wenzell heat equation with non-standard growth conditions</i>
Saturday (February 28)	4:00–4:30	Rafael Aparicio <i>Damped Second-Order Evolution Equations: Intrinsic Phase Spaces and Dirichlet Solvability</i>
Saturday (February 28)	4:30–5:00	Errol Montes-Pizarro <i>Instabilities of compressible rotating disks</i>



A-142

SIDIM 2026 Itinerary per room

Day	Time	Speaker / Talk
		MODERATOR: LUIS A. MEDINA
Friday (February 27)	3:00–3:30	Luis A. Medina <i>G-invariant Boolean functions and cryptography</i>
Friday (February 27)	3:30–4:00	José E. Calderón Gómez <i>k-Rotation symmetric functions over Galois Fields</i>
Friday (February 27)	4:00–4:30	Rodrigo A. Leon-Prato <i>Proof of the nonlinearity-weight conjecture for cubic monomial k-rotation symmetric Boolean functions</i>
Friday (February 27)	4:30–5:00	Carlos E. Feria-Nieto <i>Closed formulas for exponential sums of quartic k-rotation monomial symmetric Boolean functions</i>



A-142

SIDIM 2026 Itinerary per room

Day	Time	Speaker / Talk
MODERATOR: JAIRO A. AYALA GODOY		
Saturday (February 28)	8:30–9:00	José Agosto Rivera <i>Perspectiva Estadística del Proyecto Bee Hunting de Arecibo C3</i>
Saturday (February 28)	9:00–9:30	Luis Fernando Aparicio Mestra <i>Aplicaciones Computacionales para la Recolección de Datos en el Proyecto Bee Hunting de Arecibo C3</i>
Saturday (February 28)	9:30–10:00	Lizbeth Alvarado Vargas <i>Limpieza y Visualización Interactiva de Datos en el Proyecto Bee Hunting de Arecibo C3</i>
Saturday (February 28)	10:00–10:30	Ariana Rodríguez Flores <i>Triangulación de Datos para la Inspección de la Localización de Colmenas en el Proyecto Bee Hunting de Arecibo C3</i>
MODERATOR: REYES M. ORTIZ-ALBINO		
Saturday (February 28)	3:00–3:30	Reyes M. Ortiz-Albino <i>A summary of the theory of τ_n-factorization</i>
Saturday (February 28)	3:30–4:00	Daniel R. Vásquez-Calderón <i>The τ_n-prime counting function</i>
Saturday (February 28)	4:00–4:30	Byron A. Patiño de la Cruz <i>Sobre los grafos de τ_5-factores τ_5-irreducibles</i>
Saturday (February 28)	4:30–5:00	Carmen E. Peña-Cueto <i>On the reduced τ_r-divisor graph</i>



A-225

SIDIM 2026 Itinerary per room

Day	Time	Speaker / Talk
		MODERATOR: GABRIEL MONTOYA-VEGA
Friday (February 27)	3:00–3:30	Alan Hernández-Flores <i>An Introduction to Polynomial Invariants in Knot Theory: The Alexander–Conway and Kauffman Bracket</i>
Friday (February 27)	3:30–4:00	Alec S. Zabel-Mena <i>Finding Exceptional Trinomials of Given Degree-Gap over \mathbb{F}_{q^2} and Applications to Permutation Polynomials</i>
Friday (February 27)	4:00–4:30	Gabor Lippner <i>Maximizing Subgraphs in Regular Graphs</i>
Friday (February 27)	4:30–5:00	Dennis E. Quintano Villanueva <i>On the Classification of Stabilizable Monomial Control Systems over Finite Fields</i>
Friday (February 27)	5:00–5:30	Fernando L. Piñero <i>Majority Logic Decoding of Affine Grassmann Codes Over Nonbinary Fields</i>