



# DIS 2023

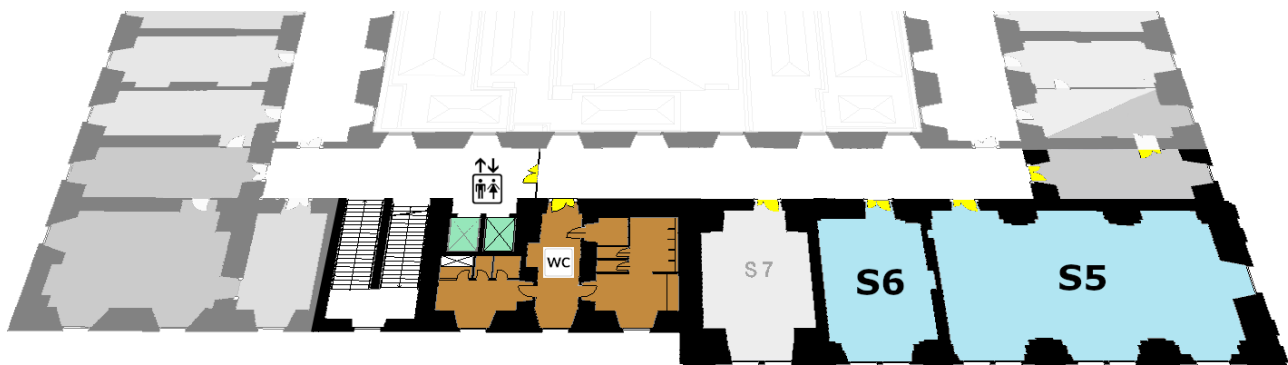
## 6<sup>th</sup> International Conference on the DYNAMICS OF INFORMATION SYSTEMS

September 3–6, 2023, Prague, Czech Republic

### General information

#### Rooms (2<sup>nd</sup> floor of the university):

- Registration: the corridor close to room S5
- Talks: rooms S5 and S6



#### Talks:

- Regular talks (rooms S5, S6): 25 min. including questions; chairman is the last speaker in the session
- Invited talks (room S5): 60 min. including questions

#### Lunches:

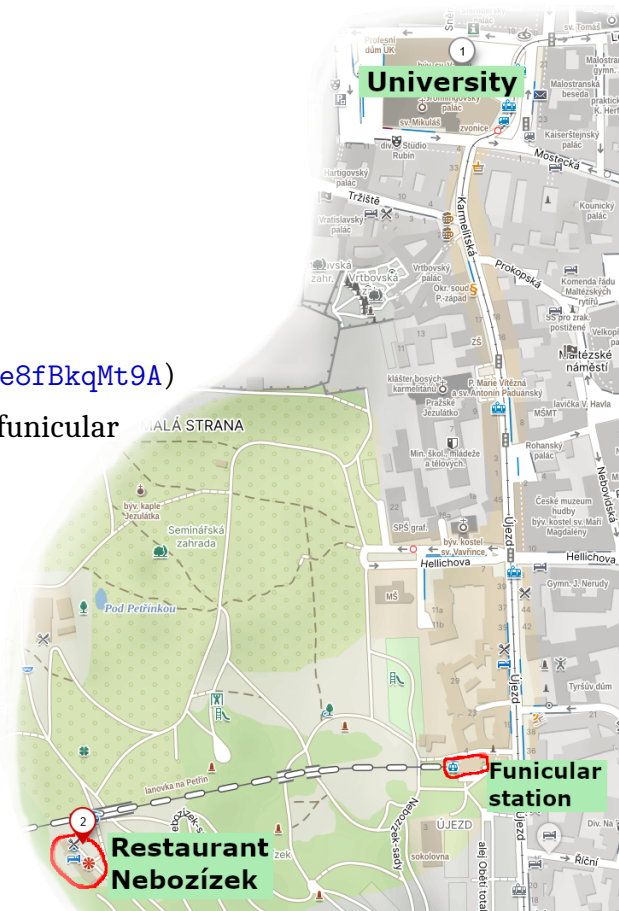
- Restaurant Profesní dům
- situated in the cellar of the university building

#### Conference dinner:

- Restaurant Nebozízek
- Address: Petřínské sady 411 (<https://goo.gl/maps/XnAcmUse8fBkqMt9A>)
- 25 minute walk from the university, the first stop of the Petřín funicular

#### Social program:

- 2 km guided tour (Strahov Monastery, Loreto, Prague Castle)



# Conference program

| Sunday<br>September 3 |                                 | Monday<br>September 4 |  | Tuesday<br>September 5 |             | Wednesday<br>September 6   |                        |
|-----------------------|---------------------------------|-----------------------|--|------------------------|-------------|--|------------------------|
|                       |                                 | 8:45-9:00             | Opening session [S5]   |                        |             |  |                        |
|                       |                                 | 9:00-10:00            | Invited talk [S5]<br><i>Diffusion capacity of single and interconnected networks</i><br>(Panos Pardalos) |                        | 9:00-10:00  | Invited talk [S5]<br><i>Towards a dynamic value of information theory</i><br>(Roman Belavkin)        |                        |
|                       |                                 | 10:00-10:30           | Coffee break   |                        | 10:00-10:30 | Coffee break   |                        |
|                       |                                 | 10:30-12:10           | Contributed talks [S5]   | Contributed talks [S6] | 10:30-12:10 | Contributed talks [S5]   | Contributed talks [S6] |
|                       |                                 |                       |  |                        | 12:10-12:30 | Conference photo   |                        |
|                       |                                 | 12:30-14:00           | Lunch  |                        | 12:30-14:00 | Lunch  |                        |
|                       |                                 | 14:00-15:00           | Invited talk [S5]<br><i>Search in imperfect information games</i><br>(Martin Schmid)                     |                        | 14:00-15:00 | Industrial session [S5]<br><i>Why and how to optimize in energy</i><br>(Urban Kravjanský, ČEZ Group) |                        |
|                       |                                 | 15:10-16:00           | Contributed talks [S5]   | Contributed talks [S6] |             | 15:30-15:45  | Closing session [S5]   |
|                       |                                 | 16:00-16:30           | Coffee break   |                        |             |  |                        |
|                       |                                 | 16:30-17:45           | Contributed talks [S5]   | Contributed talks [S6] | 16:00-18:00 | Social program (Excursion)   |                        |
| 17:00-19:30           | Registration & Informal meeting |                       |  |                        |             |  |                        |
|                       |                                 | 19:00-22:00           | Conference dinner  |                        |             |  |                        |

# Conference program: Monday (September 4, 2023)

|             |   |  |
|-------------|---|--|
| 8:45-9:00   | Opening session [room S5]   |  |
| 9:00-10:00  | Invited talk [room S5]<br><i>Diffusion capacity of single and interconnected networks</i> (Panos Pardalos)<br>chairman: Roman Belavkin                  |  |
| 10:00-10:30 | Coffee break  |  |
| 10:30-12:10 | Contributed talks [room S5]   | Contributed talks [room S6]  |
|             | <i>Building trust in video classification</i> (Konstantinos Tarkasis)   | <i>Sensitivity analysis in linear programming revisited - a general approach involving different norms</i> (Milan Hladík)                                |
|             | <i>An evolutionary approach to automated class-specific data augmentation for image classification</i> (Silviu Tudor Marc)                              | <i>A quasi-extreme reduction for interval transportation problems</i> (Elif Garajová)  |
|             | <i>Improving handwritten cyrillic OCR by font-based synthetic text generator</i> (Miroslav Hlaváč)  | <i>A pseudopolynomial algorithm for the worst min-cost flow with uncertain capacities</i> (Miroslav Rada)  |
|             | <i>Strategic decision making in trauma systems</i> (Eva K. Lee)   | <i>Exploiting Monge-like properties in optimisation problems under interval uncertainty</i> (Martin Černý)   |
| 12:30-14:00 | Lunch   |  |
| 14:00-15:00 | Invited talk [room S5],<br><i>Search in imperfect information games</i> (Martin Schmid)<br>chairman: Milan Hladík                                       |  |
| 15:10-16:00 | Contributed talks [room S5]   | Contributed talks [room S6]  |
|             | <i>Design of a new control loop using hysys dynamic</i> (Hocine Meglouli)   | <i>Using data mining techniques to analyze facial expression motion vectors</i> (Roohallah Alizadehsani) [online]  |
|             | <i>The effects of shift generation on staff rostering</i> (Kimmo Nurmi)   | <i>Determining asymmetry for random network models</i> (David Hartman)   |
| 16:00-16:30 | Coffee break  |  |
| 16:30-17:45 | Contributed talks [room S5]   | Contributed talks [room S6]  |
|             | <i>A collaborative multi-objective approach for clustering task based on distance measures and clustering validity indices</i> (Beatriz Flámia Azevedo) | <i>Iranian architectural styles recognition using image processing and deep learning</i> (Mohammad Tayarani Darbandy) [online]                           |
|             | <i>A spectral projected gradient in non-Cartesian coordinate spaces: a case study in structural biology</i> (Antonio Mucherino, Jung-Hsin Lin)          | <i>Optimizing classroom assignments to reduce non-essential interactions among university-level students during pandemics</i> (Mujahid N. Syed) [online] |
|             | <i>A numerical scheme for a generalized fractional derivative with variable order</i> (Ricardo Almeida)   | <i>Augmented Lagrangian method for linear programming using smooth approximation</i> (Hossein Moosaei) [online]  |
| 19:00-22:00 | Conference dinner   |  |

## Conference program: Tuesday (September 5, 2023)

|             |   |   |
|-------------|---|---|
| 9:00-10:00  | Invited talk [room S5]<br><b><i>Quantifying model uncertainty for semantic segmentation using RKHS operators</i></b> (Jose C. Principe)<br>chairman: Panos Pardalos |   |
| 10:00-10:30 | Coffee break  |   |
| 10:30-12:10 | Contributed talks [room S5]   | Contributed talks [room S6]   |
|             | <b><i>A risk-cost analysis for an increasingly widespread monitoring of railway lines</i></b> (Imma Lory Aprea)   | <b><i>A mixed-integer soft sensor development algorithm</i></b> (Hasan Sildir)                                      |
|             | <b><i>Optimizing the performance of financial vehicles using DEA</i></b> (Maryam Badrizadeh)  | <b><i>A cluster-based heuristic method for private car sharing</i></b> (Zeliha Ergul Aydin)                         |
|             | <b><i>Consumers financial distress: Prediction and prescription using machine learning</i></b> (Serge Nyawa, Samuel Fosso Wamba)                                    | <b><i>Heuristic algorithms for multistage flowshop scheduling problem</i></b> (Kyriakos Bitsis)                     |
|             | <b><i>The use of artificial intelligence in supply chain project management</i></b> (Oncu Hazir, Dirk Hartel)   | <b><i>Metaheuristic algorithm based on tabu search for consistent vehicle routing problem</i></b> (Rodrigo Linfati) |
| 12:10-12:30 | Conference photo  |   |
| 12:30-14:00 | Lunch   |   |
| 14:00-15:00 | Industrial session [room S5]<br><b><i>Why and how to optimize in energy</i></b> (Urban Kravjanský, ČEZ Group)<br>chairwoman: Elif Garajová                          |   |
| 16:00-18:00 | Social program (Excursion)  |   |

## Conference program: Wednesday (September 6, 2023)

|             |   |   |
|-------------|---|---|
| 9:00-10:00  | Invited talk [room S5]<br><i>Towards a dynamic value of information theory</i> (Roman Belavkin)<br>chairman: Jose C. Principe                               |   |
| 10:00-10:30 | Coffee break  |   |
| 10:30-12:10 | Contributed talks [room S5]   | Contributed talks [room S6]   |
|             | <i>Designing networks resilient to clique blockers</i> (Foad Mahdavi Pajouh)  | <i>Assignment of unexpected tasks in embedded system design process using genetic programming</i> (Adam Górski) |
|             | <i>The effects of an earnings-based covenant on capital structure and firm value</i> (Michi Nishihara)  | <i>An exact parallel method for a bi-objective knapsack problem</i> (Younes Djellouli)                          |
|             | <i>An efficient heuristic for solving the general-product structure assemble-to-order systems</i> (Mohsen Elhafsi)  | <i>Dispersion of personal spaces</i> (Jaroslav Horáček)   |
|             | <i>Strengthening network security and resilience through critical node detection and analysis</i> (Essia Hamouda)   |   |
| 12:30-14:00 | Lunch   |   |
| 14:00-15:30 | Tutorial [room S5]<br><i>RealOpt-Contingency - A computational platform for all hazard and disaster response</i> (Eva K. Lee)<br>chairman: Jaroslav Horáček |   |
| 15:30-15:45 | Closing session [room S5]   |   |