ICNAAM 2004

FINAL PROGRAM

10 – 14 September 2004

CONFERENCE CENTER:

TECHNOLOGICAL EDUCATIONAL INSTITUTE OF CHALKIS, PSAHNA, CHALKIS, GREECE (FOR SATURDAY, MONDAY AND TUESDAY)

WELCOME RECEPTION: "KOKKINO SPITI" AT THE CENTER OF CHALKIS (FOR FRIDAY)

Organised by

- European Society of Computational Methods in Sciences and Engineering (ESCMCE)

- Technological Educational Institution (TEI) of Chalkis, Greece

Chairmen and Organisers

Prof. T.E. Simos, President of ESCMSE, Active Member of the European Academy of Sciences and Arts and Corresponding Member of the European Academy of Sciences, Department of Computer Science and Technology, Faculty of Sciences and Technology, University of Peloponnese, Greece.

Dr. Ch. Tsitouras , Department of Applied Sciences, Technological Educational Institute of Chalkis, Greece .

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Prof. G. Alistair Watson, UK

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Mr. D. Sakas
Mr. Z. Anastassi
Mr. Th. Monovasilis
Mr. K. Tselios

FRIDAY 10 SEPTEMBER 2004

START OF ICNAAM 2004

16:30 – 19:00	Registration
19:00 – 20:30	Welcome reception

The registration and welcome reception will take place in a beautiful traditional building of Chalkis (NAMED "KOKKINO SPITI") AT THE CENTER OF CHALKIS.

DEPARTURE OF THE BUSSES FROM "PALMARIVA HOTEL": 15:15-15:30.

END OF THE 1ST DAY

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Saturday 11 September 2004

Invited Speaker (ROOM 1)

Chair: Theodore E. Simos

10:00 – 11:00	*G. Vanden Berghe*	**Exponential fitting: Applications for ODE-solvers**
Coffee Break		
Session 1: Newton-type method and other related iterative methods with applications **Chair: I. K. Argyros and J. M. Gutiérrez (Room 2)**		
11:30 – 12:00	*I. K. Argyros*	**A Unifying Local-Semilocal Convergence Analysis and Applications for Two-Point Newton-Like Mehtods in Banach Space**
12:00 – 12:30	*J. A. Ezquerro and M. A. Hernández*	**New Kantorovich-Type Conditions for Halley's Method**
12:30 – 13:00	*S. Amat, S. Busquier and A. Escudero*	**A Wavelet Adaptive Two-Step Newton Type Method**
Coffee Break		
13:30 – 14:00	*J. M. Gutiérrez*	**Third order methods for the simultaneous calculus of the roots of a polynomial**
14:00 – 14:30	*N. Romero and M. A. Hernández*	**On a new multiparametric family of Newton-like methods**

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Session 2: Mathemetical Methods in Physical Process Modelling I **Chair: D. Vlachos and T.E. Simos (Room 3)**		
11:30 – 12:00	*E. Fakiris and I. Zacharias*	**Application of Landsat imagery, to verify the water circulation of Saronikos Gulf, as resulted from numerical modeling**
12:00 – 12:30	*P. D. Manousopoulos, D. S. Vlachos and T. E. Simos*	**Electromagnetic field computation in large biological bodies**
12:30 – 13:00	*C. Tsabaris*	**Mathematical technique for the determination of radionuclide chain elements in the marine environment**
Coffee Break		
13:30 – 14:00	*T. H. Soukissian and G. Kalantzi*	**The use of extreme value theory in climatic predictions of wave characteristics**
14:00 – 14:30	*G. Triantafyllou, I. Hoteit, G. Korres and G. Petihakis*	**Data Assimilation Into Marine Physical-Biochemical Models using Kalman Filtering Techniques: Progress and Problems**
Session 3: Computational Problems for Periodic Systems **Chair: Eric K.-w. Chu and W.-w. Lin (Room 4)**		

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11:30 – 12:00	*Eric King-Wah Chu, Wen-Wei Lin and Alan J. Pryde*	**Perturbation of Periodic Eigenvalues via Bauer-Fike Theorems and Generalized Joint Spectra**
12:00 – 12:30	*Eric King-Wah Chu, Hung-Yuan Fan and Wen-Wei Lin*	**Reachability/Observability Gramians and Balanced Realization of Periodic Descriptor Systems**
12:30 – 13:00	*Yuen-Cheng Kuo, Wen-Wei Lin and Shu-Fang Xu*	**Regularization and Pole Assignment of Linear Discrete-Time Periodic Descriptor Systems by Derivative and Proportional State Feedback**
Coffee Break		
13:30 – 14:00	*Eric King-Wah Chu, Hung-Yuan Fan, Wen-Wei Lin and Chern-Shuh Wang*	**Structure-Preserving Algorithms for Periodic Discrete-Time Algebraic Riccati Equations**
14:00 – 14:30	*AlexanderM. Korsunsky and Lifeng Ma*	**Interpolative quadratures for singular integral equations in fracture and contact mechanics**
Session 4: Applied Mathematics I **Chair: Stefanos Spartalis (Room 5)**		
11:30 – 12:00	*L. Illiadis, S. Spartalis, F. Maris and D. Marinos*	**A Decision Support System Unifying Fuzzy Trapezoidal Function Membership Values using T-Norms: The case of river Evros Torrential Risk Estimation**
12:00 – 12:30	*Ch. Mamaloukas, S. Spartalis and Z. Manussaridis*	**Similarity approach to the problem of second grade fluid flows over a stretching sheet**
12:30 – 13:00	*Wen You-Wei, Ching Wai-Ki and NG Michael K.*	**Preconditioners Based On Gohberg-Semumcul Formula For Positive Definite Toeplitz Systems**
Coffee Break		

ARCHIVE

13:30 – 14:00	*Ch. Mamaloukas and S. Spartalis*	**Special curves whose tangents form minimal surfaces. Applications in the industry**
14:00 – 14:30	*S. Spartalis and G. Vekris*	**Information transport in 2-port cell networks**
Session 5: Function theories in R^n and their applications (to equations of mathematical physics) I **Chair: Wolfgang Sprößig and Klaus Gürlebeck (Room 1)**		
11:30 – 12:00	*Sören Krausshar (with K. Bringmann, D. Constales)*	**Applications of hypercomplex Poincare series to Bergman Spaces of hyperbolic polyhedron type domains**
12:00 – 12:30	*Guy Laville*	**Special fuctions in Clifford analysis**
12:30 – 13:00	*Mircea Martin*	**No available title**
Coffee Break		
13:30 – 14:00	*Ioannis G. Stratis*	**On causal time-invariant evolution problems and applications in complex media electromagnetics**
14:00 – 14:30	*Luis Manuel Tovar*	**Weighted function spaces: Monogenic functions and Primitives**
LUNCH		
Invited Speaker (ROOM 1) **Chair: Klaus Gürlebeck**		
15:15 – 16:15	*Wolfgang Sprößig*	**Aspects of Clifford Analysis in Applied Mathematics**
16:15 – 17:15	*Dirk Laurie, Jörg Waldvogel, Folkmar Bornemann and Stan Wagon*	**Challenges in numerical computation**

ABSTRACT

Coffee Break		
Session 6: Development of Mathematical Methods for Applied Propagation Problems **Chair: A.G. Bratsos (Room 2)**		
17:30 – 18:00	*A. G. Bratsos, D. Natsis and V. Kotsakis*	**Linearized numerical schemes for the Boussinesq equation**
18:00 – 18:30	*A. G. Bratsos*	**An explicit numerical scheme for the Sine-Gordon equation in 2+1 dimensions**
18:30 – 19:00	*A. M. Prospathopoulos, G. A. Athanassoulis and K. A. Belibassakis*	**3D acoustic scattering from a radically layered cylinder in a plane-horizontal ocean wave guide: Low-frequency results**
Coffee Break		
19:00 – 19:30	*E. E. Tzirtzilakis, Ch. Skokos and T. C. Bountis*	**A Numerical Study of Soliton Solutions of the Boussinesq Equation Using Spectral Methods**
19:30 – 20:00	*D. Natsis*	**L^1-Convergence of the sine Fourier series with coefficients monotonic with respect to strongly regularly varying sequences**
Session 7: Mathematical Physics I **Chair: Metin Demiralp (Room 3)**		
17:30 – 18:00	*Burcu Tunga and Metin Demiralp*	**Instanteneous Series in Stability and Robustness Investigations for Quantum Optimal Control: Harmonic Oscillator**
18:00 – 18:30	*Metin Demiralp and N. Abdülbaki Baykara*	**Asymptotic Expansion for the Generalized Hypergeometric Function of pFp Type at Large Values of the Argument**
18:30 – 19:00	*Tülin Kaman and Metin Demirap*	**Perturbation Expansion Around the Nominal Value of External Field Amplitude in Molecular Optimal Control Theory**
Coffee Break		

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19:15 – 19:45	*H. Kaya and M. Demiralp*	**Solving 3D Poisson Equation via HDMR**
19:45 – 20:15	*Ayşegül Kurşunlu, İrem Yaman and Metin Demiralp*	**A Space Extension Reductive Approach to the Solution of Eigenvalue Problems: Anharmonic Oscillator**
Session 8: Numerical Analysis I **Chair: Ch. Tsitouras (Room 4)**		
17:30 – 18:00	*Marwan Abukhaled*	**Stability Criteria of Explicit Weak Rynge-Kutta Schemes for a 2-Dimensional Stochastic Differential Systems**
18:00 – 18:30	*Sanja Singer and Saša Singer*	**Skew-Symmetric Differential qd Algorithm is Accurate**
18:30 – 19:00		
Coffee Break		
19:15 – 19:45	*Lubomir Baňas*	**A numerical method for the Landau-Lifshitz equation with magnetostriction**
19:45 – 20:15	*Jean-Paul Berrut*	**Another look at the Euler-Maclaurin formula**
Session 9: Computational Methods I **Chair: Annie Cuyt (Room 5)**		
17:30 – 18:00	*Vit Vondrák, Zdeněk Dostál, Jiři Dobiás and Svatopluk Pták*	**Primal and dual penalty methods to solution of contact problems**
18:00 – 18:30	*D. K. Callebaut, E. Desoppere and G. K. Karugila*	**Solution of nonlinear differential equation for falling body in viscosity meter**
18:30 – 19:00		
Coffee Break		

EARLY

19:15 – 19:45	*D. K. Callebaut and G. K. Karugila*	**Non-uniform equilibrium of an infinite Newtonian gravitating medium with cosmological constant**
19:45 – 20:15	*Mladen Rogina*	**A Stable Algorithm for Calculating with Some Singular B-Splines**
Session 10: Applied Mathematics II **Chair: G.A. Watson (Room 1)**		
17:30 – 18:00	*Mohammedi R. Abdel-Aziz*	**Effects of Relative Perturbations on a Class of Eigenvalues in Free Vibration Analysis**
18:00 – 18:30	*Ken Horie and Takashi Matsuhisa*	**Communication in awareness reaching consensus without acyclic condition**
18:30 – 19:00	*Ioan R. Ionescu*	**Safety factor analysis for landslides modeling**
Coffee Break		
19:15 – 19:45	*Emil Kasap and Fahir Talay Akyildiz*	**A Method of the Determination of a Geodesic Curve on Timelike Ruled Surface with Spacelike Rulings**
19:45 – 20:15	*K. Ngo*	**An Approach of Eigenvalue Perturbation Theory**
Coffee Break		
Invited Speaker (ROOM 1) **Chair: Theodore E. Simos**		
20:30 – 21:30	*Carsten Carstensen*	**Computational Micromagnetism**

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END OF THE 2ND DAY

SUNDAY 12 SEPTEMBER 2004

Excursion of ICNAAM 2004

Place of Excursion: Delphi (One of the most beautiful archaeological places of Greece)

Departure: 09:00

Central Dinner: Palmariva Hotel 21:00

END OF THE 3RD DAY

ICNAAM 2004

Monday 13 September 2004

Invited Speaker (ROOM 1)

Chair: Iain Duff

09:30 – 10:30	*Annie Cuyt*	**Rational Approximation Successes in Computational Science and Engineering**
	Coffee Break	

Session 11: Adaptive modelling and applications

Chair: Annie Cuyt, T. Dhaene and B. Verdonk (Room 1)

11:00 – 11:30	*T. Dhaene*	**Compact Surrogate Modeling of Passive Electronic Components**
11:30 – 12:00	*W. H. A. Schilders*	**Numerical methods for coupled circuit and interconnect simulations**
12:00 – 12:30	*Vigdis Brevik Petersen*	**Orthogonal Polynomials and Signal Processing**
	Coffee Break	
13:00 – 13:30	*Annie Cuyt, Gene Golub, Peyman Milanfar and Brigitte Verdonk*	**Inverting a multidimensional shape from moments**
13:30 – 14:00	*J. Van Deun and A. Bultheel*	**Moment-based algorithms for computing orthogonal rational functions**
14:00 – 14:30	*P. Meyer, R. Lehmensiek and W. Steyn*	**On the Application of Rational Interpolation to Root-Finding Problems in Microwave Engineering**

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Session 12: Function theories in R^n and their applications (to equations of mathematical physics) II Chair: Wolfgang Sprößig and Klaus Gürlebeck (Room 2)		
11:30 – 12:00	*Bin Lin Dai and Ai Nong Fang*	**On Limit Sets and Discreteness Criteria for Nonelementary Subgroups of $M(\overline{R}^n)$**
12:00 – 12:30	*Rauno Aulaskari*	**On Möbius invariant function spaces**
12:30 – 13:00	*Fred Brackx and Hennie De Schepper*	**Convolution kernels in Clifford Analysis**
Coffee Break		
13:30 – 14:00	*Klaus Gürlebeck and Isabel Cação*	**Monogenic Primitives of Monogenic Functions**
14:00 – 14:30	*Yakov Krasnov*	**Analytic function theories in algebras**
Session 13: Mathemetical Methods in Physical Process Modelling II **Chair: D. Vlachos (Room 3)**		
11:30 – 12:00	*D. S. Vlachos*	**Optimal ship routing based on wind and wave forecasts**
12:00 – 12:30	*D. S. Vlachos*	**A local supervised learning algorithm for multi-layer perceptrons**
12:30 – 13:00	*D. S. Vlachos, C. G. Tsoharis and I. Thanos*	**The Use of Vertical and Horizontal Accelerations of a Floating Buoy for the Determination of Directional Wave Spectra in Coastal Zones**
Coffee Break		
13:30 – 14:00	*Eric King-Wah Chu, Hung-Yuan Fan, Wen-Wei Lin and Chern-Shuh Wang*	**Structure-Preserving Algorithms for Periodic Discrete-Time Algebraic Riccati Equations**
14:00 – 14:30	*T. H. Soukissian, Z. Theochari, P. Vamvakoussi and D. Koutsogiannis*	**Stochastic forecasting and simulation tools in sea waves modelling**

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Session 14: Mathematics Methods II Chair: Ch. Tsitouras (Room 4)		
11:30 – 12:00	*K. A. Papakonstantinou and C. B. Belias*	**Mathematical Modeling of environmental conditions around buildings. The case of a public buildings complex of culture in Thessaloniki**
12:00 – 12:30	*D. G. Pavlou, Ch. Tsitouras, N. V. Vlachakis, M. G. Pavlou, V. N. Vlachakis*	**Non linear stress analysis of pressure pipes under creep conditions**
12:30 – 13:00		
Coffee Break		
13:30 – 14:00	*P. Psarrakos and Ch. Tsitouras*	**Numerical approximation of the boundary of numerical range of matrix polynomials**
14:00 – 14:30		
LUNCH		

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POSTER SESSION

15:00 – 15:30

D. S. Vlachos and T. E. Simos
Partitioned linear multistep method for long term integration of the N-body problem

D. S. Vlachos and T. E. Simos
Inverse parameter estimation of interdigital dielectrometry sensors

C. Tsabaris and G. Perdikakis
Nuclear model calculations for the $^{58}Ni(n,p)^{58}Co$ **reaction**

Z. A. Anastassi and T. E. Simos
Trigonometriacally-Fitted Runge-Kutta Methods for the Numerical Solution of the Schödinger Equation

D. P. Sakas and T. E. Simos
A Family of Seventh Algebraic Order Trigonometrically Fitted P-C Schemes for the Numerical Solution of the One-Dimensional Schrödinger Equation

S. Nakamori, A. Hermoso, J. Linares and M. I. Sánchez
Signal estimation from observations affected by random delays and white plus coloured noises

S. Nakamori, R. Caballero, A. Hermoso, J. Jiménez and J. Linares
An innovation approach to the estimation problem from uncertain observations with correlated signal and noise

Th. Monovasilis, Z. Kalogiratou and T. E. Simos,
Exponential-fitting Symplectic Methods for the Numerical Solution of the Schrödinger Equation

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Invited Speaker (ROOM 1)		
Chair: Andy Wathen		
15:30 – 16:30	*Iain Duff*	**Partitioning and parallelism in the solution of large sparse systems**
Invited Speaker (ROOM 1)		
Chair: Annie Cuyt		
16:30 – 17:30	*Weibo Gong and Jintao Xiong*	**Rational Approximation for Engineering Problems**
Coffee Break		
Session 15: Function theories in R^n and their applications (to equations of mathematical physics) III **Chair: Wolfgang Sprößig and Klaus Gürlebeck (Room 1)**		
18:00 – 18:30	*Viktor G. Kravchenko and Vladislav V. Kravchenko*	**On a generalized Schrödinger operator and Darboux transformations**
18:30 – 19:00	*L. Meister and H. Schaeben*	**Geometrical approach to quaternion transformations and integrating in quaternion space**
19:00 – 19:30	*Nai Bing*	**On Algebraic and Geometric Convergence of Clifford Matrix Groups**
Coffee Break		
20:00 – 20:30	*Swanhild Bernstein*	**The Radon transform in texture analysis**
20:30 – 21:00	*K. Bringmann, D. Constales, and R.S. Kraußhar*	**Applications of hypercomplex Poincar series to Bergman Spaces of hyperbolic polyhedron type domains**

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Session 16: Computer Science **Chair: Z. Kalogiratou (Room 2)**		
18:00 – 18:30	*Hiroaki Mohri*	**Network Design Problem for Some Graphs**
18:30 – 19:00	*Iakovos Ouranos, Petros Stefaneas and Panayiotis Frangos*	**MobileOBJ : A Mobility Approach Using CafeOBJ Algebraic Specification Language**
19:00 – 19:30		
Coffee Break		
20:00 – 20:30	*Evangelos Tzanis*	**Collatz Conjecture and Other Recurrence Sequences: Algorithms and Stopping time**
20:30 – 21:00	*V. K. Stefanidis and K. G. Margaritis*	**Algorithm Based Fault Tolerance: Review and experimental study**
Session 17: Numerical Analysis II **Chair: Susanne Brenner (Room 3)**		
18:00 – 18:30	*S. Bertoluzza*	**The mortar method with approximate constraint: Coupling finite elements on unstructured non-matching grids in 3D**
18:30 – 19:00	*Igor Bock*	**On Discretization and Linearization of von Kármán Equations for Vuscoelastic Plates**
19:00 – 19:30	*A. Davari and E. Babolian*	**A Computable Error Bound for Approximate Solution of Linear Integral Equations by Adomian Decomposition Method**
Coffee Break		
20:00 – 20:30	*S. Bertoluzza and M. Pennacchio*	**Preconditioning the Mortar Method by Substructuring: the high order case**
20:30 – 21:00	*Yong Duan*	**Meshless Galerkin Method Based on Regions Partitioned into Subdomains Using Global RBF**

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Session 18: Computational Methods II Chair: Iain Duff (Room 4)		
18:00 – 18:30	*Fahir Talay Akyildiz, Hamid Bellout and Mustafa Yapici*	**On the Use of Kantorovich Method in Viscoe-Lastic Flow**
18:30 – 19:00	*M. T. Cao, C. Moreno and P. Quintela*	**Simulation of Rayleigh waves in cracked plates**
19:00 – 19:30		
Coffee Break		
20:00 – 20:30	*Andrea Comerlati, Giorgio Pini and Giuseppe Gambolati*	**Linearized solutions to two phase flow in porous media solved by Finite Elements**
20:30 – 21:00	*D. Echeverria and P. W. Hemker*	**A Defect Correction Based approach to Space Mapping**

END OF THE 4TH DAY

ICNAAM 2004

Tuesday 14 September 2004

Invited Speaker (ROOM 1)

Chair: G.A. Watson

09:30 – 10:30	*Susanne Brenner*	**Multigrid and Domain Decomposition for C^0 Interior Penalty Methods**
Coffee Break		

Session 19: Function theories in R^n and their applications (to equations of mathematical physics) IV

Chair: Wolfgang Sprößig and Klaus Gürlebeck (Room 1)

11:00 – 11:30	*L. Leonardo Traversoni*	**Quaternion splines and wavelets in hydrodynamics**
11:30 – 12:00	*Ricardo Abreu*	**On Boundary Values of Harmonic Multivector Fields via Clifford Analysis**
12:00 – 12:30	*El-Sayed, Ahmed*	**On hyperholomorphic Bloch functions**
Coffee Break		
13:00 – 13:30	*Sirkka-Liisa Eriksson*	**Cauchy-type integral formulas for k-hypermonogenic functions**
13:30 – 14:00	*Jaime Keller*	**Comprehensive Representation of Physical Phenomena in a 5-dimensional quadratic space**

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Session 20: Numerical Analysis III
Chair: Z. Kalogiratou (Room 2)

11:30 – 12:00	*Vjeran Hari*	**On Some New Applications of the CS Decomposition**
12:00 – 12:30	*S. M. Hashemiparast, M. MasjedJamei and M. R. Eslahchi*	**On Numerical Solution of some ill-Condition Nonlinear Systems**
12:30 – 13:00		
Coffee Break		
13:30 – 14:00	*Taku Itoh, Daichi Fujimoto, Takashi Kitagawa and Susumu Nakata*	**Incomplete Cholesky Preconditioners with Band – Diagonalization for Sparse Symmetric Systems**
14:00 – 14:30	*Radek Kučera, Jaroslav Haslinger and Zdeněk Dostál*	**An algorithm for solving 3D contact problems with friction**

Session 21: Computational Methods III
Chair: Ch. Tsitouras (Room 3)

11:30 – 12:00	*G. R. Karamali and A. Shidfar*	**An Inverse Nonlinear Diffusion Equation with a Nonlocal Boundary Condition**
12:00 – 12:30	*K. Tavakoli and A. Shidfar*	**An Inverse Problem of Parabolic Type**
12:30 – 13:00	*M. M. Kassem*	**Group solution of unsteady free-convection flow from a continuous moving vertical surface subjected to constant heat flux**
Coffee Break		
13:30 – 14:00	*A. Shidfar and R. Pourgholi*	**A Numerical Solution of an Inverse Heat Conduction Problem**
14:00 – 14:30	*Xia Cui*	**Characteristic Midification ADFE Method for Convection-dominated Parabolic Integro-differential Equation**

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Session 22: Numerical Analysis IV
Chair: Michael Vrahatis (Room 4)

11:30 – 12:00	*T. Bartz-Beielstein, K. E. Parsopoulos and M. N. Vrahatis*	**Analysis of Particle Swarm Optimization Using Computational Statistics**
12:00 – 12:30	*D. G. Sotiropoulos, A. E. Kostopoulos and T. N. Grapsa*	**Training Neural Networks using Two-Point Stepsize Gradient Methods**
12:30 – 13:00	*Saša Singer and Sanja Singer*	**Efficient Termination Test for the Nelder-Mead Search Algorithm**
Coffee Break		
13:30 – 14:00	*D. G. Sotiropoulos and T. N. Grapsa*	**An Interval Branch-and-Prune Algorithm for Discrete Minimax Problems**
14:00 – 14:30	*E. C. Laskari, G. C. Meletiou and M. N. Vrahatis*	**Inverse Interpolation over Finite Fields**

Session 23: Numerical Analysis V
Chair: M. Meneguette (Room 5)

11:30 – 12:00	*Abdelhakim Lotfi*	**A Preconditioned Domain Decomposition Algorithm for Frictional Contact Problem**
12:00 – 12:30	*M. Meneguette, M. Messias and V. A. Botta*	**Stability of multistep second derivative methods for integrodifferential equations**
12:30 – 13:00		
Coffee Break		
13:30 – 14:00	*Marcelo Messias and Messias Meneguette Jr.*	**On the existence of infinite heteroclinic cycles in polynomial systems and its dynamic consequences**
14:00 – 14:30	*Kamel Nafa*	**Pressure Stabilized finite element approximation for the generalized Stokes Problem**

LUNCH

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Invited Speaker (ROOM 1) **Chair: Guido Vanden Berghe**		
15:30 – 16:30	*I. Al-Subaihi and G. A. Watson*	**The use of the l_1 and l_∞ norms in fitting curves and surfaces to data**
Invited Speaker (ROOM 1) **Chair: Ch. Tsitouras**		
16:30 – 17:30	*Andy Wathen*	**Numerical simulation of pattern formation on growing domains**
Coffee Break		
Session 24: Mathematics Methods I **Chair: Ch. Tsitouras (Room 2)**		
18:00 – 18:30	*M. P. Hanias, J. C. Statharas, K. Kouroumbas*	**Estimation of the strange attractor invariants and the use of them in forecasting the nonequilibrium thermodynamics data from liquid spilling experiments performed with hydrogen**
18:30 – 19:00	*N. I. Kavallaris, C. V. Nikolopoulos and D. E. Tzanetis*	**Estimates of blow-up time for the "open-spectrum" case for the radial symmetric semilinear heat equation**
19:00 – 19:30	*K. A. Belibassakis, Ch. N. Stefanakos, A. Bratsos and A. M. Prospathopoulos*	**Numerical simulation of weakly nonlinear wave propagation in variable bathymetry regions**
Coffee Break		

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20:00 – 20:30	*Anastasios Chronopoulos*	**Learning in Distance Education**
20:30 – 21:00	*A. K. Baldoukas, G. A. Demosthenous, D. E. Manolakos, P. Kostazos, A. Tsatsaris, S. A. Mavrommatis, B. D. Tsoukalas*	**Optimizing the crashworthy characteristics of guardrail spacers using the explicit FE code LS-DYNA**
Session 25: Computational Methods IV **Chair: D. Vlachos (Room 3)**		
18:00 – 18:30	*Shu-Ming Chang, Tai-Chia Lin and Wen-Wei Lin*	**Dynamics of Three Vortices Bose-Einstein Condensates**
18:30 – 19:00	*O. I. Kosmidou and Y. S. Boutalis*	**On the Riccati Equations Arising in Robust Control Approaches**
19:00 – 19:30	*Moody T. Chu, Yuen-Cheng Kuo and Wen-Wei Lin*	**On inverse quadratic eigenvalue problems with partially prescribed eigenstructure**
Coffee Break		
20:00 – 20:30	*Shu-Ming Chang, Wen-Wei Lin and Shih-Feng Shieh*	**Fixed Point Methods for Energy States of Multi-Component Bose-Einstein Condensates**
20:30 – 21:00	*Roland Rozsnyo and Klaus-Dieter Semmler*	**Optimal Control of Geodesics in Riemannian Manifolds**
Session 26: Numerical Analysis VI **Chair: Dirk Laurie (Room 4)**		
18:00 – 18:30	*N. Parumasur, J. Banasiak and J. M. Kozakiewicz*	**Numerical Modelling of Kinetic Equations: Diffusion Approximations with Initial Data Correctors**
18:30 – 19:00	*Willy Malfliet*	**The tanh method: a tool for solving certain classes of nonlinear PDE's**
19:00 – 19:30	*Tetsuya Sakurai, Hiroto Tadano, Yuichi Inadomi and Umpei Nagashima*	**A moment-based method for large scale eigenvalue problems**
Coffee Break		
20:00 – 20:30		
20:30 – 21:00		

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Session 27: Mathematical Physics II
Chair: Metin Demiralp (Room 5)

18:00 – 18:30	*Gülşen Taşkin and Metin Demiralp*	**A Matrix Algebraic Analytic Continuation Method for Hypergeometric Functions of ${}_{p+1}F_p$ Type**
18:30 – 19:00	*M. Alper Tunga and Metin Demiralp*	**Error Propagation Through Generalized High Dimensional Model Representation For Data Partitioning**
19:00 – 19:30		
Coffee Break		
20:00 – 20:30	*Sevda Üsküplü and Metin Demiralp*	**A Factorization Method for ${}_{p+1}F_p$ Type Hypergeometric Function Evaluations**
20:30 – 21:00	*İrem Yaman, Metin Demiralp and N. Abdülbaki Baykara*	**Factorization of Evolution Matrix to Approximate the Hypergeometric Functions of Type ${}_pF_p$**

Session 28: Numerical Analysis VII
Chair: Michael Vrahatis (Room 1)

18:00 – 18:30	*Bernard Mourrain, Nicos G. Pavlidis, Dimitris K. Tasoulis and Michael N. Vrahatis*	**Computing the Number of Real Roots of Polynomials through Neural Networks**
18:30 – 19:00	*Lin Fuyong*	**Orthogonal complex bases of spline and its application**
19:00 – 19:30	*Hiroto Tadano and Tetsuya Sakurai*	**A method for avoiding breakdown in product-type iterative methods and its behavior for Toeplitz linear systems**
Coffee Break		

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20:00 – 20:30	*M. H. van Raalte and P. W. Hemker*	**Fourier Two-level Analysis for Discontinuous Galerkin Discretization of the Convection-Diffusion equation**
20:30 – 21:00	*A. Amat, S. Busquier and J.C. Trillo*	**Stable Interpolatory Nonlinear Multiresolution Transforms in 3D**

END OF THE 5TH DAY

END OF THE CONFERENCE

We hope to see you next year

in RHODES

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