PROGRAM METMA-LATAM II

25 - 27 June, 2025 | Barranquilla, Colombia

Wednesday, 25th June 2025

Time	Event
08:00 - 08:45	Registration
08:45 - 09:00	Opening Session
09:00 - 09:45	**Plenary Session** | Håvard Rue Title: Cross-validation for dependent data. Chair: Jorge Mateu
09:45 - 10:15	**Coffee Break**
Contributed I	
10:15 - 10:35	Talk 1: Multiclass classification of skin diseases from mobile phone images.
10:35 - 10:55	Talk 2: Nonlinear distributed lag models with mixed effects for assessing climatic impact on respiratory health in Costa Rica.
10:55 - 11:15	Talk 3: Testing for equivalence on the spatial concordance correlation coefficient: An approach using satellite images of lake Villarrica, Chile, from Landsat 8 and Sentinel-2.
11:15 - 11:50	**Invited I** | Ronny Vallejos Title: Assessing the agreement between two continuous sequences. Chair: Nicolás Molano
11:50 - 12:30	**Poster Session**
12:30 - 13:30	**Lunch Break**
13:30 - 14:15	**Plenary Session** | Abhi Datta Title: Machine learning for geospatial data with explicit modeling of spatial correlations. Chair: Erik Orozco
Contributed II	
14:15 - 14:35	Talk 1: Indirect estimation of the need for palliative care during the COVID-19 pandemic: A descriptive cross-sectional study using mortality data in the Biobío Region, Chile.
14:35 - 14:55	Talk 2: On modeling discrete lattice data using the Potts model.
14:55 - 15:15	Talk 3: Intimate partner violence in Colombia 2015-2023 from the ecological feminist model.
15:15 - 15:50	**Invited II** | Rosangela Loschi Title: Modeling temporal dependence in a sequence of spatial random partitions driven by spanning tree: An application to mosquito-borne diseases. Chair: Danna Cruz
15:50 - 16:20	**Coffee Break**
16:20 - 16:30	**Guest session TIES** | Daniela Castro-Camilo
16:30 - 16:50	Talk 1: Yandira Cuvero Title: Reconstructing latent spatial relationships throw lasso methods.
16:50 - 17:35	**Plenary Session** | Jorge Mateu Title: Statistical learning for spatio-temporal point processes. Chair: Francisco J. Rodríguez-Cortés
	Inaugural Cocktail | **Folklore Group Show**

Thursday, 26th June 2025

Time	Event
09:00 - 09:45	**Plenary Session** | Lola Ugarte Title: On spatio-temporal disease mapping: Univariate and multivariate models with applications. Chair: Karen Flórez
09:45 - 10:15	**Coffee Break**
Contributed I	
10:15 - 10:35	Talk 1: Kernel universal Kriging.
10:35 - 10:55	Talk 2: Supervised classification for spatial functional multivariate data, based on the Mahalanobis distance.
10:55 - 11:15	Talk 3: Effective sample size for a Gaussian process under fixed domain asymptotics.
11:15 - 11:50	**Invited I** | Juan Camilo Sosa Title: Bayesian latent space modeling with spatial covariates for network community detection. Chair: Ramón Giraldo
11:50 - 12:30	**Poster Session**
12:30 - 13:30	**Lunch Break**
13:30 - 14:15	**Plenary Session** | Murali Haran Title: Basis representations for latent Gaussian random field models. Chair: María Paula Dueñas
Contributed II	
14:15 - 14:35	Talk 1: Gaussian massive spatial datasets: A block with pairwise likelihood approach.
14:35 - 14:55	Talk 2: Influencia del método de interpolación en la generación de modelos digitales de elevación en zonas planas: caso de estudio en el delta del río Ranchería, La Guajira.
14:55 - 15:15	Talk 3: Dinámicas espaciales de la desigualdad socioeconómica y su relación con los cultivos ilícitos en Nariño, Colombia.
15:15 - 15:50	**Invited II** | Francisco Cuevas Pacheco Title: Composite likelihood inference for space-time point processes. Chair: Lihki Rubio
15:50 - 16:20	**Coffee Break**
Contributed III	
16:20 - 16:40	Talk 1: Statistical analysis of point processes on linear networks based on the box counting dimension.
16:40 - 17:00	Talk 2: Inhomogeneous interacting marked point processes for studying morphostructures in paleobiological data.
17:00 - 17:20	Talk 3: A statistical test for selecting a cluster model in homogeneous spatial point processes.
17:20 - 17:55	**Invited III** | Jonatan González Title: A nonparametric test for SOIRS: Assessing second-order reweighted stationarity with covariates. Chair: Martha Bohorquez
Gala Dinner	

Friday, 27th June 2025

Time	Event
09:00 - 09:45	**Plenary Session** | Renato Assunção Title: Advancing monte carlo simulation with GANs, diffusion models, and normalizing flows. Chair: Danna Cruz
09:45 - 10:15	**Coffee Break**
Contributed I	
10:15 - 10:35	Talk 1: Dinámica espacio-temporal de los índices VCI, TCI y VHI (2000-2022) en la Región Caribe Norte de Colombia.
10:35 - 10:55	Talk 2: Evaluación del modelo de pulsos rectangulares de Bartlett-Lewis para la desagregación de lluvia diaria en una cuenca semiárida del caribe Colombiano.
10:55 - 11:15	**Sponsor Talk** | Joaquim Merino Title: Accelerating AI in 2025.
11:15 - 11:50	**Invited I** | Claudio Fronterre Title: A decay-adjusted spatio-temporal model to account for the impact of mass drug administration on neglected tropical diseases prevalence. Chair: Francisco J. Rodríguez-Cortés
11:50 - 12:30	**Poster Session**
12:30 - 13:30	**Lunch Break**
Contributed II	
13:30 - 13:50	Talk 1: Spatio-temporal approaches for traffic flow prediction: A comparative study.
13:50 - 14:25	**Invited II** | Marcos Oliveira Prates Title: Fast mixture spatial regression: A mixture in the geographical and feature space applied to predict porosity in the post-salt. Chair: Danna Cruz
14:25 - 14:55	**Coffee Break**
14:55 - 15:40	**Closing Session** | Alessandro Fassò Title: Statistical challenges in environmental data sets. Chair: Jorge Mateu
16:00	Cultural Activity

Poster Session

- Topological data analysis of spatial point patterns in tropical forests.

- Characterization of path loss in Omni Antennas: A geostatistical approach.

- Nonparametric methods for the homogenization of functional data.

- Bayesian spatiotemporal evaluation of air quality policies and health impacts in Mexico City. The ProAire program.

- Spatiotemporal assessment of heat-related infant mortality in Catalonia, Spain (2012-2022).

- Bayesian spatio-temporal modeling of gender-based violence: The case of Medellín, Colombia.

- Urban heat island intensity in coastal cities of northern Colombia using Landsat data and WRF/UCM model.

- Bayesian modeling of fish spatial distribution in Antioquia's fluvial networks using spatially correlated effects.

- Modelization of geographical distribution of aposematic frogs in Ecuador using deep learning and weighted pseudo-absences,

- Separable modelization of the geographical distribution of aposematic frogs in Ecuador.

- Bayesian spatially-adjusted gini index using poverty rates for fine-grained inequality mapping.

- Unequal lifespans in sparse regions: A ppatiotemporal exploration el how sex, nationality, and age shape life expectancy (2000-2022).