

# Program of SYNASC'17

## = main tracks & invited talks=

<b>Thursday, September 21</b>	
8:00-9:00	<b>Registration</b> (West University of Timișoara, ground floor, room 045C)
9:00-9:20	<b>Opening.</b> Room A11. Chair: <i>Tudor Jebelean</i>
9:20-10:10	<b>Invited talk.</b> Room A11. Chair: <i>Tudor Jebelean</i> <b>Klaus Dieter Schewe-</b> <i>Behavioural Theory and Logic of Distributed Adaptive Systems computing</i>
10:10-10:30	Coffee break
10:30-12:10	<b>Logic and Programming (I).</b> Room A11. Chair: <i>Klaus Dieter Schewe</i> (papers #39, #76, #19, #46, #38) <ul style="list-style-type: none"> <li>• <a href="#">David Cerna</a> and Michael Lettmann. <i>Towards a Clausal Analysis of Proof Schemata</i></li> <li>• <a href="#">Florian Faissolle</a>. <i>Formalization and closedness of finite dimensional subspaces</i></li> <li>• <a href="#">Andrei Arusoaie</a>, David Nowak, Vlad Rusu and Dorel Lucanu. <i>A Certified Procedure for RL verification</i></li> <li>• Cezary Kaliszyk, Josef Urban and <a href="#">Jiri Vyskocil</a>. <i>System Description: Statistical Parsing of Informalized Mizar Formulas</i></li> <li>• <a href="#">Pritom Rajkhowa</a> and Fangzhen Lin. <i>VIAP - Automated System for Verifying Integer Assignment Programs with Loops</i></li> </ul>
12:10-13:30	Lunch
13:30-15:00	<b>Tutorial.</b> Room A11. Chair: <i>Laura Kovacs</i> <b>Erika Abraham-</b> <i>SMT Solving for Arithmetic Theories: Theory and Tool Support</i>
15:00-15:20	Coffee break
15:20-16:40	<b>Logic and Programming (II).</b> Room A11. Chair: <i>Erika Abraham</i> (papers #70, #8) <ul style="list-style-type: none"> <li>• <a href="#">Sorin Stratulat</a>. <i>Validating Back-links in FOL<sub>ID</sub> Cyclic Proofs</i></li> <li>• <a href="#">Ana Turlea</a>, Florentin Ipate and Raluca Lefticaru. <i>A Test Suite Generation Approach based on EFSMs using a multi-objective algorithm</i></li> </ul>
16:40-17:00	Coffee break
17:00-18:00	<b>Symbolic Computation (I)&amp; Advances in the Theory of Computing.</b> Room A11. Chair: <i>Gabriel Istrate</i> (papers #10, #57, #18) <ul style="list-style-type: none"> <li>• Komla Amenyo Folitse, <a href="#">David Jeffrey</a> and R Corless. <i>Inverse of the Gamma function</i></li> <li>• <a href="#">David J. Jeffrey</a> and Nasir Khattak. <i>Rational orthonormal matrices</i></li> <li>• <a href="#">Stefan Popescu</a>. <i>Solving 2-D Pattern Matching using Networks of Polarized Picture Processors With Circular Permutation</i></li> </ul>
18:00-18:30	<b>Poster session</b> (papers #9, w#22) <ul style="list-style-type: none"> <li>• Diac Paul. <i>WARP: Efficient Automatic Web Service Composition</i></li> <li>• Victor Artigues. <i>Color grading with neural network</i></li> </ul>
18:30-20:30	<b>Welcome reception</b>

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<b>Friday, September 22</b>	
9:00-9:50	<b>Invited talk.</b> Room A11. Chair: <i>Viorel Negru</i> <b>Gheorghe Păun</b> — <i>Numerical P Systems, After Ten Years</i>
9:50-10:10	Coffee break
10:10-12:10	<p><b>Numerical Computing.</b> Room A11. Chair: <i>Eva Kaslik</i> (papers #62, #60, #78, #16, #6, #49)</p> <ul style="list-style-type: none"> <li>• <a href="#">Diego Brandão</a>, <a href="#">Mauricio Kischinhevsky</a>, <a href="#">Sanderson Gonzaga de Oliveira</a>, <a href="#">Carla Osthoff</a> and <a href="#">Frederico Cabral</a>. <i>A total variation diminishing Hopmoc scheme for numerical time integration of evolutionary differential equations</i></li> <li>• <a href="#">Pierrick Quemar</a>, <a href="#">Emmanuel Audusse</a>, <a href="#">Olivier Lafitte</a>, <a href="#">Benjamin Mélinand</a>, <a href="#">Agnès Leroy</a> and <a href="#">Chi-Tuân Pham</a>. <i>Parametric study of the accuracy of an approximate solution for the mild-slope equation</i></li> <li>• <a href="#">Fei Wang</a>, <a href="#">Greg Reid</a> and <a href="#">Henry Wolkowicz</a>. <i>An SDP-based method for the real radical ideal membership test</i></li> <li>• <a href="#">Agneta Balint</a> and <a href="#">Stefan Balint</a>. <i>Existence of Gaps on the Path of Equilibriums in Case of Longitudinal Flight with Constant Forward Velocity</i></li> <li>• <a href="#">Darian Onchis</a> and <a href="#">Simone Zappalà</a>. <i>Constructive realizable wavelet-like systems based on multi-windows spline-type spaces</i></li> <li>• <a href="#">Peter Mitura</a>, <a href="#">Ivan Simecek</a> and <a href="#">Ivan Kotenkov</a>. <i>Effective construction of convex hull algorithms</i></li> </ul>
12:10-13:10	Lunch break
13:10-14:00	<b>Invited talk.</b> Room A11. Chair: <i>Dana Petcu</i> <b>Panagiota Fatourou</b> - <i>Concurrency for the masses: The Paradigm of Transactional Memory</i>
14:00-14:20	Coffee break
14:20-16:20	<p><b>Distributed Computing.</b> Room A11. Chair: <i>Panagiota Fatourou</i> (papers #43, #50, #58, #68, #64, #4)</p> <ul style="list-style-type: none"> <li>• <a href="#">Andrea De Salve</a>, <a href="#">Barbara Guidi</a> and <a href="#">Laura Ricci</a>. <i>A data aggregation strategy based on Wavelet for the Internet of Things</i></li> <li>• <a href="#">Gabriel Ciobanu</a> and <a href="#">Eneia Nicolae Todoran</a>. <i>Abstract Continuation Semantics for Asynchronous Concurrency</i></li> <li>• <a href="#">Darius Bufnea</a> and <a href="#">Diana Șotropa</a>. <i>Measuring and Visualizing the Scrappiness Level of a Website</i></li> <li>• <a href="#">Eneia Nicolae Todoran</a>. <i>An Approach to Performance Evaluation Programming</i></li> <li>• <a href="#">Raul Suditu</a>, <a href="#">Cristian Babau</a>, <a href="#">Marius Marcu</a> and <a href="#">Vladimir-Ioan Cretu</a>. <i>Road Traffic Segments Characterization</i></li> <li>• <a href="#">Christoph Ertl</a>, <a href="#">Ralf-Peter Mundani</a> and <a href="#">Ernst Rank</a>. <i>Ensuring Domain Consistency in an Adaptive Framework with Distributed Topology for Fluid Flow Simulations</i></li> </ul>
16:20-16:40	Coffee break
16:40-18:20	<p><b>Artificial Intelligence (1).</b> Room A11. Chair: <i>Costin Bădică</i> (papers #51, #67, #33, #47, #72)</p> <ul style="list-style-type: none"> <li>• <a href="#">Zsuzsanna Marian</a>, <a href="#">Istvan Gergely Czibula</a> and <a href="#">Gabriela Czibula</a>. <i>A hierarchical clustering-based approach for software restructuring at the package level</i></li> <li>• <a href="#">Diana Miholca</a>, <a href="#">Gabriela Czibula</a>, <a href="#">Zsuzsanna Marian</a> and <a href="#">Istvan Gergely Czibula</a>. <i>An unsupervised learning based conceptual coupling measure</i></li> <li>• <a href="#">Adriana M. Coroiu</a>. <i>Outliers detection in analysis of cognitive emotion regulation questionnaire for teenagers</i></li> <li>• <a href="#">Doru Rotovei</a> and <a href="#">Viorel Negru</a>. <i>Improving Lost/Won Classification in CRM Systems Using Sentiment Analysis</i></li> <li>• <a href="#">Lavinia-Stefania Sirbu</a> and <a href="#">Serban Radu</a>. <i>Automated Negotiation Strategies Prediction in Multi-Agent Systems</i></li> </ul>
18:30-20:00	<b>Walking tour in Timisoara city center</b>
20:00-22:00	<b>Conference dinner (Hotel Continental)</b>

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Saturday, September 23	
9:00-9:50	<b>Invited talk.</b> Room: Aula Magna. Chair: <i>Tudor Jebelean</i> <b>Bruno Buchberger</b> - <i>Grobner Bases and Macaulay Matrices</i>
9:50-10:40	<b>Invited talk.</b> Room: Aula Magna. Chair: <i>Viorel Negru</i> <b>Tetsuo Ida</b> - <i>Models of Computation for Origami Science and Engineering</i>
10:40-11:00	Coffee break
11:00-13:00	<b>Ceremony</b> in honor of Professor <b>Stefan Maruster</b> 's 80th birthday, of Professor <b>Bruno Buchberger</b> 's 75th birthday and of Professor <b>Tetsuo Ida</b> 's 70th birthday. Room: Aula Magna
13:00-14:00	Lunch
14:00-15:30	<b>Tutorial.</b> Room A11. Chair: <i>Bruno Buchberger</i> <b>Wolfgang Windsteiger</b> - <i>The Theorema Proof Assistant</i>
15:30-15:50	Coffee break
15:50-17:30	<b>Symbolic Computation.</b> Room A11. Chair: <i>James Davenport</i> (papers #30, #17, #77, #48, #63) <ul style="list-style-type: none"> <li>• <u>John Kluesner</u> and Michael Monagan. <i>Resolving zero-divisors using Hensel lifting</i></li> <li>• <u>Robert Vajda</u>. <i>Maximal Radius for Stability Regions of Explicit Runge Kutta Methods by Real Quantifier Elimination</i></li> <li>• <u>Tateaki Sasaki</u> and Daiju Inaba. <i>Simple Relation Between the Lowest-order Element of Ideal <math>\langle G, H \rangle</math> and the Last Element of Polynomial Remainder Sequence</i></li> <li>• <u>Fadoua Ghourabi</u>. <i>Toward non-flat geometrical origami folds with Eos system</i></li> <li>• Zak Tonks, Gregory Sankaran and <u>James H. Davenport</u>. <i>Fast Matrix Operations in Computer Algebra</i></li> </ul>
17:30-17:50	Coffee break
17:50-19:10	<b>Artificial Intelligence (2).</b> Room A11. Chair: <i>Daniela Zaharie</i> (papers: #79, #74, #23, #75) <ul style="list-style-type: none"> <li>• <u>Andrei Cristian Nica</u>, Tudor Berariu, Florin Gogianu and Adina Magda Florea. <i>Learning to Maximize Return in a Stag Hunt Collaborative Scenario through Deep Reinforcement Learning</i></li> <li>• <u>Adriana Birlutiu</u>, Adrian Burlacu, Manuella Kadar and Daniela Onita. <i>Defect Detection in Porcelain Industry based on Deep Learning Techniques</i></li> <li>• <u>Dan Simovici</u>, Roman Sizov and Selim Mimaroglu. <i>A Boolean Approach for Detection of Frequent Items</i></li> <li>• Doina Cosovan and Catalin Valeriu Lita. <i>Practical aspects related to using Hidden Markov Models for detecting metamorphic file infectors</i></li> </ul>
19:10-19:50	<b>Logic and Programming (3).</b> Room A11. Chair: <i>Tudor Jebelean</i> <ul style="list-style-type: none"> <li>• Hossein Hojjat and <u>Philipp Ruemmer</u>. <i>Deciding and Interpolating Algebraic Data Types by Reduction</i></li> <li>• Andrei Arusoae, <u>Stefan Ciobaca</u>, Vlad Craciun, Dragos Gavrilit and Dorel Lucanu. <i>A Comparison of Static Analysis Tools for Vulnerability Detection in C/C++ Code</i></li> </ul>

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<b>Sunday, September 24</b>	
9:00-9:50	<b>Invited talk.</b> Room A11.Chair: <i>Tetsuo Ida</i> <b>Armin Biere</b> - <i>Challenges in Verifying Arithmetic Circuits Using Computer Algebra</i>
9:50-10:40	<b>Invited talk.</b> Room A11. Chair: <i>Tetsuo Ida</i> <b>Dongming Wang</b> - <i>Discovering Geometric Theorems from Images of Diagrams</i>
10:40-11:00	Coffee break
11:00-12:00	<b>Artificial Intelligence (3)</b> . Room A11.Chair: <i>Adriana Bîrluțiu</i> (papers #41, #7, #56) <ul style="list-style-type: none"> <li>• Dragos Teodor Gavrilut, Dan Gabriel Anton and George Popoiu. <i>Machine learning based malware detection. How to balance memory footprint with model accuracy.</i></li> <li>• <u>Laura Franzoi</u>. <i>Jaccard-like fuzzy distances for computational linguistics</i></li> <li>• <u>Ciprian-Octavian Truică</u>, Elena Apostol and Catalin Leordeanu. <i>Topic modeling using contextual cues</i></li> </ul>
12:00-13:00	Lunch
13:00-14:20	<b>Artificial Intelligence (4)</b> . Room A11.Chair: <i>Daniela Zaharie</i> (papers #71, #53, #52, #44) <ul style="list-style-type: none"> <li>• <u>Ramona Stoica</u> and Bazil Parv. <i>MultiNetCom an extended framework for communities detection in multi-relational networks</i></li> <li>• Maria-Dorinela Sirbu, <u>Marilena Panaite</u>, Ana Secui, Mihai Dascalu, Nicolae Nistor and Stefan Trausan-Matu. <i>ReaderBench: Building Comprehensive Sociograms of Online Communities</i></li> <li>• Nicolae Nistor, <u>Marilena Panaite</u>, Mihai Dascalu and Stefan Trausan-Matu. <i>Identifying Socio-Cognitive Structures in Online Knowledge Building Communities using Cohesion Network Analysis</i></li> <li>• <u>Liviu Octavian Maftciu-Scai</u>, Emanuela Maftciu-Scai and Teodora Voina. <i>Bandwidths Optimization on Sparse Matrices Using Brain Storm Optimization</i></li> </ul>
14:20-14:40	Coffee break
14:40-15:20	<b>Industrial presentation.</b> Room A11.Chair: <i>Viorel Negru</i> <b>Florin Mănăilă</b> - <i>From HPC to Deep Learning: IBM PowerAI Vision</i>
15:20-16:00	<b>Industrial presentation.</b> Room A11. Chair: <i>Viorel Negru</i> <b>Valentin Mureșan</b> - <i>Intelligence on the Edge - where machine meets the reality</i>
16:00-16:20	<b>Industrial presentation.</b> Room A11. Chair: <i>Viorel Negru</i> <b>Andrei Sucilă</b> - <i>Amazon Web Services for Machine Learning</i>
16:20	<b>Closing</b>