

17th BUAP-UAMI-UTRGV-TAMU Joint International Conference

Hosted by Department of Mathematics and Physics, Texas A&M International University

Sponsored by the College of Arts and Sciences

November 13-15, 2026 · Laredo, Texas · Hybrid (in person and online)

Short Conference Program

Day 1: Friday, November 13, 2026

Time	Presenter	Institution	Mode	Title
8:00–8:30	Registration and opening remarks			
Session D1-S1: Applied Mathematics and Mathematical Biology			Moderator: Nam Nguyen (UTRGV)	
8:35	Saugata Ghosh (S)	UTRGV	Online	Modeling Crack-Induced Thermoelastic Fields in Transversely Isotropic Strain-Limiting Solids
9:00	Omar Sharif (S)	UTRGV	Online	Oscillations in neuronal activity: a neuron-centered spatiotemporal model of the Unfolded Protein Response
9:25	Dambaru Bhatta	UTRGV	Online	A Computational Phase-Field Framework for Crack Propagation in Transversely Isotropic Elastic Solids
9:50	Erika Olivares (S)	UTRGV	Online	Semi-analytical methods for FitzHugh–Nagumo reaction–diffusion equation
10:15	Mike Lindstrom	UTRGV	Online	A Delayed, Stochastic Model of Prion Diseases with Interconnectome Protein Transport
10:40	Mahanthesh Basavarajappa	TAMU	Online	Onset and Subcritical Behavior of Double-Diffusive Convection in Tridisperse Porous Media
11:05–11:20	Tea break			
Session D1-S2: Pure Mathematics			Moderator: Eun Yoon Ann (UTRGV)	
11:20	Pavel Ramos Martínez	UAMI	Online	Invertibility on weighted vector-valued continuous function algebras
11:45	Jhonatan Saúl López Beltran (S)	BUAP	Online	Investigations into Generalized Integration
12:10	Josué Ivan Rios Cangas	UAMI	Online	C0-Semigroups Generated by Domain-Multivalued Orthogonal Linear Relations
12:35	Denisse A. S. Bernès Carmona (S)	BUAP	Online	Completeness of Trigonometric Systems on Arbitrary Frequency Range
1:00–2:00	Lunch Break			
Session D1-S3: Statistics and Applied Probability			Moderator: Dr. César Contreras (TAMU)	
2:00	Hongwei Wang	TAMU	In person	Suppression-Like Effects in Logistic Modeling of STEM Participation
2:25	Mirzobedil Dzhamolzoda (S)	TAMU	In person	Socioeconomic Determinants of Health Insurance Coverage and Health Outcomes Across Texas Counties
2:50	Carlos James Gonzalez (S)	TAMU	In person	Actuarial Analysis of Life Insurance Premiums Using Applied Probability and Python
3:15–3:25	Coffee break			

Time	Presenter	Institution	Mode	Title
Session D1-S4: Analysis, Operator Theory and Numerical Methods Moderator: Dr. Azucena Herrera (UTRGV)				
3:25	Francisco Javier Mendoza Torres	BUAP	Online	Generalized Integration and Regular Convergence of Improper Integrals in $\mathbb{R}^2$
3:50	Alma Y. Luciano Gerardo (S)	BUAP	Online	Hypercyclicity and d-Hypercyclicity of Tridiagonal Toeplitz Operators
4:15	Karen Yagdjian	UTRGV	Online	Propagation of Dirac spherical waves in the expanding universe
4:40	Runchang Lin	TAMU	In person	Local Convergence for C0 Interior Penalty Approximation of Biharmonic Problems
5:05	<i>End of Day 1</i>			

Day 2: Saturday, November 14, 2026

Time	Presenter	Institution	Mode	Title
8:30–8:40	Opening remarks			
Session D2-S1: Operator Algebras and Real Analysis			Moderator: Mr. Juan J. Arellano, Jr.	
8:40	Lourdes Palacios	UAMI	In person	On right Complemented Algebras and their left Multiplier Algebra
9:05	Gerardo A. Sánchez Márquez (S)	BUAP	In person	Examples to illustrate the Peano derivative
9:30	Víctor E. San Martín Macías (S)	UAMI	In person	The multiplier algebra on some classes of topological algebras
9:55	Slavisa Djordjevic	BUAP	In person	From Approximation Theory to Operator Theory
10:20	Carlos Signoret	UAMI	In person	The second dual algebra of certain Topological Algebras
10:45	Tea break			
Session D2-S2: Applied Mathematics			Moderator: Dr. Mahanthesh Basavarajappa (TAMIU)	
10:55	Erwin Suazo	UTRGV	In person	On explicit solutions for systems of PDEs with variable coefficients through Riccati-type systems
11:20	Zhaosheng Feng	UTRGV	In person	Parabolic System of Aggregation Formation in Bacterial Colonies
11:45	Vesselin Vatchev	UTRGV	In person	Periodic Solutions on the Circle for Shallow-Water Model
12:10	Lunch and Group Photo			
Session D2-S3: Operator Theory and Data Science			Moderator: Dr. César Contreras (TAMIU)	
1:05	Jasang Yoon	UTRGV	In person	Two-way connections between 1-variable and 2-variable weighted shifts
1:30	Jorge Ricardo Bolaños Servín	UAMI	Online	G-circulant structure in Quantum Markov Semigroups
1:55	Ivan Moises Roque Tlatelpa	UPAEP	Online	Generalized diagonal of linear relations
2:20	Tamer Oraby	UTRGV	Online	Measurement Error in Machine Learning
2:45	Anahit Galstyan	UTRGV	Online	Semilinear Klein-Gordon equation in space-time of black hole
3:10–3:20	Coffee break			
Session D2-S4: Applied Mathematics, Statistics and Education				
Moderator: Miguel Contreras Martinez (Laredo College)				
3:20	Dacun Li	Laredo College	In person	Challenges of Teaching Technology at a High School and Solutions
3:45	Karla Linero-Reyes (S)	TAMIU	In person	Does Inertia Matter? Onset of Double-Diffusive Convection in a Darcy Porous Medium
4:10	David Alexandro Figueroa (S)	TAMIU	In person	A Categorical Data Analysis on College Graduates Participating in the Labor Workforce
4:35	Michael Edmund Gutierrez (S)	TAMIU	In person	Relationships Among Web Accessibility, Content Governance, and User Engagement
5:00	Kristel Rochell Herrera (S)	TAMIU	In person	Applying Linear Discriminant Analysis to Higgs Boson Signal Identification
5:30	End of Day 2			

Day 3: Sunday, November 15, 2026

Time	Presenter	Institution	Mode	Title
Session D3-S1: Analysis and Probability				
Moderator: Dr. Hongwei Wang				
8:30	John Villavert	UTRGV	Online	On Sobolev-type embeddings and supercritical problems
8:55	Netzahualcóyotl Castañeda-Roldán	BUAP	Online	Ultrametrics, weak ultrametrics, and extended ultrametrics
9:20	Enrique Díaz-Ocampo (S)	UAEM	Online	The Haseman Boundary Value Problem with Shifts on Pure Cusp Stars
9:45	Alfredo Reyes Vazquez	BUAP	Online	About integration of functions in $\mathbb{R}^2$
10:10	Mrinal Kanti Roychowdhury	UTRGV	Online	Optimal Quantization for Probability Distributions
10:10–10:45	Tea Break			
Session D3-S2: Statistics, Data Science and Applications				
Moderator: Dr. Hongwei Wang				
10:45	Eleftherios Gkioulekas	UTRGV	In person	The hydroxychloroquine controversy for COVID-19: A review of the statistical evidence
11:10	Hyung Won Kim	UTRGV	In person	Intuition-Grounded Instruction in Introductory Statistics
11:35	Vanessa Sperling (S)	TAMU	In person	FFNN vs. PINN: Which Neural Network Solves Differential Equations Better?
12:00	Camilo Abarca Estrada (S)	BUAP	Online	The region of visibility over the Sun from a given point of the Earth surface
12:25	Moisés Soto Bajo	BUAP	Online	Revisiting Shannon’s Information Theory in the Context of Numerical Finite Signals
12:50	Jose Daniel Torres Campos	BUAP	Online	Some Approximation Results for a Generalized Szász–Mirakyan Operator
1:15	Closing remarks, group photo, and Lunch			

Notes

- Each presentation is 20 minutes followed by 5 minutes of Q&A. (S) denotes a student presenter.
- All times are Central Time (UTC−6), which is the same clock time in Laredo, Puebla and Mexico City in November.
- We have tried to accommodate each presenter's preferred date and time as far as possible. Thank you for your understanding.
- Microsoft Meeting links for online participation will be shared shortly. Online presenters are kindly asked to join the session 10 minutes before it begins to test audio, video and screen sharing.
- The full program and the book of abstracts will be shared shortly.
- In-person presenters are kindly asked to bring their presentation on a USB drive (PDF or PowerPoint) and load it onto the session computer before their session begins.
- Session moderators will keep each talk within the allotted time so that the program runs on schedule.
- If you notice any error in your name, affiliation or presentation title, please contact the Local Organizing Committee as soon as possible.
- For any questions, please contact the Local Organizing Committee: Dr. Mahanthesh Basavarajappa (mbasavarajappa@tamiu.edu), Dr. Runchang Lin (rlin@tamiu.edu) or Dr. Hongwei Wang (hongwei.wang@tamiu.edu).