

University of Calabria, Rende (CS), Italy  
in cooperation with  
Society for Industrial and Applied Mathematics, USA

Program of  
The 2nd International Conference and Summer School  
NUMTA 2016

**Numerical Computations:  
Theory and Algorithms**

Pizzo Calabro, Italy  
19–25 June 2016  
<http://wwinfo.dimes.unical.it/~yaro/numta2016>

Numerical Computations: Theory and Algorithms 2016 (NUMTA 2016), Pizzo Calabro, Italy

**General Macro Table (Plenary lectures and Tutorials) [see the next three tables for details]**

Monday, June 20		Tuesday, June 21		Wednesday, June 22		Thursday, June 23		Friday, June 24	
9:00	Registration	9:00	Parallel sessions	9:00	Parallel sessions	9:00	Parallel sessions	9:00	Parallel sessions
9:30	Opening	9:20		9:20		9:20		9:20	
9:45	Plenary Lecture Kunoth	9:40		9:40		9:40		9:40	
		10:00		10:00		10:00		10:00	
		10:20		10:20		10:20		10:20	
10:35	Coffee Break	10:40		10:40		10:40		10:40	
10:50	Plenary Lecture Pardalos	11:00	Coffee Break	11:00	Coffee Break	11:00	Coffee Break	11:00	Coffee Break
		11:20	Plenary Lecture Brugnano	11:20	Plenary Lecture Gao	11:20	Plenary Lecture Venturino	11:20	Plenary Lecture Venturino
11:40	Tutorial Sergeyev	12:10	Plenary Lecture A. Zilinskis	12:10	Plenary Lecture Zhigljavsky	12:10	Plenary Lecture D'Alotto	11:40	Parallel sessions
								12:00	
								12:20	
12:30	Joint photo							12:40	
								13:00	
13:00	Lunch								
14:30	Parallel sessions	14:30	Parallel sessions	15:00	Excursion	16:30	Coffee Break	14:30	Closing
14:50		14:50							
15:10		15:10							
15:30		15:30							
15:50		15:50							
16:10		16:10							
16:30	Coffee Break	16:30	Coffee Break	16:30	Coffee Break	16:30	Coffee Break	16:30	Coffee Break
16:50	Tutorial Lolli	16:50	Plenary Lecture De Leone			16:50	Parallel sessions	16:50	Closing
17:40	Tutorial Battiti	17:40	Tutorial Gustafson			17:10			
-		-				17:30			
18:30		18:30				17:50			
						18:10			
						18:30			
19:00	Dinner	19:00	Dinner	20:00	Dinner	20:00	Conference Dinner	19:00	Farewell Dinner

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**Main room (Plenary lectures are also indicated for convenience)**

Monday, June 20		Tuesday, June 21		Wednesday, June 22		Thursday, June 23		Friday, June 24			
9:00	Registration	9:00	Special Session 2: Intractable Problems and Approximation Algorithms I	9:00	Special Session 4: Numerical and Computational Methods in Data Analysis and Classification II	9:00	Special Session 5: Numerical Global Optimization Algorithms II	9:00	Special Session 8: High Performance Computing in Modeling and Simulation I		
9:30	Opening	9:20		9:20		9:20		9:20		9:20	
9:45	Plenary Lecture Kunoth	9:40		9:40		9:40		9:40		9:40	
		10:00		10:00		10:00		10:00		10:00	
		10:20		10:20		10:20		10:20		10:20	
10:35	Coffee Break	10:40	10:40	10:40	10:40	10:40	10:40	10:40			
10:50	Plenary Lecture Pardalos	11:00	Coffee Break	11:00	Coffee Break	11:00	Coffee Break	11:00	Coffee Break		
11:40		Tutorial Sergeyev	11:20	Plenary Lecture Brugnano	11:20	Plenary Lecture Gao	11:20	Plenary Lecture Venturino	11:20	Special Session 9: High Performance Computing in Modeling and Simulation II	
	12:10		Plenary Lecture A. Zilinskas	12:10	Plenary Lecture Zhigljavsky	12:10	Plenary Lecture D'Alotto	12:10			
	12:30		Joint photo								
13:00	Lunch										
14:30	Special Session 1: Numerical and Computational Methods in Data Analysis and Classification I	14:30	Special Session 3: Numerical Global Optimization Algorithms I	15:00	Excursion	14:40	Tutorial Shamseddine	14:30	Special Session 10: Intractable Problems and Approximation Algorithms II		
14:50		14:50						14:50		14:50	
15:10		15:10						15:10		15:10	
15:30		15:30						15:30		15:30	
15:50		15:50						15:50		15:50	
16:10		16:10				16:10	Rizza	16:10			
16:30	Coffee Break	16:30	Coffee Break			16:30	Coffee Break	16:30	Coffee Break		
16:50	Tutorial Lolli	16:50	Plenary Lecture De Leone			16:50	Special Session 7: Approxim. Theory and Its Applications II	16:50	Closing		
17:40 - 18:30	Tutorial Battiti	17:40 - 18:30	Tutorial Gustafson			17:10					
						17:30					
						17:50					
						18:10					
18:30						18:30					
19:00	Dinner	19:00	Dinner	20:00	Dinner	20:00	Conference Dinner	19:00	Farewell Dinner		

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**Second Room (Plenary lectures are also indicated for convenience)**

Monday, June 20		Tuesday, June 21		Wednesday, June 22		Thursday, June 23		Friday, June 24	
9:00	Registration	9:00	Burdakov	9:00	Kobylkin	9:00	Guthrie	9:00	Voevodin
9:30	Opening	9:20	Fasano	9:20	Han	9:20	Gwinner	9:20	Muliukha
9:45	Plenary Lecture Kunoth (Room 1)	9:40	Astorino	9:40	Porta	9:40	Ciegis	9:40	Chernyavskiy
		10:00	Dzemyda	10:00	Addawe	10:00	Porfiriev	10:00	Jang
		10:20	Cococcioni	10:20	Zykina	10:20	Calidonna	10:20	Chernykh
10:35	Coffee Break	10:40	Iannone	10:40	F. Fontes	10:40	Caldarola	10:40	
10:50	Plenary Lecture Pardalos (Room 1)	11:00	Coffee Break	11:00	Coffee Break	11:00	Coffee Break	11:00	Coffee Break
		11:20	Plenary Lecture Brugnano (Room 1)	11:20	Plenary Lecture Gao (Room 1)	11:20	Plenary Lecture Venturino (Room 1)	11:20	
11:40	Tutorial Sergeyev (Room 1)	12:10	Plenary Lecture A.Zilinskas (Room 1)	12:10	Plenary Lecture Zhigljavsky (Room 1)	12:10	Plenary Lecture D'Alotto (Room 1)	11:20	
12:30	Joint photo							11:40	
								12:00	
								12:20	
								12:40	
								13:00	
13:00	Lunch								
14:30	Le Mézo	14:30	Special Session 6: Approxim. Theory and Its Applications I	15:00	Excursion	14:40	Tutorial Shamseddine (Room 1)	14:30	
14:50	Califano	14:50							
15:10	Ishiwata	15:10							
15:30	Amodio	15:30							
15:50	Saleewong	15:50							
16:10	Mazzia	16:10							
16:30	Coffee Break	16:30	Coffee Break			16:30	Coffee Break	16:30	Coffee Break
16:50	Tutorial Lolli (Room 1)	16:50	Plenary Lecture De Leone (Room 1)			16:50	D. Fontes	16:50	Closing
17:40	Tutorial Battiti (Room 1)	17:40	Tutorial Gustafson (Room 1)			17:10	Cafieri		
-		-				17:30	Štikonas		
18:30		18:30				17:50	Zanella		
						18:10	Mukhametzhanov		
19:00	Dinner	19:00	Dinner	20:00	Dinner	18:30	Gruzdeva		
						20:00	Conference Dinner	19:00	Farewell Dinner

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**Third Room (Plenary lectures are also indicated for convenience)**

Monday, June 20		Tuesday, June 21		Wednesday, June 22		Thursday, June 23		Friday, June 24					
9:00	Registration	9:00	Caliciotti	9:00	Stikoniene	9:00	Lisawadi	9:00					
9:30	Opening	9:20	Masetti	9:20	Serov	9:20	Fedele	9:20					
9:45	Plenary Lecture Kunoth (Room 1)	9:40	Rabago	9:40	Chaturantabut	9:40	Krents	9:40					
		10:00	Pragliola	10:00	Faydaoglu	10:00	Demin	10:00					
		10:20	Trofimov	10:20	Teodoro	10:20	Tun	10:20					
10:35	Coffee Break	10:40	Zasukhin	10:40	Shmerling	10:40	Sintunavarat	10:40					
10:50	Plenary Lecture Pardalos (Room 1)	11:00	Coffee Break	11:00	Coffee Break	11:00	Coffee Break	11:00	Coffee Break				
		11:20	Plenary Lecture Brugnano (Room 1)	11:20	Plenary Lecture Gao (Room 1)	11:20	Plenary Lecture Venturino (Room 1)	11:20					
11:40	Tutorial Sergeyev (Room 1)	12:10	Plenary Lecture A.Zilinskas (Room1)	12:10	Plenary Lecture Zhigljavsky (Room 1)	12:10	Plenary Lecture D'Alotto (Room 1)	11:20					
12:30	Joint photo							11:40					
								12:00					
								12:20					
								12:40					
								13:00					
13:00	Lunch												
14:30		14:30	Rebegoldi	15:00	Excursion	14:40	Tutorial Shamseddine (Room 1)	14:30					
14:50		14:50	Hari					14:50					
15:10		15:10	Ozaki					15:10					
15:30		15:30	Ilin					15:30					
15:50		15:50	Salam					15:50					
16:10		16:10	Han					16:10					
16:30	Coffee Break	16:30	Coffee Break					16:30	Coffee Break	16:30	Coffee Break	16:30	Coffee Break
16:50	Tutorial Lolli (Room 1)	16:50	Plenary Lecture De Leone (Room 1)					16:50	Dosiyev	16:50	Closing	16:50	
17:40	Tutorial Battiti (Room 1)	17:40	Tutorial Gustafson (Room 1)					17:10	Kobayashi				
-		-						17:30	Celiker				
18:30		18:30		17:50	Toshiaki								
				18:10	Castillo								
19:00	Dinner	19:00	Dinner	20:00	Dinner	20:00	Conference Dinner	19:00	Farewell Dinner				

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Talks related to the Grossone Infinity Computing

Monday, June 20		Tuesday, June 21		Wednesday, June 22		Thursday, June 23		Friday, June 24	
10:20		10:20	<b>Cococcioni (Room 2)</b>	10:20		10:20		10:20	
10:35		10:40	<b>Iannone (Room 2)</b>	10:40		10:40		10:40	
10:50		11:00	Coffee Break	11:00	Coffee Break	11:00	Coffee Break	11:00	Coffee Break
		11:20		11:20		11:20		11:20	
11:40	<b>Tutorial Sergeyev</b>							11:40	
								12:00	
12:30	Joint photo			12:10	<b>Plenary Lecture Zhigljavsky</b>	12:10	<b>Plenary Lecture D'Alotto</b>	12:20	
								12:40	
								13:00	
13:00	Lunch								
14:30		14:30		15:00	Excursion			14:30	
14:50		14:50				14:40		14:50	
15:10		15:10						15:10	
15:30		15:30				15:30		15:30	
15:50		15:50				15:50		15:50	
16:10	<b>Mazzia (Room 2)</b>	16:10				16:10	<b>Rizza (Main Room)</b>	16:10	
16:30	Coffee Break	16:30	Coffee Break			16:30	Coffee Break	16:30	Coffee Break
16:50	<b>Tutorial Lolli</b>	16:50	<b>Plenary Lecture De Leone</b>			16:50			
17:40		17:40				17:10			
-		-				17:30			
18:30		18:30		17:50		16:50	Closing		
				18:10					
				18:30					
19:00	Dinner	19:00	Dinner	20:00	Dinner	20:00	Conference Dinner	19:00	Farewell Dinner

**NUMTA2016**  
**19 - 25 June 2016**  
**Club Med Resort "Napitia"**  
**Pizzo Calabro, Italy**

<b>Plenary Lectures (Room 1)</b>			
Day	Time	Speaker / <b>Chairman</b>	Title
20.06.2016	9:45	Angela Kunoth <b>Luigi Brugnano</b>	Generating Sparse Representations by Adaptive Multiscale Approximation
20.06.2016	10:50	Panos M. Pardalos <b>Renato De Leone</b>	Computational Models and Challenging Global Optimization Problems
21.06.2016	11:20	Luigi Brugnano <b>Yaroslav Sergeyev</b>	Recent advances in the numerical solution of Hamiltonian PDEs
21.06.2016	12:10	Antanas Zilinskas <b>Yaroslav Sergeyev</b>	Rational decision theory based approach to global optimization
21.06.2016	16:50	Renato De Leone <b>Louis D'Alotto</b>	Nonlinear programming and grossone: algorithms
22.06.2016	11:20	David Gao <b>Antanas Zilinskas</b>	On Unified Modeling, Theory, and Method for Solving Multi-Scale Global Optimization Problems
22.06.2016	12:10	Anatoly Zhigljavsky <b>Antanas Zilinskas</b>	Classical areas of mathematics and statistics where the concept of grossone could be useful
23.06.2016	11:20	Ezio Venturino <b>Panos M. Pardalos</b>	On some computational issues in biology, ecology and population theory
23.06.2016	12:10	Louis D'Alotto <b>Panos M. Pardalos</b>	Classifying Cellular Automata Using Grossone

<b>Tutorials (Room 1)</b>			
Day	Time	Speaker / <b>Chairman</b>	Title
20.06.2016	11:40	Yaroslav Sergeyev <b>Renato De Leone</b>	Numerical Computations with Infinities and Infinitesimals: Foundations and Applications
20.06.2016	16:50	Gabriele Lolli <b>Anatoly Zhigljavsky</b>	Episodes in the history of infinitesimals
20.06.2016	17:40	Roberto Battiti <b>Anatoly Zhigljavsky</b>	The LION way: machine Learning for Intelligent Optimization: a source of power for innovation in business
21.06.2016	17:40	John Gustafson <b>Louis D'Alotto</b>	Adoption of Unum Arithmetic: Two Approaches
23.06.2016	14:40	Khodr Shamseddine <b>Gabriele Lolli</b>	One-variable and Multi-variable Integral Calculus over the Levi- Civita Field and Applications



## NUMTA 2016 Special Sessions

**Special session 1:  
Numerical and Computational Methods in Data Analysis and Classification I  
Chairman: Gerardo Toraldo  
20.06.2016, Room 1, 14:30 – 16:30**

Time	Subm.	Authors	Title
14:30	35	Manlio Gaudio, Annabella Astorino and Antonio Fuduli	Nonlinear Programming for classification problems in machine learning
14:50	72	Rosanna Campagna, Serena Crisci, Salvatore Cuomo, Ardelio Galletti and Livia Marcellino	A second order derivative scheme for the Bregman Algorithm class
15:10	89	Ardelio Galletti, Salvatore Cuomo, Livia Marcellino and Giulio Giunta	Some error bounds for K-iterated Gaussian recursive filters
15:30	90	Andrea Cristofari, Alberto De Santis and Stefano Lucidi	Using Smooth Approximations of the Zero-Norm for Cluster Analysis
15:50	122	Vanna Lisa Coli, Valeria Ruggiero and Luca Zanni	Scaled first-order methods for a class of large-scale constrained least squares problems
16:10	201	Gerardo Toraldo, Daniela di Serafino, Valeria Ruggiero and Luca Zanni	A Note on Spectral Properties of Some Gradient Methods

**Special session 2:  
Intractable Problems and Approximation Algorithms I  
Chairman: Yury Kochetov  
21.06.2016, Room 1, 9:00 – 11:00**

Time	Subm.	Authors	Title
09:00	11	Michael Khachay and Katherine Neznakhina	Towards a PTAS for the Generalized TSP in Grid Clusters
09:20	12	Michael Khachay and Roman Dubinin	Approximability of the d-dimensional Euclidean Capacitated Vehicle Routing Problem

09:40	18	Anna Navrotskaya and Victor Il'ev	A local search for a graph clustering problem
10:00	6	Julia Kovalenko	Optimal Recombination in Genetic Algorithms for Flowshop Scheduling Problems
10:20	152	Alexander Plyasunov and Artem Panin	On Three-Level Problem Of Competitive Pricing
10:40	7	Yury Kochetov, Ekaterina Alekseeva and Mohand Mezmaz	Local Search Heuristic for the Discrete Leader-Follower Problem with Multiple Follower Objectives

**Special session 3:  
Numerical Global Optimization Algorithms I  
Chairman: Vladimir Grishagin  
21.06.2016, Room 1, 14:30 – 16:30**

Time	Subm.	Authors	Title
14:30	143	Konstantin Barkalov and Roman Strongin	New Approach to Parallel Solving a Set of Global Optimization Problems
14:50	23	Alexander Strekalovskiy	An Exact Penalty for D.C. Optimization
15:10	37	Jonathan Gillard	Optimization Problems in Structured Low Rank Approximation
15:30	77	Julius Žilinskas, Remigijus Paulavicius and Lakhdar Chiter	A new diagonal partition-based method for global optimization problems
15:50	81	Roberto Battiti, Yaroslav Sergeyev, Mauro Brunato and Dmitri Kvasov	GENOPT 2016: Design and Results of a GENERALization-based Challenge in Global OPTimization

16:10	14	Konstantin Barkalov and Ilya Lebedev	Local Tuning in Multilevel Scheme of Parallel Global Optimization
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**Special session 4:  
Numerical and Computational Methods in Data Analysis and Classification II  
Chairman: Salvatore Cuomo  
22.06.2016, Room 1, 9:00 - 11:00**

Time	Subm.	Authors	Title
09:00	158	Mario Guarracino, Mara Sangiovanni, Gerardo Severino, Gerardo Toraldo and Marco Viola	On the Regularization of Generalized Eigenvalues Classifiers
09:20	80	Salvatore Cuomo, Pasquale De Michele, Ardelio Galletti and Giovanni Ponti	Collaborative Reputation Systems in a Cultural Heritage Scenario
09:40	71	Edward Kh. Gimadi, Ivan Rykov and Oxana Tsidulko	The TSP-approach to approximate solving the m-Cycles Cover problem
10:00	82	Roberto Battiti and Mauro Brunato	Optimization by Populations of Collaborative Local Searchers
10:20	177	Lou D'Alotto and Clara Pizzuti	Characterization of one-dimensional cellular automata rules through topological network features
10:40	34	Vittorio Latorre and David Gao	Global Optimal Trajectory in Chaos and NP-Hardness

**Special session 5:  
Numerical Global Optimization Algorithms II  
Chairman: Roman Strongin  
23.06.2016, Room 1, 9:00 - 11:00**

Time	Subm.	Authors	Title
09:00	49	Yuri Evtushenko, Mikhail Posypkin and Sergey Lurie	New optimization problems arising in modelling of 2D-crystal lattices

09:20	39	Gražina Gimbutienė and Antanas Žilinskas	Clustering-based statistical global optimization
09:40	36	Yuri Popkov, Boris Darkhovskiy and Alexey Popkov	GFS algorithm based on simple Monte Carlo trials for solving global optimization problems
10:00	17	Daniela Lera and Yaroslav Sergeyev	Remarks on global optimization using space-filling curves
10:20	16	Vladimir Grishagin, Ruslan Israfilov and Yaroslav Sergeyev	Comparative efficiency of dimensionality reduction schemes in global optimization
10:40	66	Albertas Gimbutas and Antanas Žilinskas	On global optimization using an estimate of Lipschitz constant and simplicial partition

**Special session 6:  
Approximation Theory and Its Applications I  
Chairman: Maria Grazia Russo  
21.06.2016, Room 2, 14:30 – 16:30**

Time	Subm.	Authors	Title
14:30	40	Magda Rebelo and Luísa Morgado	Introducing graded meshes in the numerical approximation of fractional differential problems
14:50	120	Giampietro Allasia, Roberto Cavoretto and Alessandra De Rossi	Hermite-Birkhoff interpolation on arbitrarily distributed data on the sphere and other manifolds
15:10	92	Roberto Cavoretto, Alessandra De Rossi and Emma Perracchione	RBF-PU interpolation with variable subdomain sizes and shape parameters
15:30	105	Ahmet Duran, Mehmet Tuncel, Serdar Celebi, Bora Akaydin and Figen O. Topkaya	A Comparison of SuperLU Solvers on the Intel MIC Architecture
15:50	119	Cecile Piret	A fast radial basis functions method for solving partial differential equations on arbitrary surfaces

16:10	187	Ahmet Duran and Mehmet Tuncel	A New Parallel Numerical Parameter Optimization Algorithm for a Dynamical System
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**Special session 7:  
Approximation Theory and Its Applications II  
Chairman: Alessandra De Rossi  
23.06.2016, Room 1, 16:50 – 18:50**

Time	Subm.	Authors	Title
16:50	142	Donatella Occorsio and Maria Grazia Russo	Extended Lagrange interpolation in $L^1$ spaces
17:10	87	Elisa Francomano, Frank Hilker, Marta Paliaga and Ezio Venturino	On basins of attraction for a predator-prey model via meshless approximation
17:30	146	Guido Ala, Elisa Francomano and Marta Paliaga	Towards an efficient meshfree solver
17:50	79	Francesco Dell'Accio, Filomena Di Tommaso and Kai Hormann	On the enhancement of the approximation order of the triangular Shepard method
18:10	78	Filomena Di Tommaso, Francesco Dell'Accio and Kai Hormann	Multinode rational operators for univariate interpolation
18:30	144	Giada Serafini	Numerical Approximation of Weakly Singular Integrals on a Triangle

**Special session 8:  
High Performance Computing in Modeling and Simulation I  
Chairman: William Spataro  
24.06.2016, Room 1, 9:00 – 11:00**

Time	Subm.	Authors	Title
09:00	48	Giovanni Ravazzani, Silvio Davolio, Alessandro Ceppi and Alessandro Fiore	Wind speed interpolation for hydrological modeling in complex topography area

09:20	50	Pavlos Progias, Angelos Amanatiadis, William Spataro, Giuseppe Trunfio and Georgios Ch. Sirakoulis	A Cellular Automata Based FPGA Realization of a New Metaheuristic Bat-Inspired Algorithm
09:40	96	Alfonso Senatore, Donato D'Ambrosio, Alessio De Rango, Rocco Rongo, William Spataro, Giuseppe Mendicino and Salvatore Straface	Accelerating A Three-Dimensional Eco-Hydrological Cellular Automation On GPU With OPENCL
10:00	121	Albino Altomare, Eugenio Cesario and Carlo Mastroianni	Efficient workload management in geographically distributed data centers leveraging autoregressive models
10:20	123	Federica Lucà, Rocco Rongo, Valeria Lupiano and Giulio Iovine	Lava-flow hazard with optimized non-uniform grid of vents
10:40	126	Gianluigi Folino, Andrea Giordano and Carlo Mastroianni	Scalable asynchronous execution of cellular automata
<p><b>Special session 9:</b>  <b>High Performance Computing in Modeling and Simulation II</b>  <b>Chairman: William Spataro</b>  <b>24.06.2016, Room 1, 11:20 - 13:00</b></p>			
Time	Subm.	Authors	Title
11:20	132	Giuseppe Agapito, Pietro Hiram Guzzi and Mario Cannataro	Parallel Processing of Genomics Data
11:40	133	Pietro Sabatino, Francesco Chiaravalloti, Giuseppe Fedele and Salvatore Gabriele	Algorithms for the analysis and characterization of convective structures relative to extreme rainfall events.

12:00	46	Vadim Voevodin, Vladimir Voevodin, Denis Shaikhislamov and Dmitry Nikitenko	Data mining method for anomaly detection in the supercomputer task flow
<b>Special session 10:</b> <b>Intractable Problems and Approximation Algorithms II</b> <b>Chairman: Adil Erzin</b> <b>24.06.2016, Room 1, 14:30 – 16:30</b>			
Time	Subm.	Authors	Title
14:30	47	Mikhail Posypkin and Roman Kolpakov	The Lower Bound on Complexity of Parallel Branch-And-Bound Algorithm for Subset Sum Problem
14:50	63	Mikhail Posypkin, Roman Kolpakov and Si Thu Thant Sin	The Upper Bound on the Complexity of Branch- and-Bound with Cardinality Bound for Subset sum Problem
15:10	75	Oleg Khamisov	Optimization with quadratic support functions in nonconvex smooth optimization
15:30	30	Andrei Orlov and Alexander Strelakovski	On a numerical solving of random generated hexamatrix games
15:50	10	Roman Plotnikov, Adil Erzin and Nenad Mladenovic	Approximation Algorithms for the Min- Power Symmetric Connectivity Problem
16:10	3	Adil Erzin and Lydia Osotova	Comparative Analysis of Regular Covers with One or Two Types of Sectors

## NUMTA 2016 Regular Sessions

<b>Regular Session 1</b>			
<b>Chairman: Luigi Brugnano</b>			
<b>20.06.2016, Room 2, 14:30 – 16:30</b>			
Time	Subm.	Authors	Title
14:30	1	Thomas Le Mézo, Luc Jaulin and Benoit Zerr	An interval approach to compute Initial Value Problem
14:50	182	Giovanna Califano and Dajana Conte	Domain Decomposition methods for a Class of Integro-Partial Differential Equations
15:10	54	Tetsuya Ishiwata	Structure preserving finite difference scheme for the vortex filament motion
15:30	93	Pierluigi Amodio and Giuseppina Settanni	Numerical solution of multiparameter spectral problems by high order finite different schemes
15:50	188	Teerapol Saleewong, Chamaiporn Cotnam and Sayaphat Susai	A finite integration method for Boundary Value ODEs
16:10	108	Francesca Mazzia, Yaroslav D. Sergeev, Felice Iavernaro, Pierluigi Amodio and M.S. Mukhametzhanov	Numerical methods for solving ODEs on the Infinity Computer



**Regular Session 2**  
**Chairman: Sonia Cafieri**  
**21.06.2016, Room 2, 9:00 - 11:00**

Time	Subm.	Authors	Title
09:00	57	Oleg Burdakov and Ahmad Kamandi	Quasi-Newton multipoint and interpolation methods with line search
09:20	106	Giovanni Fasano, Silvio Giove and Riccardo Gusso	Polarity for Quadratic Hypersurfaces and the Conjugate Gradient method: relation with degenerate and non-degenerate cases
09:40	91	Annabella Astorino, Manlio Gaudio and Giovanna Miglionico	Optimizing Sensor Cover Energy for Directional Sensors
10:00	147	Gintautas Dzemyda and Mykolas Bilinskas	Optimization in Modeling the Ribs-Bounded Contour from Computer Tomography Scan
10:20	145	Marco Cococcioni, Massimo Pappalardo and Yaroslav D. Sergeyev	Lexicographic Multiobjective Linear Programming using Integer Grossone Powers
10:40	220	Paola Iannone, Davide Rizza and Athina Thoma	Teaching the arithmetic of infinity: a qualitative evaluation

**Regular Session 3**  
**Chairman: TBD**  
**21.06.2016, Room 3, 9:00 - 11:00**

Time	Subm.	Authors	Title
09:00	26	Andrea Caliciotti, Giovanni Fasano and Massimo Roma	Preconditioning strategies for Nonlinear Conjugate Gradient methods, based on Quasi-Newton updates
09:20	192	Giulio Masetti, Silvano Chiaradonna and Felicita di Giandomenico	Equations Ordering Influence on Inexact and Quasi-Inverse Newton methods
09:40	135	Julius Fergy Rabago and Jerico Bacani	Steffensen's Analogue for Approximating Roots of Polynomial Equations
10:00	199	Monica Pragliola, Salvatore Cuomo, Gerardo Toraldo, Daniela Calvetti and Erkki Somersalo	Computational issues in Linear Multistep Method Particle Filtering
10:20	61	Aleksandr Trofimov, Lydmila Sirotenko, Almaz Khanov and Vladimir Losev	Electrical simulating for chip formation process
10:40	53	Sergey Zasukhin	Determining Evaporation in the Model of Water Transfer in Soil

**Regular Session 4**  
**Chairman: Mario Guarracino**  
**21.06.2016, Room 3, 14:30 - 16:30**

Time	Subm.	Authors	Title
14:30	165	Simone Rebegoldi, Lola Bautista, Laure Blanc-Féraud, Arturo Plata, Marco Prato and Luca Zanni	An efficient gradient-based method for differential-interference-contrast microscopy
14:50	41	Vjeran Hari	On the Complex HZ Method for PGEP

15:10	44	Katsuhisa Ozaki	Improvement of error bound for dot product with unit in the first place
15:30	155	Valery Ilin	On the Iterative Processes in the Krylov-Sonneveld Subspaces
15:50	178	Ahmed Salam	An upper J-Hessenberg reduction of a matrix through symplectic Householder transformations
16:10	136	Ji-Wan Seo, Seung-Jin Choi, Sang Yong Han and Junho Kim	Fuzzy Ensemble based Data Fusion in A Big Data Environment

**Regular Session 5**  
**Chairman: Valeria Ruggiero**  
**22.06.2016, Room 2, 9:00 - 11:00**

Time	Subm.	Authors	Title
09:00	94	Konstantin Kobylkin	Complexity and Approximability for a Problem of Intersecting of Proximity Graphs with Minimum Number of Equal Disks
09:20	129	Sunghyun Kang, Ji-Wan Seo, Sang Yong Han, Seung-Jin Choi and Junho Kim	Mining Feature-Opinion in Biased Online Community
09:40	98	Tatiana Alessandra Bubba, Federica Porta, Gaetano Zanghirati and Silvia Bonettini	Region-of-interest tomography: a nonsmooth regularization approach based on shearlets
10:00	76	Rizavel Addawe, Joel Addawe and Joselito Magadia	Optimization of Seasonal ARIMA Models Using Differential Evolution - Simulated Annealing

			(DESA) Algorithm in Forecasting Dengue Cases in Baguio City
10:20	113	Anna Zykina, Olga Kaneva and Tatiana Pavlychenko	Complementarity problem for the stochastic transportation problem
10:40	28	Fernando A.C.C. Fontes and Luís Tiago Paiva	Optimal Control of Constrained Nonholonomic Systems: adaptive time-grid refinement algorithms
<b>Regular Session 6</b> <b>Chairman: Francesca Mazzia</b> <b>22.06.2016, Room 3, 9:00 - 11:00</b>			
Time	Subm.	Authors	Title
09:00	150	Olga Štikonienė	Modeling of the Non-Steady Navier-Stokes Equations in Thin Structures
09:20	170	Valery Serov and Teemu Tyni	Inverse Scattering Problems for the Perturbed Biharmonic Operator
09:40	67	Saifon Chaturantabut and Gun Srijuntongsiri	Nonlinear Reduced-Order Modeling with Contractivity and Monotonicity Properties
10:00	176	Serife Faydaoglu and Valery G. Yakhno	Approximate Computation of the Green's Function of Transverse Vibration of the Composite Rods

10:20	179	M. Filomena Teodoro	Approximating a Nonlinear Advanced-Delayed Equation From Acoustics
10:40	116	Efraim Shmerling	Acceptance Tail Ziggurat Algorithm for Generating Unimodal Random Variables

**Regular Session 7**  
**Chairman: Mihaiela Isac**  
**23.06.2016, Room 2, 9:00 - 11:00**

Time	Subm.	Authors	Title
09:00	2	Roderick Guthrie and Mihaiela Isac	COMPUTATIONAL FLUID DYNAMIC MODELING OF HORIZONTAL SINGLE BELT CASTING (HSBC) OF STEEL STRIPS; Numerical and modelling issues.
09:20	197	Joachim Gwinner	Numerical Methods for Nonsmooth Boundary Value Problems in Contact Mechanics
09:40	5	Raimondas Ciegis	Numerical Simulation of Unidirectional Models of Lasers
10:00	56	Denis Porfiriev, Anastasiya Gorbunova, Igor Zavershinsky, Semen Sugak and Nonna Molevich	Numerical simulation of precessing vortex core dumping by localized nonstationary heat source
10:20	160	Claudia Roberta Calidonna, Mariafrancesca De Pino, Salvatore Di Gregorio, Francesco Gullace, Daniel Gulli and Valeria Lupiano	A Cellular Automata model for beach morphodynamics

10:40	166	Fabio Caldarola, Francesca Bertacchini, Eleonora Bilotta, Pietro Pantano and Leonardo Fabian Renteria Bustamante	Emergence of linguistic-like structures in one-dimensional Cellular Automata
<b>Regular Session 8</b> <b>Chairman: Valery Serov</b> <b>23.06.2016, Room 3, 9:00 - 11:00</b>			
Time	Subm.	Authors	Title
09:00	191	Supranee Lisawadi	A Cost Minimization Design of Non-conforming Control Charts
09:20	85	Luigi D'Alfonso, Giuseppe Fedele, Francesco Chiaravalloti, Gaetano D'Aquila, Gilberto Pin and Thomas Parisini	Finite-time parameters estimation of the Chua system
09:40	103	Anton Krents, Molevich Nonna, Dmitry Anchikov and Anton Pakhomov	Spontaneous pattern formation in broad-area lasers
10:00	117	Igor Demin and Sergey Gurbatov	The Use Fast Legendre Transform Algorithm for Numerical Simulation of Nonlinear Waves and Structures
10:20	8	Hein Tun, Prof. Dr. Sergey Lupin and Aleksandr Gureev	Combination of Context-role and Perimeter Protection Paradigms for Modelling the Security of Information Systems
10:40	193	Wutiphol Sintunavarat and Adoon Pansuwan	Discussion of a new iterative algorithm for numerical reckoning fixed points of Suzuki's generalized nonexpansive mappings

**Regular Session 9**  
**Chairman: Khodr Shamseddine**  
**23.06.2016, Room 1, 15:30 – 16:30**

Time	Subm.	Authors	Title
15:30	134	Kyaw Zaw Ye, Balabanov Anatoly Andrevich, Barhotkin Vyacheslav Alexandrovich, Gagarina Larissa Gennadievna, Savchenko Yuriy Vasilyevich, Krylikov Nikolay Olegovich, Shagin Anatoly Vasilyevich and Minakov Evgeniy Ivanovich	RESOLUTION OF LOGICAL EQUALIZATIONS BY RECURRENT METHOD
15:50	115	Vladimir Zykin	Theory for Typed Inclusion Dependencies with Null Values
16:10	21	Davide Rizza	Supertasks and Numeral Systems

**Regular Session 10**  
**Chairman: Alexander Strekalovskiy**  
**23.06.2016, Room 2, 15:30 – 16:30**

Time	Subm.	Authors	Title
15:30	169	Elaf Ali and David Gao	Canonical Finite Element Method For Solving Nonconvex Variational Problems to Post Buckling Beam Problem
15:50	83	Bhagyesh Patil, L. P. M. I. Sampath, Ashok Krishnan, K. V. Ling and H . B. Gooi	Examining the Bernstein global optimization approach to optimal power flow problem
16:10	107	Renato Bruni, Fabio Celani and Stefano Lucidi	Min-Max Optimization for determining Optimal Parameters in Magnetic Spacecraft Stabilization via Attitude feedback

**Regular Session 11**  
**Chairman: Dmitri Kvasov**  
**23.06.2016, Room 3, 15:30 – 16:30**

Time	Subm.	Authors	Title
15:30	19	Victor Gergel and Evgeniy Kozinov	Accelerating Multicriterial Optimization by the Intensive Exploitation of Accumulated Search Data
15:50	109	Darkhan Akhmed-Zaki, Timur Imankulov, Bazargul Matkerim and Beimbet Daribayev	Implicit and Explicit Parallel Algorithms for Simulating 3D Oil Recovery problem
16:10	42	Anatoliy Korotchenko and Valentina Smoryakova	On a method of construction numerical integration formulas

**Regular Session 12**  
**Chairman: Julius Zilinskas**  
**23.06.2016, Room 2, 16:50 – 18:30**

Time	Subm.	Authors	Title
16:50	43	Dalila Fontes, Sergiy Butenko and Mohammad Hosseinian	A heuristic approach to the maximum edge weight clique problem on sparse networks
17:10	112	Sonia Cafieri, Andrew Conn and Marcel Mongeau	Solving aircraft conflicts by continuous optimization and mixed-integer nonlinear programming
17:30	140	Artūras Štikonas and Gailė Paukšaitė	The Minimum Norm Least Squares Solution to the Discrete Nonlocal Problems



17:50	124	Riccardo Zanella, Massimo Zanetti and Valeria Ruggiero	A parallel approach for image segmentation by numerical minimization of a second-order functional
18:10	184	Marat Mukhametzhanov, Dmitri Kvasov and Yaroslav Sergeyev	Acceleration Techniques in the Univariate Lipschitz Global Optimization
18:30	29	Tatiana Gruzdeva and Alexander Strekalovskiy	An Approach to Fractional Programming via D.C. Optimization

**Regular Session 13**  
**Chairman: TBD**  
**23.06.2016, Room 3, 16:50 – 18:30**

Time	Subm.	Authors	Title
16:50	181	Adiguzel Dosiyeu	A method of harmonic extension for computing the generalized stress intensity factors for Motz's problem
17:10	84	Kenta Kobayashi	The circumradius condition and its application
17:30	27	Emine Celiker and Adiguzel Dosiyeu	On the Fourth-Order Accurate Approximations of the Solution of the Dirichlet Problem for Laplace's Equation in a Rectangular Parallelepiped
17:50	86	Itoh Toshiaki	Discretization of the Schwarzian Derivative
18:10	20	Kenier Castillo and Fernando R. Rafaeli	Interlacing and monotonicity of zeros of orthogonal polynomials briefly revisited

18:30	131	Giulio Iovine, Alessio De Rango, Donato D'Ambrosio and Oreste Terranova	EroCal 2.0: a dynamic distributed soil erosion model
<b>Regular Session 14</b> <b>Chairman: Mikhail Posypkin</b> <b>24.06.2016, Room 2, 09:00 – 10:40</b>			
Time	Subm.	Authors	Title
9:00	45	Sergey Sobolev, Konstantin Stefanov and Vadim Voevodin	Automatic discovery of the communication network topology for building a supercomputer model
9:20	97	Vladimir Muliukha, Alexander Ilyashenko, Vladimir Zaborovsky and Alexey Lukashin	Cyber-Physical Approach to the Network-Centric Robotics Control Task
9:40	64	Andrey Chernyavskiy, Kamil Khamitov, Alexey Teplov, Vadim Voevodin and Vladimir Voevodin	Properties of the Numerical Algorithms for Problems of Quantum Information Technologies: Benefits of Deep Analysis
10:00	171	Young Ju Heo, Won Sang Chin and Ju Wook Jang	Identifying Service Contexts for QoS Support in IoT-Service Oriented Software Defined Networks
10:20	25	Igor Kulikov, Igor Chernykh and Boris Glinskiy	Numerical simulations of astrophysical problems on a massively parallel supercomputers