TUESDAY MORNING

9:30-12:30: Tutorial 1: *A short introduction to wavelet methods in statistics* Fabien Navarro, Université Paris 1 **Room 1**

TUESDAY AFTERNOON

14:00-15:00 *Opening Session* **Room 1**

15:00-16:00 Plenary Lecture (on line): *Efficient and Consistent Data Driven Model Selection for time series,* Jean Marc Bardet, Université Paris 1. **Room 1**

16:00-17:30 Tutorial 2 (online): *Evaluation of Ki-67 index with deep learning,* Joseph Rynkiewicz*,* Université Paris 1. **Room 1**

Room 2

Time	Speaker	Title
16:00	I. Monserrat	Implementación de lean office para la tropicalización del sistema de gestión de calidad de la Empresa Dogo S.A. de C.V.
16:20	P. Roura	ICCE: software to calculate extreme clime change indicators
16:40	M. A. Díaz	Verisoft: software of verification analysis for climate prediction in climatological variables.
17:00	C. D. Zetina	Analysis of an instrument for measuring scientific alphabetization with the Rash model

WEDNESDAY MORNING

9:00-10:00 Plenary Lecture: *Segregation through the multiscalar length,* Madalina Olteanu, Université Paris -Dauphine (joint work with J. Randon-Furling, W. Clark and C. de Bezenac). **Room 1**

Break

10:20-12:00 Tutorial 3 (online): *Variational analysis in optimization and control,* Boris Mordukhovich*,* Wayne State University. **Room 1**

Economic Modeling Applications **Room 2**

Time	Speaker	Title
10:20	I. Caamal	Characterization of the economic variables of barley production technologies in Mexico
10:40	H. Casarrubias	Ecodemographical analysis in Mexico of micro-businesses for a recommender system
11:00	J. F. García	Knowledge management and innovation capacity in higher education organizations
11:20	H. Casarrubias	Identification of fine movements for optimizing assemble tasks
11:40	J. F. García	Personal characteristics of women entrepreneurs in rural communities in the municipality of Centro Tabasco.

WEDNESDAY AFTERNOON

Numerical Analysis **Room 1**

Time	Speaker	Title
14:00	Loidel Barrera	Implementation of a Hermite interpolation scheme based on elastic quadratic A-spline curves
14:20	V. Hernández	Phase velocity method for computing dispersion curves in curved plates
14:40	M. Cruz	Isogeometric simulation of acoustic radiation

Break

Artificial Intelligence **Room 1**

Time	Speaker	Title
15:20	J.Ch. Lamirel	A federating sparse approach for graph and word embedding with high explainability capacities (Main Lecture)
16:00	C. Laroche	Pesticide concentration monitoring: investigating spatio-temporal patterns in left censored data**.**
16:20	D. García	Restauración de imágenes usando un ordenamiento suave de sus parches
16:40	D. Valdés	On pattern detection with discrete shapelet transform I: shapelet estimation, multilevel detection and noise robustness
17:00	S. Lazcano	Face emotion recognition to determine the performance of a Zumba fitness class to reducing stress

Medicine **Room 2**

Time	Speaker	Title
14:00	A. Tuero	A Bayesian hierarchical spatio-temporal model for the diabetes mellitus mortality in Cuba, decade 2011 to 2020
14:20	M. A. Martínez	Temporal evolution of a leukemic line that competes with healthy hematopoiesis: mathematical modeling describes some causes of leukemogenesis
14:40	C. Viada	Inflammation index in healthy, sick and convalescent Covid-19 patients
15:00	D. Lumpuy	Influence of stochastic noise on hematopoietic recovery after autologous bone marrow transplantation

Break

Time	Speaker	Title
15:40	A. González	Mathematical modelling and computational simulation as a tool to understand and describe proliferation patterns in the diagnostic and relapses of acute leukemia.
16:00	M. Vega	Spatio-temporal EEG source decomposition model for estimating changes in neural connectivity related to cognitive aging
16:20	J.E. Alvarez	A multi-objective evolutionary algorithm for EEG inverse problem.
16:30	A. Labrada	Comparison of automatic sleep stage scoring methods

THURSDAY MORNING

9:00-10:00 Plenary Lecture (on line): ***Optimization problems with variable domination structures and applications***, C. Tammer, Martin Luther Universität Halle-Wittenberg **Room 1**

Break

10:20-12:00 Tutorial 4 (online)**:** ***Variational analysis in optimization and control,*** Boris Mordukhovich, Wayne State University, Detroit, Michigan, USA. **Room 1**

Block Chain (coordinator L.R. Piñeiro) **Room 2**

Time	Speaker	Title
10:20	M. Katrib	Beyond cryptocurrencies. Blockchain, the trust machine (Main Lecture)
10:50	A. MAsso	Smart contracts and tokenization in blockchain.their potential for innovation in traceability application (ML)
11:20	J. Lopez	Applying blockchain for aviation fuel Traceability
11:40	D. Mena	Electronic voting system using an enterprise blockchain
12:00	C. Denis	Application of blockchain technology to develop traceability systems for agricultural products
12:20	A. Masso	Blockchain-based system for distribution control of medicines on Cuba

THURSDAY AFTERNOON

Applied Mathematics and Decision-Making **Room 1**

Time	Speaker	Title
14:00	F. Navarro	Extensions of the flow-based capacity calculation area of the European electricity transmission networks
14:20	M. Marohn	A new view on risk measures and acceptance sets
14:40	G. Bouza	Steepest descent methods for different class of optimization problems: an overview
15:00	M. L. Perdomo	Metrics for the evaluation and generation of school courses

Break

Probability and Statistics **Room 1**

Time	Speaker	Title
15:40	P. O. Juárez	Procedures for scrambling sensitive quantitative variables: an updated review
16:00	I. Ngongo	Inference for nonstationary time series of counts with application to change-point problems
16:20	F. Rodriguez	Symbolic regression for generalized linear models of ODEs

Algorithms **Room 2**

Time	Speaker	Title
14:00	J. Campbell	Geobase: field survey mobile application for decision making
14:20	A. C. Moreno	Preliminary metaheuristic scheme for solving the signal configuration optimization problem
14:40	M. Gonzales	SOM to explore relations between pathological history and symptoms of recovered COVID-19 patients
15:00	M. Fernandez	Clustering algorithms and trajectories applied to the analysis of residential segregation
15:20	R. Bracho	Convex combination generated by application of two Werner random response procedures(short communication)
15:30	Y. Fernandez	Uncertainty and robustness in humanitarian logistics: an overview (short communication)

Break

Econometrics **Room 2**

Time	Speaker	Title
16:00	G. Gavino	Laboratory of times and movements for industrial engineering of the CU-UAEM Valle de México.
16:20	A. Cardenas	Autoregressive econometric modeling (AR) of gross fixed capital formation and foreign direct investment in the Ecuadorian economy during the period 2000-2020
16:40	E. Rosas	An study for forecasting the national consumer price index of Mexico

FRIDAY MORNING

9:00-10:00 Plenary Lecture: *So you want to design and launch an MS program in analytics*, James J. Cochran, Alabama University **Room 1**

10:00-10:20 RIDECA Meeting **Room 2**

10:20-12:00 Student Tandem **Room 1**

Logistics **Room 2**

Time	Speaker	Title
10:20	V. Choudri	Optimal pricing and optimal production lot-size inventory models with price-dependent demand
10:40	C.K. Shivashankari	Production inventory models for deteriorating items with price-dependent demand integrated with time-dependent demands –in forth order equation
11:00	A. Fernández	On the use of experimental design to derive managerial insights in supply chain management: two illustrative examples
11:20	J. R. Daduna	Efficient public transport services To improve living condition in rural areas

12:00-13:00 Closing Plenary Lecture: *Early Stopping rules and Iterative Learning algorithms*, Alain Celisse, Université Paris 1. **Room 1**