

GENERAL TIME-TABLE

Legend

Abbrev.	Activities	Abbrev.	Activities	Abbrev.	Activities
A	Algorithms and related topics	AI	Artificial Intelligence	EcP	Economical Problems
L	Logistics's problems	MH	Models related with Health	O	Optimization
OR	Operations Research	PS	Probabilities and Statistics	UD	Urban Dynamics

Tuesday 3th

9:00-11:30: Registration, Faculty of Mathematics and Computers Sciences, Universidad de La Habana.

09:30-12:30: Tutorial.

14:00-15:00: Opening Session, Aula Magna, Universidad de La Habana.

15:00-16:00: Plenary Lecture, Room 1. Varona's Building. Universidad de La Habana.

16:00-16:15: Coffee Break.

16:15-16:45: Poster's Session 1 and 2. Varona's Building. Universidad de La Habana.

18:30-20:30: Welcome party, Capri's Hotel, 21th and N, La Florentina's Restaurant.

Wednesday 4th

Varona's Building. Universidad de La Habana.

09:00-10:00: Plenary Lecture, Room 1.

10:00-10:20: Coffee Break.

10:20-12:00 Parallel Sessions

Room 1	Room 2	Room 3	Room 4
MH1	AI1	O1	OR 1

12:00-14:00: Lunch Break. El Bicky's Restaurant.

14:00-15:00: Plenary Lecture, Room 1.

15:00-15:10: Coffee Break.

15:10-16:50: Parallel Sessions

Room 1	Room 2	Room 3	Room 4
PS1	L1	O2	EcP1

Thursday 5th

Varona's Building. Universidad de La Habana.

09:00-10:00: Plenary Lecture, Room 1.

10:00-10:20: Coffee Break,

10:20-11:20: Plenary Lecture, Room 1.

11:20-12:00 Parallel Sessions

Room 1	Room 2	Room 3
P3	MH2	EcP2

12:00-14:00: Lunch Break. El Bicky's Restaurant.

14:00-15:00: Plenary Lecture, Room 1.

15:00-15:10: Coffee Break.

15:10-16:50 Parallel Sessions

Room 1	Room 2	Room 3
A1	UD1	PS2

19:00: Conference Dinner, La Barraca's Restaurant, Nacional's Hotel , 21th and O.**Friday 6th**

Botanical Garden

8:30: Departure, Plaza Agramonte in Front of the Faculty of Mathematics and Computer Sciences, University of Havana.

09:30-10:20: Plenary Lecture, Room 1.

10:20-10:40: Coffee Break.

10:40-13:0 Parallel Sessions.

Room 1	Room 2
PS3	EcP3

12:20-13:20: Plenary lecture, Room 1.

13:00-15:30: Farewell Lunch and Botanical Garden Tour.

SESSIONS

Tuesday, 3th
Morning

Varona' s Building. University of Havana.

10:00-12:00: **Tutorial** : Room 1.

R. Padman (Carnegie Mellon University, USA): Healthcare Informatics and Analytics'.

Introducer: G. Bouza.

Plenary Lecture: Room 1.

14:00-15:00: Ramayya Krishnan (Carnegie Mellon University, USA): Opportunities at the intersection of Artificial Intelligence and Operations Research.

Introducer: S. Allende.

16:15-16:45: Poster Session 1: Health Applications. Room 1.

Chair: A. Marrero.

Speaker	Title
A. Heras	Logistic regressor for segmentation of diabetic foot ulcers in Cuban patients
A. Padrn	Automatizing numerical experiments for solving parameter estimation in epidemiological models.
A. Tuero	Spatio-temporal analysis of mortality by diabetes mellitus in Cuba during 2018.
D. Diaz	Depression and suicidability on alcoholic patients admitted on the Rogelio Paredes Addiction Center from January to august 2019.
M. A. Díaz	Generalized lineal models applied to studies in human health.

16:15-16:45: Poster Session 2: Logistic's problems. Room 1.

Chair: A. Marrero.

Speaker	Title
A. Escalera	A proposal of agent-based simulation optimization oriented to the road network evaluation.
D. González	Automatic generation of grammars for obtaining infinity neighborhood criteria in the vehicle routing problem.
F. Rodríguez	How good is your VRP model? An automatic model verification framework based on unit testing.
M. M. Martinez	Obtaining neighborhood criteria for the vehicle routing problem.
S. Albinski	Competitive re-balancing in one-way car-sharing.

Wednesday, 4th Morning

Varona' s Building. University of Havana.

Plenary Lecture: Room 1.

09:00-10:00: P. Valdés (Center of Neurosciences , Cuba): Mathematical Models in Neuro-sciences.

Introducer: M. Cottrell.

Models related with Health 1 (MH1). Room 1.

Chair: C. Bouza.

Time	Speaker	Title
10:20-10:40	C. R. Sebrango	Modeling multiwave dengue outbreaks using profile likelihood.
10:40-11:00	R. Uranga	Effects of the theory of potential outcomes in the calculation of subgroup summary measures in clinical trials.
11:00-11:20	C. Viada	Estimation and validation of survival based on quality of life in patients with lung cancer treated with CIMAVAXEGF.
11:20-11:40	Y. Garcia	Application of the Bayesian time series method for estimating the causal impact at the population level of the Cuban VACCINEVA-MENGOC-BC.
11:40-12:00	D. Díaz	Mortality and morbidity of cardiovascular disease in Cuba. A risk levels relation according to the World Health Organization risk classification.

Artificial Intelligence 1(AI1): Room 2.

Chair: J.M. Sauto.

Time	Speaker	Title
10:20-10:40	L. García	A probabilistic model for capturing topic relevance in news.
10:40-11:00	C. Quintana	A deep learning model for semantic relation classification in Spanish based on distant supervision.
11:00-11:20	M. Prado	Predicting topic popularity using Neural Networks and a time sensitive topic model.
11:20-11:40	W. Hojas	Framework based on email streams simulation to evaluate spam detection.
11:40-12:00	J. P. Consuegra	Deep learning-based approach applied to information's extraction in e-health Spanish documents.

Optimization 1 (O1). Room 3.

Chair: R. Steuer.

Time	Speaker	Title
10:20-11:00	C. Tammer	(ML) Subdifferentials and SNC property of scalarization functionals with uniform level sets and applications.
11:00-11:20	W. Gmez	An augmented lagrangian algorithm for nonlinear semi-definite programming applied to the covering problem
11:20-11:40	G. Bouza	Steepest descent algorithm for computing non-dominated points: a first approach.
11:40-12:00	I. A.R. Moghrabi	New multi-step conjugate gradient method for optimization.

Operations Research 1 (OR1). Room 4.

Chair: J. F. García.

Time	Speaker	Title
10:20-10:40	D. Álvarez	A reactive GRASP for the batch-sizing problem in a national printing bureau.
10:40-11:00	I. Urquiola	Design of procedure for a planning and controlling the production using mathematical tools.
11:00-11:20	O. Fuerte	Optimization model for CEDIS de Productos Terminados S. A. de C. V. based on KANBAN.
11:20-11:40	J. E. Rojas	A hybrid metaheuristic algorithm for the fuel consumption heterogeneous fleet vehicle routing problem with packing constraints.
11:40-12:00	A. Lpez	Sentiment analysis applied to evaluations of engineering students in Mexico.

Wednesday, 4th Afternoon

Varona' s Building. University of Havana.

Plenary Lecture: Room 1.

14:00-15:00: Jan Rueckmann (University of Bergen, Norway): Strongly stable C-stationary points for mathematical programs with complementarity constraints

Chair: D. Aussel.

Probability and Statistics 1(PS1). Room 1.

Chair: J. Rynkiewicz.

Time	Speaker	Title
15:10-15:50	J.Ch. Lamirel	(ML) Feature maximization: a new large scope metric especially adapted to big, noisy and complex data statistics.
15:50-16:10	C. Hardouin	Estimation methods in a logistic spatial regression a simulation study.
16:10-16:30	C. Chávez	Cross-validation methods for spatially dependent data. A simulation study.
16:30-16:50	D. Makajic-Nikolic	Generating an efficient experimental design using optimization approach.

Logistics 1(L1). Room 2.

Chair: A. Ruiz.

Time	Speaker	Title
15:10-15:30	G. Prause	A holistic assessment approach for clean shipping investments.
15:30-15:50	H.D. Haasis	Selected issues of operations research in line with digital economic cooperation between neighboring seaports.
15:50-16:10	D. Sackmann	Multi-agent systems in supply chain finance.
16:10-16:50	J. R. Daduna	((ML) Basic structures of delivery problems in city logistics.

Optimization 2(O2). Room 3.

Chair: J. Rueckman.

Time	Speaker	Title
15:10-15:50	D. Aussel	(ML) A multi-level models for best response in energy demand side management.
15:50-16:10	A. Cruz	Diagonalization method for the Equilibrium Problem with multi leaders and multiple followers.
16:10-16:50	B. A. Wickstrom	Optimal language policy for the vitality of minority languages.

Economical problems 1 (EcP1). Room 4.

Chair: Gabriela Gaviño.

Time	Speaker	Title
15:10-15:30	J. Lapa	Analysis of the Mexican labor market in the framework of the subordinated financialization process.
15:30-15:50	D. Trêcek	Managing e-business environments by deploying systems dynamics and qualitative assessment dynamics.
15:50-16:10	F. Pasiouras	Assessing social, environmental and financial performance with a composite index.
16:10-16:30	E. Rosas	Solvency capital requirement for risk equity, the Mexican solvency regulations. A garch methodology with t-student innovations.
16:30-16:50	I. Atsalaki	Stock market index trend forecasting by ANFIS.

Thursday, 13th Morning

Varona' s Building. University of Havana.

Plenary Lecture: Room1.

09:00-10:00: M. Cottrell (Université Paris I, France): Quantitative Methods for Big Data
Chair: V. Sistachs.

Plenary Lecture: Room 1.

10:20-11:20: J. Rynkiewicz (Université Paris I, France): Deep Learning and statistics
Chair: P. Doukhan.

11:20-12:00: Poster Session 3: OR Applications. Room 1.

Chair: D. Peluffo.

A L. Infante	A decision support tool for multiple team formation problems.
A. Rodríguez	New method for detection of rolling bearing fault detecting by using lock-in amplifiers and monocomponent signal decomposition.
D. Menció	Rumor simulation with spreaders of different character.
E. Borrego	Generation of boolean functions that can compose S-boxes square with high non-linearity.
E N. Cabrera	Improvement of Bogue equations for clinker production in Cuban cement factory.
E. N. Cabrera	Space association patterns. A contribution to sustainable development in mountain ecosystems.
G. Arencibia	Orientation estimation, based on Kalman filter, using inertial measurement unit without magnetometer.
J. Herrera	Metaheuristics in the variable size and cost bin packing problem.
S. Vzquez	Quality system of the calibration process of micrometers in the Academic Metrology Laboratory in Valle de Mexico University Center of Autonomous University of the State of Mexico.
Y. Fernandez	An overview and short review on instance selection based on condensed nearest neighborhoods for data classification tasks.
Y. Fernandez	Overview on kernels for least-squares support-vector-machine-based clustering: explaining kernel spectral clustering.

Models related with Health 2(MH2). Room 2.

Chair: V. Sistachs.

Time	Speaker	Title
11:20-11:40	J. A. Betancourt	Training medicine students in epidemic dynamics using deterministic simulation model.
11:40-12:00	S. H. Al-Subhi	Clinical decision support system for pregnant women with heart diseases.

Economical models (EcP2). Room 3.

Chair: J. Lappa.

Time	Speaker	Title
11:20-11:40	J. F. Garca	Analysis of poverty situation in Mexico and Tabasco. Strategic plan proposal for the development of marginated rural communities.
11:40-12:00	I. Caamal	Explaining factors of the variations in the production of lemon-lime in San Rafael, of the State of Veracruz, Mexico.
12:00-12:20	I. Caamal	Export price formation of lemon-lime of the Misantla municipality of the State of Veracruz, México.

Thursday 5th Afternoon

Varona' s Building. University of Havana.

Plenary Lecture: Room 1.

14:30-15:30: D. H. Peluffo-Ordez (Yachay Tech, Ecuador): Generalized model for data representation and clustering based upon least-squares support vector machines and kernels

Introducer: L. García.

Algorithms 1(A1). Room 1.

Chair: G. Bouza.

Time	Speaker	Title
15:10-15:30	I. D. Herrera	A hybrid genetic algorithm for optimizing urban distribution of auto-parts by a vertex vehicle routing problem.
15:30-15:50	C. Prez	Comparing the variants of the metaheuristic infinitely variable neighborhood search.
15:50-16:10	A. C. Prez	A solution for the school bus routing problem.
16:10-16:30	N. Nikoli	Iterated greedy heuristic for covering designs.
16:30-16:50	F. Rodríguez	Solving parametric initial value problems with neural networks.

Urban Dynamics 1(UD1). Room 2.

Chair: C. Hardouin

Time	Speaker	Title
15:10-15:50	M. Cottrell	(ML) Multidimensional urban segregation.
15:50-16:10	J. Campbell	A first step looking for spatial patterns on the aging structure of Havana's population.
16:10-16:30	D. García	Study of trajectories for segregation analysis in Paris: convergence and mixed model.
16:30-16:50	L. Ramos	Simulation model for scheduling an evacuation process (SiMOEV).

Probabilities and Statistics 2(PS2). Room 3.

Chair: A. Santiago.

Time	Speaker	Title
15:10-15:30	J. M. Sautto	Solar radiation data modeling through functional data analysis.
15:50-16:10	C. Bouza	Stratified ranked set sampling with missing observations for estimating the difference.

16:10-16:50 Rideca Meeting. Room 3

Chair: C. Bouza.

Friday, 6th Morning

Plenary Lecture: Room 1.

09:30-10:20: Jose Luis. Verdegay (Universtiy of Granada, Spain): How an autonomous decision system decide?
Introducer: C. Bouza

Mathematical Economics 3(ME3). Room 1.

Chair: J. Ch. Lamirel.

10:30-11:00	P. Doukhan	(ML)Non stationarity and applications.
11:00-11:20	J. Corujo	Convergence of a Fleming-Viot type particle system on the cycle graph.
11:20-11:40	M. Crespo	On allocation of the weakest active redundancy to the weakest components in a series system.
11:40-12:00	G. Bayolo	On the lifetime of a cold standby system with two types of reparation

Economic problems (Ec3). Room 2.

Chair: C. Bouza.

Time	Speaker	Title
10:40-11:00	G. Gavio	Finished product planning sytem (MRP) through a set of logically related procedures in real needs of dates and quantities.
11:00-11:20	O. González	Stress analysis and development of a GUI in Matlab applied to an exoskeleton structure using the von Mises criterion.
11:20-11:40	G. Gavio	Quality system of the calibration process of micrometers in the Academic Metrology laboratory in Valle de Mexico University Center of Autonomous University of the State of Mexico.
11:40-12:00	J. C. Belen	System for analyzing the hand wrist mobility with virtual vision feedback.

Plenary Lecture: Room 1.

12:00-13:00: Ralph Steuer(University of Georgia, USA): Computing equally-sized cones on a sphere for use in Multicriteria Optimization with distributed processing
Introducer: C.Tammer.