

11th INTERNATIONAL CONFERENCE ON OPERATIONS RESEARCH

La Habana, March 11th-14th, 2014

Organized by:

Universidad de La Habana.

SAMM, Université Paris I, Panthéon-Sorbonne.

Sponsors:

Cubana de Aviación.

Oficina del Historiador de la Ciudad.

Sociedad Cubana de Matemática y Computación, Sección Investigación Operacional.

Société Française de Statistique.

Société de Mathématiques Appliquées et Industrielles.

GENERAL TIME-TABLE

Legend

Abbrev.	Activities	Abbrev.	Activities	Abbrev.	Activities
A	Algorithms and related topics	CV	Computer Vision	DM	Decision making
IP	Image Processing	L	Logistics	ME	Mathematical Economics
O	Optimization	PDE	Partial differential equation	PS	Probability and statistic

Tuesday 11th

08:30-09:30: Registration, Facultad de Matemática y Computación, Universidad de La Habana.

09:30-10:30: Opening Session, Aula Magna, Universidad de La Habana.

10:30-13:00: Registration, Facultad de Matemática y Computación, Universidad de La Habana.

14:30-15:30: Plenary Lecture. Salón Internacional. Hotel Habana Riviera.

15:30-16:10: IP1. Room 1, Hotel Habana Riviera.

16:10-16:30: Coffee Break.

16:30-17:30: Parallel sessions. Hotel Habana Riviera.

Room 1	Room2
IP2	PS1

18:30-19:15: Tour: "Hotel Habana Riviera and its History".

19:30-23:00: Welcome party, Salón Internacional, Hotel Habana Riviera.

Wednesday 12th

Hotel Habana Riviera.

09:00-10:00: Plenary Lecture, Salón Gelabert.

10:00-10:30: Coffee Break.

10:30-12:30 Parallel Sessions

Room 1	Room 2	Room 3	Room 4
PS2	DM1	CV1	O1

12:30-14:30: Lunch Break.

14:30-16:10: Parallel Sessions

Room 1	Room 2	Room 3	Room 4
PS3	A1	IP3	L1

16:10-16:30: Coffee Break.

16:30-18:30 Parallel Sessions

Room 1	Room 2	Room 3	Room 4
PS4	ICOR and its publications	CV2	PDE1

Thursday 13th

Hotel Habana Riviera.

09:00-10:00: Plenary Lecture, Salón Gelabert.

10:00-10:30: Coffee Break,

10:30-12:30 Parallel Sessions

Room 1	Room 2	Room 3
PS5	A2	ME1

12:30-14:00: Lunch Break.

14:30-15:30: Plenary Lecture, Salón Gelabert.

15:30-16:10 Parallel Sessions

Room 1	Room 2	Room 3
PS6	O2	ME2

16:10-16:30: Coffee Break.

16:30-18:30 Parallel Sessions

Room 1	Room 2	Room 3
PS7	O3	ME3

Friday 14th

Hotel Habana Riviera.

09:00-10:00: Plenary Lecture, Salón Gelabert.

10:00-10:30: Coffee Break.

10:30-13:30 Parallel Sessions.

Room 1	Room 2
PS8	ME4

12:10-13:30: Encuentro “Presente y perspectivas de la Investigación de Operaciones en Cuba”. Coordinador: S. Allende.

Reunión de RIDECA.

14:00-....: Closing Address.

SESSIONS

Plenary Lecture:

14:30-15:30: Lüthi, H. J.: Swiss DRG: A financial risk perspective.

Introducer: M. Cotrell.

Workshop on Image Processing. Image Processing 1(IP1). Room 1.

Chair: M. Baguer.

Time	Speaker	Title
15:30-15:50	Guerrero, F.	A method for red blood cell cluster separation in digital images of sickle cell disease.
15:50-16:10	Carrera, D.	Texture classification using regular vines.

Workshop on Image Processing. Image Processing 2(IP2). Room 1.

Chair: M. Baguer.

Time	Speaker	Title
16:30-16:50	Delgado, W.	Aplicación de métodos a posteriori para la corrección de sombras en imágenes de la membrana corioalantoica de embriones de pollo.
16:50-17:10	Cruz, E.	Deblurring: A GPU approach.
17:10-17:30	Phoulady, M.A.	Review of the effects of two-dimensional, computational filters on the processing of pseudo-spectral of immersed boundary of incompressible Navier-Stokes equations.
17:30-17:50	Phoulady, M.A.	Investigation of the one-dimensional numerical filters effects on the Fourier pseudo-spectral embedded boundary solution of the incompressible Navier-Stockes equations.

Probabilities and Statistics 1(PS1). Room 2.

Chair: J.N. Bacro.

16:30-16:50	Ribereau, P.	Skew generalized extreme value distribution.
16:50-17:10	Toulemonde, G.	Dependence structures for spatial extremes.
17:10-17:30	Masiello, E.	Ruin probability and climate change.
17:30-17:50	Dematteo, A.	On tail index estimation based on multivariate data.
17:50-18:10	Villa-Vialaneix, N.	Density-based inverse calibration with functional predictors.

Wednesday, 12th
Morning

Plenary Lecture:

09:00-10:00: Tammer, C. A unified approach for different concepts of robustness and stochastic programming via nonlinear scalarizing functionals.

Introducer: H. Gfrerer.

Probability and Statistics 2(PS2): Room 1.

Chair: D. Haughton.

Time	Speaker	Title
10:30-10:50	Hardouin, C.	Exact marginal distributions and normalizing constant for Gibbs processes.
10:50-11:10	El Mahrsi, M. K.	Clustering moving object trajectories in road network environments.
11:10-11:30	Lassoued, D.	On exponential dichotomy of non-autonomous periodic systems.
11:30-11:50	Boushaba, M.	Joint reliability importance in a k -out-of- $N : F$ system for Markov-dependent components.
11:50-12:10	Boelaert, J.	Is one demand function enough? An inquiry on preference stability using discrete mixtures of neural networks.

Decision Making 1 (DM1). Room 2.

Chair: S. Allende.

Time	Speaker	Title
10:30-10:50	Fernández, E.	Comparison of several outranking-based multicriteria sorting methods.
10:50-11:10	Scott, D. J.	Glarma models and the Glarma R package.
11:10-11:30	Cerny, M.	Solving inverse interval linear programming using a parametric programming approach.
11:30-11:50	Suárez, S.	Marco de trabajo para inventarios geoespaciales.
11:50-12:10	Fonseca, O.	A tool to simulate an intersection controlled by traffic lights timing variables.
12:10-12:30	Velázquez, J.	A desirability-based multicriteria decision making strategy for drug discovery.
12:30-12:50	Estévez, S.	Evaluation of supervised classification algorithm for mining opinion in Twitter.

Workshop on Image Processing. Computer Vision 1(CV1). Room 3.

Chair: A. León.

Time	Speaker	Title
10:30-10:50	Mesejo, D.	An experimental comparison of depth map denoising algorithm.
10:50-11:10	Paredes, C.	Detection of flat surfaces in three-dimensional point clouds captured by the Microsoft Kinect device.
11:10-11:30	Darias, D.	Stereoscopic vision system based on PlayStation Eye cameras.
11:30-11:50	Mesejo, J.A.	Proposal of the use of RGB-D cameras for therapeutics applications.
11:50-12:10	Franiatte, S.	Automated paintball turret target tracking algorithm.
12:10-12:30	Yero, G.	A study on diffusion in articulated human motion tracking by particle filtering.

Optimization 1(O1). Room 4.

Chair: C. Tammer.

Time	Speaker	Title
10:30-10:50	Ilhucatz, M.R.	Linear-quadratic optimal control problem with a random horizon.
10:50-11:10	Bouza, G.	Subgradients-like algorithms for solving variable inequalities.
11:10-11:30	Hernández, D.	K-convex test functions for vector optimization with variable order.
11:30-11:50	Jean-Alexis, C.	A nonsmooth approach to solve generalized equations.
11:50-12:10	Andouze-Bernard, S.	An optimal control approach for E-rumor.
12:10-12:30	Pietrus, A.	Euler's method revisited for linear control systems.

Wednesday, 12th Afternoon

Probability and Statistics 3(PS3). Room 1.

Chair: C. Hardouin.

Time	Speaker	Title
14:30-15:10	Haughton, D.	Global analytics: four illustrative stories and a virtual academic community (VALSAC). Main Lecture.
15:10-15:30	Gaubert, P.	Toward a multi-agent model of labour markets' dynamics.
15:30-15:50	Randon-Furling, J.	Schelling-type urban segregation models with switching and preferential dynamics.
15:50-16:10	Haughton, J.	Setting the post-2015 development agenda: is multidimensional poverty measurable?

Probability and Statistics 4(PS4). Room 1.

Chair: E. Menéndez.

Time	Speaker	Title
16:30-16:50	Sistachs, V.	Árboles de decisión borrosos, una implementación de ANFIS y SDT.
16:50-17:10	Carrera, D.	Estimation of distribution algorithms based on regular vines.
17:10-17:30	Jiménez, Y. R.	Modelo de pronóstico del costo de la reincorporación estudiantil en la carrera de Agronomía de la Universidad Agraria de La Habana.
17:30-17:50	Viada, C.	Revisión sistemática de los métodos de imputación de datos faltantes y su efectos en las estimaciones.
17:50-18:10	Díaz, L.	Enfoque del modelo de regresión logística bayesiano usando el Markov chain Monte Carlo.
18:10-18:30	Raíces, I.	Modelación bayesiana para la estimación del riesgo relativo de morir por cáncer de las vías respiratorias en Cuba en el año 2011.
18:30-18:50	García, K.	Classification of sleep stages based in statistical pattern recognition.

Algorithms 1 (A1). Room 2.

Chair: S. Allende.

14:30-14:50	Marins, F. A.	Metaheuristics for sequencing multiple mixed-models assembly lines in a lean manufacturing environment.
14:50-15:10	Tapasco, O. A.	Simulated model for measuring performance telemarketers on a call center.
15:10-15:30	Hernández, C. T.	Evaluating reverse logistics alternatives by using analytic network process with BOCR.
15:30-15:50	Crawford, B.	Bees can solve the set covering problem?
15:50-16:10	Guénoche, A.	Multi clustering gives robustness to vertex classes in graphs.

16:30-18:00: Round Table: ICOR and its publications Room 2.

Workshop on Image Processing. Image Processing (IP3). Room 3.

Chair: M. Baguer.

Time	Speaker	Title
14:30-14:50	Baguer, M.L.	Graph based segmentation.
14:50-15:10	Chinea, L.	An algorithm to detect and segment touching or overlapping objects.
15:10-15:30	Alvarez, Y.T	An eyelid segmentation method based on a multi-objective evolutionary approach.
15:30-15:50	Garcés, Y.	New similarity index for the mean shift iterative algorithm.
15:50-16:10	Castañeda, I.	Image segmentation using wavelets based on texture classification.

Workshop on Image Processing. Computer Vision (CV2). Room 3.

Chair: A. León.

Time	Speaker	Title
16:30-16:50	Escobedo, M.	Estudio de las orientaciones de los vasos sanguíneos a partir del análisis del espectro de Fourier en imágenes de la membrana corioalantoica de embriones de pollo.
16:50-17:10	Ahmad, T.	Comparative analysis of human activity recognition using various techniques.
17:10-17:30	Govender, N.	Probabilistic models for D active shape recognition using Fourier descriptors and mutual information.

Logistics 1(L1). Room 4.

Chair: A. Ruiz

Time	Speaker	Title
14:30-15:10	Daduna, J.R.	Container shuttle systems for linking seaport container terminals and dedicated satellite terminals.
15:10-15:30	Juárez, L. H.	Estimating of transit demand in transport systems.
15:30-15:50	Guedes, P.	Solving large instances of multi-depot vehicle scheduling problem with time-space network and column generation.
15:50-16:10	Da Silva M.A.	Cross-layer optimization applied to obtain time metric specified to wireless mesh networks.

Partial differential equations 1 (PDE1). Room 4.

Chair: M. Rodríguez.

Time	Speaker	Title
16:30-16:50	Aissaoui, M.Z.	Stationary solution of the equation of coagulation of droplets with a vertical wind.
16:50-17:10	Fujita, H.	Equations for stationary motion of the air in one dimension and computation for the formation of clouds by a wind.
17:10-17:30	Rodríguez, M.	Turing-Hopf patterns in higher dimensions.
17:30-17:50	Mora, C.	Stable numerical methods for two classes of stochastic differential equations with multiplicative noise.

Thursday, 13th Morning

Plenary Lecture:

09:00-10:00: Gfrerer, H.: On regular and limiting coderatives of the normal cone mapping to inequality system.

Chair: M. Cerny.

Probabilities and Statistics 5(PS5). Room 1.

Chair: V. Sistachs.

Time	Speaker	Title
10:30-11:10	Menéndez, E.	Nonparametric regression: an alternative to the scatter diagram.
11:10-11:30	Monterrey, P.	Probability distribution of p -value in tests for the mean of one normal population.
11:30-11:50	Monterrey, P.	Effect of physical activity on energy and nutrient intake in young university students: a Bayesian analysis.
11:50-12:10	Bouza, C.	Some results on sampling populations with a graph structure.
12:10-12:30	Freyre, P.	Generación aleatoria de permutaciones del grupo simétrico o del alternado.
12:30-12:50	Gaviño, G.	Competitive comprehensive model, enterprise- higher education institutions: study applied to region IV on the state of Mexico.
12:50-13:10	López, L.	Prognostic factors for cervical cancer patients in Tabasco, México.

Algorithms 2(A2). Room 2.

Chair: S. Behar.

Time	Speaker	Title
10:30-10:50	Fosado, O.	HYDRA: plataforma informática para el análisis in silico de modelos metabólica escala genómica.
10:50-11:10	Reyes, R.	Development and analysis of probabilistic algorithms for genome-scale metabolic reconstruction.
11:10-11:30	Permy, C.	Algoritmo basado en colonia de abejas para el problema de ruteo de vehículos heterogéneos
11:30-11:50	Morales, W.	Constraint based curve manipulation with cubic A-splines.
11:50-12:10	Méndez, B.M.	Heuristic algorithms for keyword search in XML documents using the ACO meta-heuristic.
12:10-12:30	Denoda, F.	Fuzzy linear regression models: a medical application.
12:30-12:50	Cabrera, L.	Genetic algorithms with diversity measures for multiple classifier systems.

Mathematical Economics (ME1). Room 3.

Chair: T. Cipra.

Time	Speaker	Title
10:30-10:50	Mazalov, V.	A game theoretic model for tournament organization.
10:50-11:10	Gardes, F.	Riemannian consumers.
11:10-11:30	Reichl, P.	Stability issues for the fixed-point problem of QOE-based charging in the internet.
11:30-11:50	Gardes, F.	Full price elasticities and the value of time: A Tribute to the Beckerian model of the allocation of time.
11:50-12:10	Lahiri, S.	Existence of competitive equilibrium in piecewise linear and concave exchange economies and the non-symmetric Nash bargaining solution.

Thursday 13th Afternoon

Plenary Lecture:

14:30-15:30: Karmann, A.: What determines the interest margin? An Analysis of the German banking system.

Introducer: B.A. Wickstroem.

Probability and Statistics 6 (PS6). Room 1.

Chair: C. Bouza.

Time	Speaker	Title
15:30-15:50	Pérez, V. E.	Métodos de agregación para calcular índices compuestos. Obtención de un ranking de sostenibilidad turística.
15:50-16:10	Guerra, C. W.	Aplicación del CATPCA para el estudio de la sostenibilidad de la empresa pecuaria Valle del Perú.

Probability and Statistics 7 (PS7). Room 1.

Chair: C. Bouza.

Time	Speaker	Title
16:30-16:50	Sautto, J. M.	Indicadores de gestión, responsabilidad y desempeño en la administración pública del estado de Guerrero, México.
16:50-17:10	Álvarez, J.	Modelo de optimización para estimar la tasa de interés justa para un financiamiento automotriz.

Optimización 2 (O2). Room 2

Chair: G. Bouza.

Time	Speaker	Title
15:30-15:50	Díaz, R.	A direct splitting method for non-smooth variational inequalities.
15:50-16:10	Bello, Y.	A relaxed-projection splitting algorithm for variational inequalities in Hilbert spaces.

Optimización 3 (O3). Room 2

Chair: G. Bouza.

Time	Speaker	Title
16:30-16:50	Bustamante, J.	Approximating functions by positive linear operators.
16:50-17:10	Quesada, J.M.	A discrete operator for approximation of continuous periodic functions.
17:10-17:30	Gómez, J.A.	A globally convergent algorithm for a PDE-constrained optimization problem.

Mathematical Economics 2(ME2). Room 3.

Chair: B.A. Wickstroem

Time	Speaker	Title
15:30-15:50	Cipra, T.	Optimal pension consumption strategies.
15:50-16:10	Labidi, M.	A shift scheduling model for a bank IT staff.

Mathematical Economics 3(ME3). Room 3.

Chair: B.A. Wickstroem

16:30-16:50	Prause, G.	On the evaluation of voting power in companies.
16:50-17:10	Klingelhöfer, H. E.	Financial valuation of investments into new market segments and decisions on segment development.
17:10-17:30	Ahlheim, M.	Considering household size in contingent valuation studies.

Friday, 14th
Morning

Plenary Lecture:

09:00-10:00: Cornet, B.: Pricing securitied via non-additive risk-neutral probabilities.

Introducer: C. Bouza

Probabilities and Statistics 8 (PS8). Room 1.

Chair: M. Sautto.

10:30-10:50	Ramírez, M. A.	Análisis multisectorial de la economía del Estado de Tabasco.
10:50-11:10	Santiago, A.	Un estudio cuantitativo de la migración en la frontera sur de México-Guatemala.
11:10-11:30	García, J.F.	Complejidad y multidimensionalidad de la pobreza. El caso de México.
11:30-11:50	Priego, O.	La migración en la frontera sur de México-Guatemala.
11:50-12:10	Caamal, I.	Análisis de la función de exportación de limón persa a Estados Unidos de América.

12:10-13:30: Room 1.

Encuentro “Presente y perspectivas de la Investigación de Operaciones en Cuba”. Coordinador: S. Allende.
Reunión de RIDECA.