

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
9:00 – 11:00 Registration - Welcoming Session M1	9:00 – 10:00 Keynote Session T1 <i>Computational Science and Complex Systems Research</i> Professor G. Nicolis , Université Libre de Bruxelles, Member of the Academy of Athens	9:00 – 10:00 Keynote Session W1 <i>Hyperbolic Balance Laws with Dissipation</i> Professor C. Dafermos , Brown University	9:00 – 10:00 Keynote Session Th1 <i>A New Method for Studying Order and Chaos in Conservative Dynamical Systems</i> Professor T. Bountis, University of Patras	9:00 – 10:00 Keynote Session F1 <i>Entropy, nonextensive statistical mechanics, and numerical applications</i> Professor C. Tsallis , Brazilian Academy of Sciences & Santa Fe Institute
11:00-12:00 Keynote Session M2 <i>Educational Systems in Mathematics and Other Related Topics</i> Professor N. Artemiadis , Member and former President of the Academy of Athens	10:00 – 11:00 Keynote Session T2 <i>Approximate Solution of Very Large Linear Systems of Equations by Simulation</i> Professor D.Bertsekas , MIT	10:00 – 11:00 Keynote Session W2 <i>Novel numerical techniques based on Fokas transforms, for the solution of boundary and initial value problems</i> Professor T.S. Papatheodorou, University of Patras	10:00 – 11:00 Keynote Session Th2 <i>Using Extrapolation for the Solution of the Linear Complementarity Problem</i> Professor A. Hadjidimos , University of Thessaly	10:00 – 11:00 Session F2 Invited Tutorial <i>Numerical Solution of PDEs. The Two Strategies: Finite Differences or Finite Elements. Which One to Choose?</i> Professor K. Iordanidis , University of Patras
12:00-13:00 Keynote Session M3 <i>Integrability, boundary value problems and imaging</i> Professor A. Fokas , Cambridge University, Member of the Academy of Athens	11:00-11:30 <i>Break</i>	11:00-11:30 <i>Break</i>	11:00-11:30 <i>Break</i>	11:00-11:30 <i>Break</i>
13:00-14:30 <i>Lunch break</i>	11:30-12:30 Session T3	11:30-12:30 Session W3	11:30-12:30 Session Th3	11:30-12:30 Session F3
14:30-15:30 Keynote Session M4 <i>The Reality of Mathematics</i> Professor P. Ligomenides , Member of the Academy of Athens	12:30-14:30 <i>Lunch break</i>	12:30-14:30 <i>Lunch break</i>	12:30-14:30 <i>Lunch break</i>	12:30-14:30 <i>Lunch break</i>
15:30 – 18:00 Session M5 18:00 – 18:30 <i>Break</i> 18:30 – 21:00 Session M6	14:30 – 17:00 Session T4 17:00 – 17:30 <i>Break</i> 17:30 – 20:00 Session T5	14:30 - <i>Excursion to Ancient Messini</i>	14:30 – 17:00 Session Th4 17:00 – 17:30 <i>Break</i> 17:30 – 20:00 Session Th5 21:00 - Conference Dinner & Awards	14:30 – 17:00 Session F4 17:00 – 17:30 Closing Remarks End of Conference

Session M5

1. *The Optimum Preconditioned Simultaneous Displacement Method for 2-cyclic matrices*, M.A. Louka, N.M. Missirlis and F.I. Tzaferis (U. Athens)
2. *On an iterative Algorithm for H-matrices: The Irreducible and Reducible Case*, M. Alanelli (U. Crete) and A. Hadjidimos (U. Thessaly)
3. *Numerical-symbolical methods computing the rank of block bidiagonal Toeplitz matrices*, D. Triantafyllou and M. Mitrouli (U. Athens)
4. *Optimal stationary one- and two-parameter ADI preconditioners for Conjugate Gradient methods*, Michael Lapidakis (U. Crete) and A. Hadjidimos (U. Thessaly)
5. *The distance from a matrix polynomial to matrix polynomials with a prescribed multiple eigenvalue*, N. Papathanasiou and P. Psarrakos (Natl. Technical U. Athens)

Session M6

1. *Scalable preconditioners for hp-version discontinuous Galerkin finite element methods*, E.H. Georgoulis (U. Leicester) and D. Loghin (U. Birmingham)
2. *Discontinuous Galerkin Methods for the linear Schrödinger equation in non-cylindrical domains*, D.C. Antonopoulou (U. Crete and FORTH)
3. *The singular function boundary integral method for two- and three-dimensional elliptic boundary value problems with boundary singularities*, E. Christodoulou, M. Elliotis, C. Xenophontos and G. Georgiou (U. Cyprus)
4. *A symmetric Boussinesq system of KdV-KdV type*, D.E. Mitsotakis and V.A. Dougalis (U. Athens and FORTH)
5. *Accelerated finite difference method for a simplified phase field model*, C.A. Sfyarakis (U. Athens and FORTH)

Session T3

1. *On the iterative analysis of the generalized Dirichlet-Neumann map for elliptic PDEs*, A.G. Sifalakis (Tech. U. Crete), S.R. Fulton (Clarkson U.), E.P. Papadopoulou and Y.G. Saridakis (Tech. U. Crete)
2. *The use of orthogonal Bergman polynomials for the reconstruction of planar domains*, N. Stylianopoulos (U. Cyprus)

Session T4

1. *A paraxial approach for Electromagnetic PIC codes in highly relativistic beams*, F. Assous (Ariel U. Center, Israel) and F. Tsipis (Bar-Ilan U., Israel)
2. *Simultaneous solution of large scale linear systems and eigenvalue problems*, G. Pashos, M.E. Kavousanakis, A.N. Spyropoulos, J.A. Palyvos, and A.G. Boudouvis (Natl. Technical U. Athens)
3. *A symbolic-numeric software package for the computation of the GCD of several polynomials*, D. Christou and N. Karcianas (City U., London) and M. Mitrouli (U. Athens)
4. *A greedy approach to transversal selection for nonlinear systems of equations*, D.G. Sotiropoulos (Ionian U.) and I.E. Livieris (U. Patras)
5. *On the prediction of time series local optima: A backtrack technique*, G.S. Androulakis and E.G. Lisgara (U. Patras)

Session T5

1. *Separation of local extrema of least squares piecewise monotonic data fits*, I.C. Demetriou (U. Athens)
2. *Effective Modification of the BFGS Method for Training Recurrent Neural Networks*, C-C. Peng and G.D. Magoulas (Birkbeck College, London)
3. *Optimal detection of redundant features via artificial neural network pruning using genetic algorithms*, A. Adamopoulos (Democritus U. Thrace)
4. *Nonextensive particle swarm optimization methods*, A.D. Anastasiadis and G.D. Magoulas (Birkbeck College, London), G. Georgoulas (Georgia Tech), A. Tzes (U. Patras)
5. *Improved Newton's method without direct function evaluations*, E.N. Malihoutsaki, I.A. Nikas, and T.N. Grapsa (U. Patras)

Session W3

1. *Weighted quadrature rules for finite element methods*, S.P. Oliveira (LAGEP-CPGG, Brazil), A.L. Madureira and F. Valentin (LNCC, Brazil)
2. *Spline collocation for parabolic partial differential equations*, Christina C. Christara (U. Toronto)

Session Th3

1. *Polynomial filtered Lanczos iterations with applications in electronic structure calculations*, C. Bekas (IBM Research, Zürich) and Y. Saad (U. Minnesota)
2. *Re-scaling techniques for computing blowing-up solutions to 2nd order differential equations*, N.R. Nassif (American U. Beirut), N.M. Karam (U. Rennes I) and Y. Soukiassian (American U. Beirut)

Session Th4

1. *Deterministic and randomized column selection algorithms for matrices*, C. Boutsidis and P. Drineas (Rensselaer Polytechnic Institute, U.S.A.)
2. *Reachability and holdability of nonnegative states*, D. Noutsos (U. Ioannina) and M. Tsatsomeros (Washington State U.)
3. *Some results on sign symmetric matrices*, M.G. Tzoumas (Agrinio)
4. *A numerical technique for computing real eigenvalues of real tridiagonal matrices*, F.N. Valvi and V.S. Geroyannis (U. Patras)
5. *Modified SCRS method based on residual vector of BiCR method*, S. Fujino and Y. Onoue (Kyushu U., Japan) and K. Abe (Gifu Shotoku Gakuen U., Japan)

Session Th5

1. *Asymmetric periodic orbits in the photogravitational restricted three-body problem*, K. Papadakis, O. Ragos and C. Litznerinos (U. Patras)
2. *Analysis of a class of hybrid dynamical systems with hysteresis phenomenon*, C. Quémard (U. Angers, France)
3. *Semi-Lagrangian semi-implicit time-splitting scheme for a regional model of the atmosphere*, A. Bourchtein and L. Bourchtein (Pelotas State U., Brazil)
4. *Performance comparison of the element free Galerkin method and the finite pointset method*, I.V. Shevchenko (Southern Federal U., Rostov-on-Don, Russian Federation)
5. *Modeling the magnetoEncephaloGram (MEG) of epileptic patients using genetic programming*, E. Georgopoulos (ATEI Kalamata), A. Adamopoulos (Democritus U. Thrace) and S. Likothanassis (U. Patras)

Session F3

1. *The conditioning of FD matrix sequences coming from semi-elliptic differential equations*, D. Noutsos (U. Ioannina), S.S. Capizzano (U. Insubria, Italy) and P. Vassalos (Athens U. Economics & Business)
2. *On the growth problem for Hadamard matrices*, M. Mitrouli (U. Athens)

Session F4

1. *Comparison of different spatial grids for numerical schemes of geophysical fluid dynamics*, L. Bourchtein and A. Bourchtein (Pelotas State U., Brazil)
2. *Linear versus nonlinear models for evaluation of brain connectivity from neurophysiological time series*, L. Cimponeriu (U. Potsdam, Germany), M. Stavrinou, L. Moraru and A. Bezerianos (U. Patras)
3. *Combining Evolutionary and Stochastic Gradient Techniques for System Identification*, K. Theofilatos (U. Patras), G. Beligiannis (U. Ioannina) and S. Likothanassis (U. Patras)
4. *Applying robust multibit watermarks to digital images*, D. Tsolis (ITI, Centre of Research & Technology Hellas), S. Nikolopoulos (U. Patras), L. Drossos (ATEI Messolongi), S. Sioutas (Ionian U.) and T. Papatheodorou (U. Patras).
5. *Perturbed Newton method for unconstrained optimization*, T. Grapsa, G. Antonelou, A. Kostopoulos (U. Patras)

