



# Proceedings of the Computer Science Students Conference

**Edition II**

**3rd Computer Science Students Conference  
Cluj-Napoca, June 2012**

Organized by

**Computer Science Department  
Faculty of Automation and Computer Science  
Technical University Cluj-Napoca**

**Computer Science Department  
Faculty of Mathematics and Computer Science  
Babes-Bolyai University Cluj-Napoca**

**ISSN 2285 – 2166**

**2012**

## Table of contents:

Roxana Balaci (UBB), <i>Generating Programs for Classification using Particle Swarm Optimization Algorithms</i> .....	1-7
Robert Albert (UTCN), <i>Monitoring Patients with Wearable Devices</i> .....	8-14
Iustina Gligor (UTCN), <i>Cerberus - a text messaging system</i> .....	15-19
Alexandru-Marian Albu (UBB), <i>Document Presentation using Natural User Interface - A Microsoft Kinect based approach</i> .....	20-26
Teodora-Andra Albu (UBB), <i>Study of Romanian Sign Alphabet Recognition System</i> .....	27-31
Alexandru-Paul Ban, Oana Baciu (UTCN), <i>Opinion mining - Sentiment analysis in e-commerce and sports</i> .....	32-37
Laura Lavinia Ciuca (UTCN), <i>Knowledge representation and reasoning in construction</i> .....	38-42
Ioana-Maria Apintei (UBB), <i>Animating Scalable Vector Graphics</i> .....	43-49
Béla Balázs (UBB), <i>3D Software Visualization Tool for Enhanced Code Comprehension</i> .....	50-60
Danut Mihon, Dorian Gorgan (UTCN), <i>Spatial Data Processing and Visualization Techniques in Distributed Environments</i> .....	61-67
Emil Marginean (UTCN), <i>Performance evaluation of Cloud-based Web Services: Formal modeling and experimentation</i> .....	68-75
Diana Botean (UBB), <i>Image processing using graphical programming for embedded devices</i> .....	76-83
Alexandru Brad (UBB), <i>A Semantic Web Ready Personal Knowledge Manager</i> .....	84-91
Tamas-Albert Gasko, Adriana Dorina Ghirisan (UTCN), <i>Extracting Process Models using Bio-Inspired Clustering</i> .....	92-99
Florin Cristian Macicasan, Octavian Lucian Hasna (UTCN), <i>Context-Behavioral Advertisement Recommendation – A Unified Approach</i> .....	100-108
Diana Maria Ciuhuță (UBB), <i>A Comparison of Clustering Algorithms in Recommender Systems</i> .....	109-114
Andra Dîncu (UBB), <i>Personal Travel Assistant – A multi-agent approach</i> .....	115-122
Ciprian Oprișa, George Cabău, Adrian Coleșa (UTCN), <i>Clustering .NET Applications Using Code Patterns</i> .....	123-128

Alexandru Dumbravan (UTCN), <i>Friends Tracking System</i> .....	129-134
Bogdan Pop (UBB), <i>Building an automated task delegation algorithm for project management and deploying it as SaaS</i> .....	135-140
Mircea Grecu (UBB), <i>Atmospheric Temperature Prediction using Machine Learning</i> .....	141-147
Oxana Hotea, Adrian Groza (UTCN), <i>Semantic Processing of Sensor Streams for Urban Computing</i> .....	148-154
Cosmina Ivan, Razvan Popa (UTCN), <i>Cloud based Cross Platform Mobile Applications</i> .....	155-162
Réka – Andrea Károly (UBB), <i>Train Monitoring</i> .....	163-167
Ovidiu Pârvu (UBB), <i>Building intelligent knowledge management systems</i> .....	168-174
Katalin Sebestyén-Pál, Roland Vachter, Gheorghe Sebestyén-Pál (UTCN), <i>Energy-Efficient Multimedia Streaming on a Cloud Infrastructure</i> .....	175-182
Andrei Vlad Lutas (UTCN), <i>Memory introspection for detecting operating system critical data structure</i> .....	183-189
Dénes-Bálint Kelemen-Fehér, Klaudia Kintzel (UBB), <i>Tower - 3D graphics solutions for Android and iOS platforms</i> .....	190-196
Florentina Lung (UBB), <i>Test Driven Development for mobile applications</i> .....	197-203
Silviu-Ioan Filip (UTCN), <i>High degree polynomial approximations and their applications</i> .....	204-210
Alexandra Mota (UTCN), <i>Blind People Assistant Software Environment on web</i> .....	211-216
Botond Kiss, Beáta Magyari (UBB), <i>Augmented Reality Framework for Treasure Hunt Games</i> .....	217-222
Adriana Neagoş (UBB), <i>Cross-Site Scripting Browsers' Protection Analysis</i> .....	223-229
Sorin Buzura (UTCN), <i>Simulations Framework for Network Congestion Avoidance Algorithms using the OMNeT++ IDE</i> .....	230-236
Oana Maria Hategan (UTCN), <i>Influenza Detection Based on Twitter Streaming Data</i> .....	237-241
Ovidiu Pârvu, Krisztián Szabó, Barnabás Székely, Rareş Dragomir (UBB), <i>EcoSorter – The intelligent ecological robot</i> .....	242-247
Voica Gavrilut (UBB), <i>Accessibility of source code</i> .....	248-256

Andrei Coclici, Andreea Tudose Vintila (UTCN), <i>A Hybrid Solution for Network Intrusion Detection</i> .....	257-264
Andreea Sin-Neamtiu, Mihai-Andrei Veres (UTCN), <i>Automatic Paleographic Transcription using a Novel Feature Vector and a Hierarchic Classifier</i> .....	265-272
Barna Szocs, Szilárd Vajday, Judit Robu (UBB), <i>D.A.C Draw and Calc - The Intuitive Calculator</i> .....	273-279