



LITHUANIAN COMPUTER SOCIETY  
VILNIUS UNIVERSITY  
INSTITUTE OF DATA SCIENCE AND DIGITAL TECHNOLOGIES  
LITHUANIAN ACADEMY OF SCIENCES



12th Conference on

# DATA ANALYSIS METHODS FOR SOFTWARE SYSTEMS

Program

**Druskininkai, Lithuania, Hotel “Europa Royale”**

<http://www.mii.lt/DAMSS>

**December 2 – 4, 2021**

<b>11<sup>00</sup>–13<sup>00</sup></b>	<b>Registration Info Desk</b>
<b>13<sup>00</sup>–13<sup>30</sup></b>	<b>Opening, Welcome and Introductory Remarks</b>

*Gintautas Dzemyda* “Data Analysis Methods for Software Systems”  
(Vilnius University, Institute of Data Science and Digital Technologies)

<b>13<sup>30</sup>–15<sup>00</sup></b>	<b>Plenary Session</b>
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*Tatiana Tchemisova* “Generating of Non-Regular Instances of Semidefinite Programming Problems” (University of Aveiro, Portugal)

*Remigijus Paulavičius, Ernestas Filatovas* “Empirical Analysis of Selected Blockchain Simulators” and “Application of MCDM Techniques for Consensus Protocol Selection” (Vilnius University)

<b>15<sup>00</sup>–15<sup>30</sup></b>	<b>Coffee break</b>
<b>15<sup>30</sup>–16<sup>30</sup></b>	<b>Oral Session (Room A)</b>

1. *Stefano Bonnini, Michela Borghesi* “Mental Health Effects of Covid-19 Lockdown: Empirical Findings and Multivariate Regression Model” (University of Ferrara, Italy)
2. *Domnica Dzitac, Wajahat Mirza, Bokang Jia, Simona Dzitac* “TCEM: An Exhaustive Text-to-Code Evaluation Metric for the Auto-Generated Code Snippets” (New York University Abu Dhabi, UAE)
3. *Jurgita Markevičiūtė, J. Bernatavičienė, R. Levulienė, V. Medvedev, P. Treigys* “COVID-19 Infection in Lithuania: Analysis of Social-Economic Consequences” (Vilnius University)

- **J. Arnastauskaitė, T. Ruzgas, M. Bražėnas** “Power Analysis of Multivariate Goodness of Fit Tests”
- **D. Breskuvienė** “Forbearance Prediction Using XGBoost and Light GBM models”
- **A. Budžys, V. Medvedev, O. Kurasova** “User Behaviour Analysis Based on Similarity Measures to Detect Anomalies”
- **A. Burmakova, D. Kalibatienė** “Machine Learning vs. Fuzzy Inference Methods for Predicting the Oil Spill Consequences with Small Data Sets”
- **A. Chaževskas** “Newest Machine Learning Password Guessing Techniques”
- **M. Danilovaitė, G. Tamulevičius** “Acoustic Analysis for Vocal Fold Assessment – Challenges, Trends, and Opportunities”
- **R. Dauliūtė, E. Mačius, G. Danys, J. Trinkūnas, R. Puronaitė, R. Bėrontas** “Software for Automatic Anonymisation of Radiographic Images”
- **J. Jucevičius, P. Treigys, J. Bernatavičienė, M. Trakymas, I. Naruševičiūtė, R. Briedienė** “Investigation of Abnormal Prostate Region Detection Using Different Modality Combinations of mpMRI Scans”
- **G. Kasputytė, A. Landaitė, R. Juozaitienė, A. Bunevičius, R. Bunevičius, Š. Bagdonas, J. Venius, T. Krilavičius** “Monitoring of Cancer Patients Using Smartphones Sensor Data”
- **G. Navickas, G. A. Melnik-Leroy, P. Treigys** “Measuring the Quality of Synthetic Speech”
- **R. Surkant, J. Jucevičius, P. Treigys, J. Bernatavičienė, M. Trakymas, I. Naruševičiūtė** “Cancerous Tissue Detection Using Dynamic Contrast-Enhanced MRI Data for Prostate Region”

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- *M. Vaškevičius, J. Kapočiūtė-Dzikienė* “Modeling of Crystallization Conditions for Organic Synthesis Product Purification Using Deep Learning”

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<b>18<sup>00</sup>–19<sup>30</sup></b>
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<b>Welcome Party</b>
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<b>9<sup>00</sup>–10<sup>00</sup></b>	<b>Plenary Session</b>
<p><i>Audris Mockus</i> “World of Code: Enabling a Research Workflow for Mining and Analyzing the Universe of Open Source VCS Data” (University of Tennessee, USA)</p>	
<b>10<sup>00</sup>–11<sup>00</sup></b>	<b>Oral Session (Room A)</b>
<ol style="list-style-type: none"> <li>1. <i>Rūta Juozaitienė, E. Wit</i> “Unobserved Heterogeneity May Induce Ghost Triadic Effects in Relational Event Models” (Vilnius University, Vytautas Magnus University)</li> <li>2. <i>Dalia Krikščiūnienė, V. Sakalauskas, I. Ognjanovic, R. Sandelij</i> “Evaluation of Artificial Intelligence Methods and Tools for Discovering Healthcare Data Patterns” (Vilnius University)</li> <li>3. <i>K. Morkūnaitė, V. Tamakauskas, R. Leonavičius, D. Skaudickas, Vincentas Veikutis</i> “Somatic and Mental Symptoms in Patients with Chest Pain: A Cross-Sectional Study” (Lithuanian University of Health Sciences)</li> </ol>	
<b>10<sup>00</sup>–11<sup>00</sup></b>	<b>Poster Session (2), December 3 (Room B)</b>
<ul style="list-style-type: none"> <li>• <i>G. Dzemyda, V. Medvedev, M. Sabaliauskas</i> “On the Parallelization of the Geometric Multidimensional Scaling”</li> <li>• <i>A. Gadeikytė, D. Sandonavičius, V. Rimavičius, R. Barauskas</i> “Numerical Simulations of Heat and Mass Exchange Between Human Skin and Textile Structures”</li> <li>• <i>R. Gipiškis, O. Kurasova</i> “Application of CNNs for Brain MRI Image Segmentation”</li> <li>• <i>A. Igumenov, E. Filatovas, V. Medvedev, R. Paulavičius</i> “Estimating Energy Consumption of Ethereum Network”</li> <li>• <i>M. Kepalas, J. Žilinskas</i> “Locations on Networks”</li> </ul>	

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- **K. Lašas, A. Matusevičius, R. Juozaitienė, T. Krilavičius** “Vehicle Route Optimization Using Evolutionary Algorithms”
  - **R. Kunickaitė, D. Servaitė, G. Jenciūtė, A. Bumblauskas, M. Bučelytė, A. Glemža, T. Krilavičius** “Anomaly Detection in Systems Metrics”
  - **M. Lukauskas, T. Rasytas, D. Vaitmonas, M. Minelga** “Natural Language Generation with Architecture of Transformers: A Case Study of Business Names Generation”
  - **M. Lukauskas, T. Ruzgas** “Analysis of Clustering Methods Performance Across Multiple Datasets”
  - **A. Lupeikienė** “Decomposition Problems in the Development of Complex Information Systems”

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**11<sup>00</sup>–11<sup>20</sup>**

**Coffee break**

**11<sup>20</sup>–12<sup>20</sup>**

**Oral Session (Room A)**

1. **Vytautas Paura, Virginijus Marcinkevičius** “The Analysis of Impact of Noise on Hyperspectral Unmixing Algorithms” (Vilnius University)
  2. **Dalius Mažeika, E. Ševiakovas** “User Behavior Based Host-Level Intrusion Detection Using Deep Neural Network” (Vilnius Gediminas Technical University)
  3. **Yuriy Kharin, Valeriy Voloshko** “Robust Statistical Analysis for BiCNAR(s) Time Series” (Belarusian State University, Belarus)
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- **R. Gricius, I. Belovas** “Intelligent Data Capture in Digitized Business Documents”
- **S. Gudas, K. Noreika** “Causal Interactions of the Agile Activities in Application Development Management”
- **R. Jurkus, P. Treigys, J. Venskus** “Prediction of Vessels Trajectory Using Different Coordinate Systems”
- **E. Karčiauskas** “Features of the Python Active Lessons Teaching Methodology”
- **G. Korvel, K. Kąkol, P. Treigys, B. Kostek** „Examining the Self-Similarity Method for the Lombard Effect Recognition “
- **A. Kriščiukaitis, A. R. A. dos Santos Rodrigues, R. Petrolis, V. Marozas** “On the Problem of Eigenvector Sign Ambiguity: Ad-Hoc Solution for Eigenvector Decomposition-Based Signal and Image Analysis”
- **D. Kuizinienė, P. Savickas, T. Krilavičius** “Application of Artificial Intelligence for Automatic Lending Decision Making Using Transactions Data”
- **A. Šubonienė, O. Kurasova, V. Medvedev, A. Kielaitė-Gulla, A. Samuilis, D. Jagminas, K. Strupas, G. Dzemyda** “On the Computed Tomography Image Data to Diagnose Pancreatic Cancer Using Machine Learning”
- **V. Tamakauskas, V. Tatarūnas, N. Kupstytė-Krištaponė, V. Veikutis** “P2Y12 Inhibitors (Ticagrelor) Adverse Effect Prediction Depending on Clinical Data and Genetic Factors in Patients after Acute Coronary Syndrome”
- **S. Tautvaišas, J. Žilinskas** “Scalable Trust Region Bayesian Optimization with Product of Experts”

12 <sup>20</sup> –12 <sup>40</sup>	<b>DAMSS 2021 Photo</b>
12 <sup>40</sup> –14 <sup>00</sup>	<b>Lunch</b>
14 <sup>00</sup> –15 <sup>00</sup>	<b>Plenary Session</b>

*Rytis Maskeliunas* “Deep Learning in Alzheimer’s Disease” (Kaunas University of Technology)

*Pasi Fränti* “Web Tools for Analysing Location-Based Data” (School of Computing, University of Eastern Finland)

15 <sup>00</sup> –15 <sup>30</sup>	<b>Closing session, Coffee</b>
15 <sup>30</sup> –16 <sup>30</sup>	<b>Oral Session (Room A)</b>

1. *Linas Petkevičius, Simonas Šaltenis, Alminas Čivilis, Kristian Torp* “Electric Vehicle Energy Consumption Modelling and Estimation” (Vilnius University)
2. *Dovilė Kuiziniienė, Tomas Krilavičius* “Artificial Intelligence Financial Distress Barometer (Companies’ Case)” (Vytautas Magnus University)
3. *Jonas Šiaulys* “Several Stochastic Models for Non-Life Insurance Business” (Vilnius University)

15 <sup>30</sup> –17 <sup>30</sup>	<b>Poster Session (4) and Discussions (Room B)</b>
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- *E. Butkevičiūtė, L. Bikulčienė, T. Blažauskas* “An Architecture of Cognitive Health Evaluation and Monitoring System”
- *J. Kazanavičius, D. Mažeika* “Performance Benchmarking of Communication Patterns in Microservice Architecture”
- *A. Lančinskas, J. Žilinskas, P. Fernández, B. Pelegrín* “Competitive Facility Location Problems with Different Customer Behavior Rules”
- *J. Miliauskaitė, D. Kalibatiienė* “Developing an ANFIS-Based Model to Predict Web Services QoS/QoE”
- *M. Petkevičius, D. Vitkutė-Adžgauskienė* “Knowledge-Base Enriched Word Embeddings for Social Media Text Analysis”



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- **I. Rudaitis, J. Mandravickaitė, D. Kalinauskaitė, V. Gvozdovaitė, T. Krilavičius** “Evaluation Metrics for Synthetic Social Media-Derived Texts”
  - **T. Ruzgas, V. Kraujalis, D. Milonas** ”Mortality Rate Estimation Models of Patients with Prostate Cancer Diagnosis”
  - **Š. Sielskaitė, D. Kalibatienė** ”Fuzzy and CMMN Based Dynamic Software Project Management Process Modelling and Simulation”
  - **M. Songailaitė, E. Kankevičiūtė, J. Mandravickaitė, D. Kalinauskaitė, T. Krilavičius** “Deep Learning Models for Hate Speech Detection”
  - **M. Songailaitė, T. Krilavičius** “Music Similarity Evaluation Using Machine Learning Methods and Audio Signal Profiles”
  - **S. Virbukaitė, J. Bernatavičienė** “Impact of Images Quality Variety and Resizing Level on Eye Fundus Optic Disc Segmentation”
  - **J. Skirelis, D. Navakauskas** “Investigation of Wireless Sensor Networks Protocols Performance”
  - **M. Zdanavičiūtė, R. Juozaitienė, T. Krilavičius** “Telecommunication Customer Churn Prediction Using Machine Learning Methods”

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19<sup>00</sup>–21<sup>00</sup>

Dinner

10<sup>00</sup>–12<sup>00</sup>

**General Discussion and Concluding Remarks**

*Round table discussion*

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