MASCOT08
IAC-CNR, Roma, Italy

Thursday 23

8.30 Registration
9.10 MASCOT08
IAC Welcome: Michiel Bertsch
IMACS Welcome: Robert Beauwens
Robert Vichnevetsky
ISGG Welcome: Bharat K. Soni

Lecture Session I Chairperson: Robert Vichnevetsky
Lecturer: Francois Guibault
9.20 Subdivision-based geometric domain description for integrated mesh adaptation and geometry modification
F. Guibault, M. Wang

10.00 Direct simulation Monte Carlo for the European expert space vehicle
J. Hauser, J-M Muylaert, T. Gollnick

10.40 Coffee break

Session I Chairperson: Maria Morandi Cecchi
11.10 Dirichlet to Neumann boundary conditions in generalized curvilinear coordinates for multiple scattering
S. Acosta, V. Villamizar
11.35 Moving the sources in the BS method
A. Garcés, R. Beauwens, G. Van den Eynde

12.00 Time-harmonic method for the linearized Euler equations for turbo-machinery noise propagation through engine exhaust
R. Arina, A. Iob
12.25 Mean value interpolation in algebraic numerical grid generation
C. Conti, R. Morandi
12.50 Lunch time

Session II Chairperson: Jochem Häuser
14.35 A spline based algorithm for the analysis of the flow of Scirocco plasma wind tunnel nozzle
E. Buchignani, G. Pezzella, M. Marini
15.00 Optimization of the iteration parameters of the simulation of incompressible flow by genetic algorithm
A. Shklyar, A. Arbel
15.25 Numerical analysis of laminar separation bubbles
P. Catalano
15.50 Coffee break

Session III Chairperson: Renzo Arina
16.15 IESTA: a modular distributed simulation platform for the evaluation of air transport systems
R. Kervarc, A. Elie, T. Dubot, J. Bourrley
16.40 Assessment of air traffic environmental impacts using a large numerical code in a modular platform
R. Kervarc, A. Elie, M. Charlotte, P. Carle
17.05 Advanced numerical techniques for simulation of wingtip vortex
S. Ahmad, W. Brewer, P. Cinnella
20.30 Workshop Dinner

Friday 24

Lecture Session II Chairperson: Robert Beauwens
Lecturer: Jochem Häuser
9.10 Numerical electro and magneto-fluiddynamics with applications
J. Hauser, J-M. Muylaert, O. Rybatzki

10.00 Computational simulations & 3D visualization applications in research & development, education, training & re-training
B.K. Soni

10.40 Coffee break

Session VI Chairperson: Edoardo Buchignani
16.15 Plasmon-polariton waveguides: mathematical modelling and numerical simulations
P. Curci

16.40 Neural modelling and fault diagnosis for prevention of cascading events in electric power systems
G.G. Rigatos, P. Siano

11.10 Age-dependent pediatric finite element model development and validation
J-E. Kim, Y. Ito, A.M. Shih, B.K. Soni
11.35 Mathematical methods for the analysis of left ventricular wall motion
B. Quatember, M. Mayr, W. Recheis, S. Demertzis, G. Allasia, R. Cavoretto, A. De Rossi, E. Venturino
12.00 Design of an advanced user interface with dynamic windows enabling cardiologists to handle complex mathematical tasks
M. Mayr, B. Quatember
12.25 New gradient vector flow field for segmentation of breast tumors in ultrasound images
A. Rodttoo, S.S. Makhanov
12.50 Lunch time

Session V Chairperson: Vianey Villamizar
14.35 Residual correction techniques for the efficient solution of the inverse medium problem
P. Maponi
15.00 An analysis of a spline collocation method for a normalized flux
K. Suria, Z. Uzelac, L. Teofanov
15.25 The solution of Tikhonov regularized equations arising from Fredholm integral equations of first kind
N. Egidi
15.50 Coffee break
Applications of confined one-dimensional ultracold Bose gases with dipolar interactions
S. De Pal, R. Citro, E. Orignac, P. Pedri,
M.L. Chiofalo

Saturday 25
Session VII Chairperson: Pierluigi Maponi

9.25 Quadrature rules for Cauchy principal value integrals with refinable functions
L. Gori, E. Pellegrino, E. Santi

9.50 The best-approximation weighted-residuals method in finite elements
F. Marzuzi, M. Morandi Cecchi

10.15 Time-frequency analysis of magnetoencephalographic data
G. Betti, F. Pitoli

10.40 Coffee Break

Lecture Session III Chairperson: Bharat K. Soni

Lecturer: Alfio Borzi

11.10 Multigrid methods for PDE optimization
A. Borzi

Session VIII Chairperson: Alfio Borzi

11.50 Validation and assessment of turbulence transition models
G. Cheng, R. Nichols, K.D. Nervoorkar,
P.G. Radhamony, B.K. Soni

12.15 Multigrid variational image segmentation and accomodative algorithms
R.M. Spitaleri

12.40 Closing Greetings

MASCOT08
Co-sponsors:
IAC-Istituto per le Applicazioni del Calcolo-CNR
SIMAI-Societa' Italiana di Matematica Applicata e Industriale
GNCS-Gruppo Nazionale di Calcolo Scientifico

Meetings Honorary Chair: Robert Vichnevetsky
Meeting Chairs: F. Pistella, R.M. Spitaleri

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J. Ekaterinarris, FORTH, Greece
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IMACS/ISGG Workshop
October 23-25, 2008

MASCOT08
8th Meeting on Applied Scientific Computing and Tools
Grid Generation, Approximation and Visualization

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