General Program
VENUE Havana University, Building \Felipe Poey"
Faculty of Mathematics and Computing Science

Time	Activity	Place
Monday, 6		
08:00 - 12:00	**REGISTRATION**	**Salón de Reuniones**
09:00 - 10:00	**INVITED LECTURE: V. Totik**	**Classroom 6**
10:00 - 10:20	**SNACK**	
10:30 - 11:30	**WORK SESSIONS**	**Classrooms**
12:00 - 13:30	**LUNCH**	**La Roca" Restaurant**
14:00 - 14:45	**OPENNING CEREMONY**	**Aula Magna**
15:00 - 17:30	**WORK SESSIONS**	**Classrooms**
18:00 - 19:30	**WELCOME COCKTAIL**	
Tuesday, 7		
09:00 - 10:00	**INVITED LECTURE: C. Clason**	**Classroom 6**
10:00 - 10:20	**SNACK**	
10:30 - 12:00	**WORK SESSIONS**	**Classrooms**
12:30 - 14:00	**LUNCH**	**La Roca" Restaurant**
14:30 - 17:30	**WORK SESSIONS**	**Classrooms**
Wednesday, 8	**FREE**	
Thursday, 9		
09:00 - 10:00	**INVITED LECTURE: J. S. Geronimo**	**Classroom 6**
10:00 - 10:20	**SNACK**	
10:30 - 12:00	**WORK SESSIONS**	**Classrooms**
12:30 - 14:00	**LUNCH**	**La Roca" Restaurant**
14:30 - 17:30	**WORK SESSIONS**	**Classrooms**
20:00 - 23:00	**FAREWELL DINNER**	
Friday, 10		
09:00 - 10:00	**INVITED LECTURE: V. Shikhman**	**Classroom 6**
10:00 - 10:20	**SNACK**	
10:30 - 12:00	**WORK SESSIONS**	**Classrooms**
12:30 - 14:00	**LUNCH**	**La Roca" Restaurant**
14:30 - 17:30	**WORK SESSIONS**	**Classrooms**
17:30 - 17:45	**CLOSING CEREMONY**	**Classroom 6**

Monday, 6

9-10 **Plenary lecture** (Classroom 6): The asymptotic form of the Gauss-Lucas theorem; Vilmos Totik, University of South Florida, USA & University of Szeged, Hungary.

10-10:20 SNACK Work Sessions

Chair: Aymeé Marrero

Time	Activity	Place
10:30-11	Lyapunov exponents for random switched systems and stabilizability of control systems (Fritz Colonius)	Classroom 5
11-11:30	Orthogonal polynomials in the solution of the problem of optimal control (Erick Delgado)	Classroom 5

Special Work Session: Hermite-Padé approximation

Chair: Alexander I. Aptekarev

Time	Activity	Place
10:30-11	Analytic continuation of meromorphic functions defined on a three-sheeted Riemann surface via type I Hermite-Padé polynomials (Alexander Komlov)	Classroom 6
11-11:30	Asymptotic distribution of the zeros of Jacobi-Piñeiro and multiple Laguerre polynomials (Walter Van Assche)	Classroom 6

Chair: Juan M. Otero

Time	Activity	Place
10:30-11	Método de búsqueda local y perturbación para el problema de enrutamiento de vehículos con recogida y entrega simultánea (Alina Fernández)	Classroom 8
11-11:30	Estrategia de selección de recorridos para el problema de enrutamiento de vehículos con flota heterogénea y múltiples compartimentos (Dafne García)	Classroom 8

Chair: Antonio Bolufé

Time	Activity	Place
15-15:30	Un algoritmo memético aplicado al problema de planificación de recorridos turísticos (Luis A. Bouza)	Classroom 5
15:30-16	Problema del cartero chino sobre redes mixtas (Joanna Campbell)	Classroom 5
16-16:20	Coffee	
16:30-17	Análisis experimental con metaheurísticas (Aracelys García)	Classroom 5
17-17:30	Algoritmos heurísticos para la solución del problema lineal con restricciones de equilibrio (Dania Tamayo)	Classroom 5

Special Work Session: Hermite-Padé approximation
Chair: Walter Van Assche

Time	Activity	Place
15-15:30	Discrete integrable systems generated by Angelesco systems of Hermite-Pade aproximants (Alexander Aptekarev)	Classroom 6
15:30-16	Multiplicative non-Hermitian perturbations of Hermitian matrices and classical random matrix ensembles (Rostyslav Kozhan)	Classroom 6
16-16:20	Coffee	
16:30-17	On Nikishin systems with discrete components and weak asymptotics of their orthogonal polynomials (Guillermo López Lagomasino)	Classroom 6
17:-17:30	Convergence of row sequences of simultaneous Fourier-Padé approximation (Junot Cacoq)	Classroom 6

Chair: Jorge Estrada

Time	Activity	Place
15-15:30	Approximation algorithms for Ridge functions (Allan Pinkus)	Classroom 8
15:30-16	Subdivision based snakes for contour detection (Victoria Hernández)	Classroom 8
16-16:20	Coffee	
16:30-17	Parameter-dependent interpolatory subdivision wiht non-uniform parametrization (Rafael Díaz)	Classroom 8
17-17:30	A fair Hermite quadratic A-spline scheme (Dayron García)	Classroom 8

Tuesday, 7

9-10 **Plenary lecture** (Classroom 6): Nonsmooth optimization of partial differential equations; Christian Clason, University Duisburg-Essen, Germany.

10-10:20 SNACK Work Sessions

Chair: Laurent Baratchart

Time	Activity	Place
10:30-11	Polar Bergman Orthogonal Polynomials (Rehouma Abdelhamid)	Classroom 5
11-11:30	Bergman orthogonal polynomials and the Grunsky matrix (Bernhard Beckermann)	Classroom 5
11:30-12	Relative asymptotics of orthogonal polynomials (Nikos Stylianopoulos)	Classroom 5

Chair: Alina Ruíz

Time	Activity	Place
10:30-11	A new approach to the proximal point method: convergence on general riemannian manifolds (Glaydston de Carvalho)	Classroom 6
11-11:30	Unifying the local convergence analysis of Newton's Method for strongly regular generalized equations (Orizon P. Ferreira)	Classroom 6
11:30-12	Curve and surface fitting by implicit polynomials: optimum degree finding and heuristic refinement (Juan M. Otero)	Classroom 6

Chair: Miguel A. Jiménez

Time	Activity	Place
10:30-11	Convolution and product theorems for the special affine Fourier transform (Ahmed Zayed)	Classroom 8
11-11:30	Anisotropic approximation with shift-invariant subspaces (Moisés Soto)	Classroom 8
11:30-12	Hurwitz and Hurwitz-type matrices of two-way in infinite series (Alexander Dyachenko)	Classroom 8

Special Work Session

Chair: Guillermo López Lagomasino

Time	Activity	Place
15-16:00	Optimization problems in the stability analysis of uncertain time (Diederich Hinrichsen)	Classroom 6
16-16:20	Coffee	

Chair: Ana Matos

Time	Activity	Place
16:30-17	Best rational approximation to functions with finitely many singularities (Laurent Baratchart)	Classroom 5
17-17:30	Modified logarithmic potential theory and applications (Franck Wielonsky)	Classroom 5

Chair: Sira Allende

Time	Activity	Place
16:30-17	A smoothing approach for mathematical programs with complementarity constraints (Danae Carreras)	Classroom 6
17-17:30	Simulated tropism: a new metheuristic for multimodal optimization problems (Carlos Saez)	Classroom 6

Chair: Victoria Hernández

Time	Activity	Place
16:30-17	Interpolación de la superficie craneal para el diseño automático de prótesis (Javier Cabrera)	Classroom 8
17-17:30	Hybrid nonautonomous SIR-model coming from a simple and reasonable government action police (Eugenio A. M. Rocha)	Classroom 8

Thursday, 9

9-10 **Plenary lecture** (Classroom 6): Bivariate Bernstein-Szego weights on the square; Jeffrey S. Geronimo, Georgia Institute of Technology, USA.

10-10:20 SNACK Work Sessions

Chair: Christian Clason

Time	Activity	Place
10:30-11	On proximal (sub)gradient splitting method for nonsmooth convex optimization problems (Yunier Bello)	Classroom 5
11-11:30	Scalar functions for computing minimizers under variable order structures (Gemayqzel Bouza)	Classroom 5
11:30-12	Ekeland's variational principle and its application to equlibrium problems (Azadeh Hosseinpour)	Classroom 5

Chair: Mariano Rodríguez

Time	Activity	Place
10:30-11	A note on the existence of certain nowhere Lipschitz functions (Miguel A. Jiménez)	Classroom 6
11-11:30	A reproducing kernel Hilbert discretization method for linear PDEs with nonlinear right-hand side (Eugenio A. M. Rocha)	Classroom 6
11:30-12	Patrones fuertes de Turing-Hopf en el sistema de Lengyel-Epstein (Julián Sarría)	Classroom 6

Special Work Session: Random and Optimal Point Configuration

Chair: Edward B. Saff

Time	Activity	Place
10:30-11	Random processes and minimal energies in high dimensional spheres (Carlos Beltrán)	Classroom 8
11-11:30	Asymptotics of minimal discrete periodic energy problems (Doug Hardin)	Classroom 8
11:30-12	On external fields created by fixed charges (Ramón Orive)	Classroom 8

Chair: Bernhard Beckermann

Time	Activity	Place
15-15:30	Consequences of Abel`s theorem extended to the rows of Padé table (Abel Fernández)	Classroom 5
15:30-16	On series representations for Apéry`s constant (Anier Soria)	Classroom 5
16-16:20	Coffee	
16:30-17	Zeroes of finite differences of polynomials and entire functions (Mikhail Tyaglov)	Classroom 5
17-17:30	On rational functions without Froissart doublets (Ana Matos)	Classroom 5

Chair: Gemayqzel Bouza

Time	Activity	Place
15-15:30	Some Remarks on checking feasibility of nominations in gas pipeline systems (Ruediger Schultz)	Classroom 6
15:30-16	A distributed interior point method for multistage stochastic NLPs (Marc Steinbach)	Classroom 6
16-16:20	Coffee	
16:30-17	Nonlinear optimization in gas networks for storage of electric energy (Jan Thiedau)	Classroom 6
17-17:30	Optimization in water distribution systems (Lisa Hegerhorst)	Classroom 6

Special Work Session: Random and Optimal Point Configuration
Chair: Doug Hardin

Time	Activity	Place
15-15:30	Optimal discrete measures for Riesz potentials (Edward B. Saff)	Classroom 8
15:30-16	Energy bounds for antipodal spherical codes (Maya Miteva Stoyanova)	Classroom 8
16-16:20	Coffee	
16:30-17		Classroom 8
17-17:30		Classroom 8

Friday, 10

9-10 Plenary **lecture** (Classroom 6): Algorithmic principle of least revenue for finding market equilibria; Vladimir Shikhman, Catholic University of Louvain, Belgium.

10-10:20 SNACK Work Sessions

Chair: Marta L. Baguer

Time	Activity	Place
10:30-11	Ordered D-stability and its application to mathematical economics (Volha Kushel)	Classroom 5
11-11:30	Estudio de singularidades en transistorios de presión (Eduardo Trutié)	Classroom 5
11:30-12	Redes Complejas con aplicación a la epidemia de dengue (Glenda Rodríguez)	Classroom 5

Chair: Lance Littlejohn

Time	Activity	Place
10:30-11	Time and band limiting for matrix orthogonal polynomials (Mirta Castro)	Classroom 6
11-11:30	Two stochastic models related with an example coming from group representation theory (Manuel Domínguez)	Classroom 6
11:30-12	Linear spectral transformations of matrix of measures (Fancisco Marcellán)	Classroom 6

Chair: Héctor Pijeira

Time	Activity	Place
10:30-11	Muckenhoupt inequalities with three measures and applications to Sobolev orthogonal polynomials (Domingo Pestana)	Classroom 8
11-11:30	Markov-type inequalities and duality in weighted Sobolev spaces (José M. Rodríguez)	Classroom 8
11:30-12	Analytic properties of Al-Salam-Carlitz I-Sobolev type orthogonal polynomials (Anier Soria)	Classroom 8

Chair: Vladimir Shikhman

Time	Activity	Place
15-15:30	Solvability and new primal-dual partition of the space of linear semi-infinite continuous optimization problems (Abraham Barragán)	Classroom 5
15:30-16	Optimizing derivatives through stochastic programming (Carlos Bouza)	Classroom 5
16-16:20	Coffee	
16:30-17	Numerical approximations of optimal portfolios in mispriced asymmetric Levy markets (Winston Buckley)	Classroom 5
17-17:30	Warm started active set solver for tree-structured QP's (Daniel Rose)	Classroom 5

Chair: Francisco Marcellán

Time	Activity	Place
15-15:30	An extension of the orthogonal polynomials of Gottlieb (Theodore S. Chihara)	Classroom 6
15:30-16	Krall orthogonal polynomials on the simplex (Lidia Fernández)	Classroom 6
16-16:20	Coffee	
16:30-17	Glazman-Krein-Naimark theory, left-definite theory and the square of the Legendre polynomials differential operator (Lance Littlejohn)	Classroom 6
17-17:30	Discrete Painlevé equations for recurrence coefficients of Laguerre-Hahn orthogonal polynomials of class one (Maria das Neves Rebocho)	Classroom 6

Chair: José M. Rodríguez

Time	Activity	Place
15-15:30	On Sobolev-Type Extremal Polynomials (Héctor Pijeira)	Classroom 8
15:30-16	Asymptotics of extremal polynomials with respect to Sobolev norms (Ana Portilla)	Classroom 8
16-16:20	Coffee	
16:30-17	Projected solutions of Nash games with applications to electricity markets (Didier Aussel)	Classroom 8
17-17:30		Classroom 8

17:30-17:45 Closing Ceremony (Classroom 6)