

PROGRAM

August 5, Sunday

14:00, Opening Ceremony

15:00 – 16:00, Chair Yuan Jin Yuan

15:00 - Nelson Maculan (UFPRJ) – An Approach to the problem of covering solids by spheres of different diameters. Joint work with Renan V. Pinto.

15:30 - Yunqing Huang (Xiangtan University) - Finite element analysis of electromagnetics in metamaterials.

16:00, Coffee-break

16:30 – 17:30, Chair Aixiang Huang

16:30 - Clóvis Caesar Gonzaga (UFSC) - On the complexity of steepest descent algorithms for minimizing quadratic functions.

17:00 - Wu Zhang (Shanghai University) - Compressible Wavelet Lattice Boltzmann Method and Applications. Joint work with Wenhao Zhu.

19:30, Sponsored Conference Dinner

August 6, Monday

8:30 – 10:00, Chair José Alberto Cuminato

8:30 - Sérgio Scheer (UFPR) - Applied Visual and Interactive Computation.

9:00 - Chunguang Li – To be announced

9:30 - Jin Yun Yuan (UFPR) - To be announced

10:00, Coffee-break

10:30 – 12:00, Chair Geraldo Nunes Silva

10:30 - José Alberto Cuminato (USP) - An Implicit Technique for Solving Low Reynolds Number Moving Free Surface Flows: The XPP Model.

11:00 - Geraldo Nunes Silva (UNESP)- On the existence of solutions to optimal control problems in time scales.

11:30 - Alvaro Coutinho (UFRJ) - Recent Advances in High Performance Algorithms for Computational Science and Engineering.

12:00, Lunch

14:00 - 16:00, Chair Alvaro Coutinho

14:00 - Esdras Penedo de Carvalho(UEM) - Design of an Ammonia Synthesis Reactor. Joint work with Carolina Borges, Doherty Andrade and Yuan Jin Yun.

14:20 - João Paulo Gois (UFABC) - Methodologies and Applications of Level-Set Methods with Radial Basis Functions

14:40 - Igor Leite Freire (UFABC) - Conservation laws for evolution equations

15:00 - Gislaine Aparecida Pericaro (FECILCAM) - Filter Algorithms Globally Convergent: theory, implementation and application. Joint work with Ademir Ribeiro and Elizabeth Karas.



August 6, Monday (cont.)

15:20 - Rene Orlando Medrano Torricos (UNIFESP) - A description in the phase, time, and parameter spaces about periodic orbits with high stability.

15:40 - Messias Meneguette Jr (UNESP) - A Numerical study of the log conformation representation. Joint work with Luciene A. B. Silva.

16:00, Coffee-break

16:30, Panel Discussion: “Research and Graduate Program Collaboration between Brazil and China”, with: Yunqing Huang, Aixiang Huang, Nelson Maculan, José Alberto Cuminato, Geraldo Nunes Silva.

August 7, Tuesday

8:30 – 10:00, Chair To Fu MA

8:30 - Aixiang Huang (Xi'an Jiaotong University) - Post-Galerkin Methods Based on an Approximate Inertial Manifold

9:00 - André Nachbin (IMPA) - Solitary waves in intricate river networks

9:30 - Xu Chuanju (Xiamen University) - Fractional Partial Differential Equations: Modeling and Computation.

10:00, Coffee-break

10:30 – 11:50, Chair Luiz Carlos Matioli

10:30 - Juliano Bem Francisco (UFSC) - Kohn-Sham equations and extrapolation methods for electronic structure calculations.

10:50 - Priscila Cardoso Calegari (USP) - Adaptive Numerical Simulation of a Non-Evaporating Spray in a Turbulent Jet. Joint work with Alexandre M. Roma.

11:10 - To Fu MA (USP) - Optimal decay rates for a class of dissipative Mindlin-Timoshenko plates.

11:30 - Rodrigo Eustáquio (UTFPR) - A study on the Halley's method using L-BFGS method. Joint work with Ademir Ribeiro and Miguel Dumett.

12:00, Lunch

13:30, Visit to Iguassu Falls

August 8, Wednesday

8:30 – 10:00, Chair Esdras Penedo de Carvalho

8:30 - Tzon-Tzer Lu (National Sun Yat-Sen University) - Effective and True Condition Numbers of Linear Systems. Joint work with Tzu-Yuan Lin

9:00 - Jorge P. Zubeli (IMPA) - Investment Decisions under Uncertainty, Partial Differential Equations and Quantitative Finance

9:30 - Shuhua Zhang (Tianjin University of Finance and Economics) - Front-fixing Finite Element Methods for the American Option Pricing with Regime Switching.



August 8, Wednesday (cont.)

10:00, Coffee-break

10:30 – 11:50, Chair Miguel Dumett

10:30 - Boying Wu (Harbin Institute of Technology) - Dynamic bifurcation for the numerical solution of the generalized Burgers equations.

10:50 - Paulo Mancera (UNESP) - Mathematical analysis and simulation of cancer treatment models. Joint work with Diego S. Rodrigues.

11:10 - Miguel Dumett (UFPR) - Oscillations in the Biotic Pyrite Iron Cycle by Acidithiobacillus Ferrooxidans Bacteria.

11:30 - Cassio Oishi (UNESP) - Numerical Results for the Hight Weissenberg Number Problem.

12:00, Lunch

14:00 - 15:20, Chair Cassio Oishi

14:00 - Sebastián Ossandón (Pontificia Universidad Católica de Valparaíso)- On the study of fuzzy preconditioners for Maxwell equations. Joint work with Mauricio Barrientos.

14:20 - Yujia Wu (University of Lanzhou) - Compact ADI Scheme with Extrapolation for 2D Parabolic Equations

14:40 - Rómulo Castillo (Universidad Centrocidental Lisandro Alvarado) - A p-order homogeneous like-distance in convex programming. Joint work with Jorge Campos and Eibar Hernández.

15:00 - Zuo-nong Zhu (Shanghai Jiao Tong University) - Soliton interactions in some semidiscrete integrable systems.

15:20, Coffee-break

15:40- 17:20 Chair Hugo Lara

15:40 - Mauricio Barrientos (Pontificia Universidad Católica de Valparaíso) - Numerical Analysis for incompressible quasi-Newtonian flows with dual-mixed formulations via FEM-BEM coupling¹

16:00 - Catalina M. Rúa (USP) - An Adaptive Uzawa Method for the Steady Stokes Equations. Joint work with Alexandre H.D. Cenicerós and M. Roma.

16:20 - Pedro Damázio (UFPR) - A Modified Nonlinear Spectral Galerkin Method for the Equations of Motion Arising in the Kelvin-Voigt Fluids. Joint work with Ambit K. Pany, Jin Yun Yuan and Amiya K. Pani.

16:40 - Gilcilene Sanchez de Paulo (UNESP) - Numerical results of viscoelastic flows in a cross-slot geometry by using a dumbbell model.

17:00 - Hugo Lara (Universidad Centrocidental Lisandro Alvarado) - A semidefinite programming approximation for the problem of fitting positive exponential sums to empirical data. Joint work with Adalys Álvarez.

19:00, Conference Dinner at the Raffain Restaurant.



August 9, Thursday

8:30 – 9:50, Chair Elizabeth Wegner Karas

8:30 - Adriano Verdério (UFPR) - Global Convergence for a derivative-free trust region method with models based in polynomial interpolation. Joint work with Elizabeth Wegner Karas and Lucas Garcia Pedroso.

8:50 - Priscila Savulski Ferreira (UFPR) - Global Convergence of a Derivative Free Method for Unconstrained Optimization. Joint work with Paulo Conejo, Ademir Ribeiro, Mael Sachine and Elizabeth Karas.

9:10 - Mariana Kleina (UFPR) - Interior-Point Method for Hydrothermal Dispatch Problem. Joint work with Débora Cintia Marcilio and Luiz Carlos Matioli.

9:30 - Simone Miloca (UFPR) - Expansion Planning Problem of an Electrical Network with Reliability. Joint work with Neida P. Volpi, Ademir Ribeiro and Elizabeth Karas.

9:50, Coffee-break

10:20-12:00, Chair Pedro Damázio

10:20 - Fernando L. P. Santos (UNESP) - CFD simulation of conservation equations using the TOPUS scheme. Joint work with Valdemir G. Ferreira, Paulo F. Mancera and Cassio M. Oishi.

10:40 - Deepjyoti Goswami (UFPR, IIT Bombay) - Crank-Nicolson Scheme For The Oldroyd Model Of Order One. Joint work with Amiya K. Pani.

11:00 - Tuanny Elyz Brandeleiro Brufati (UFPR) - Performance study of iterative methods for seismic tomography. Joint work with Saulo Pomponet Oliveira and Amin Bassrei.

11:20 - Diego Zontini (UFPR, IFPR) - A new iterative method for computing the pseudo inverse, using the Penrose equations.

11:40 - Geovani Nunes Grapiglia (UFPR) - Estimation of Monetary Policy Preferences: a Genetic Algorithm Approach.

12:00, Lunch

13:30, Visit to Itaipu Dam

August 10, Friday

9:00, Visit do Itaipu Park - Ecological trail of Refuge “Bela Vista”

