

COSIT 2022 Program (ver. 1.1, posted on 6 July 2022):

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|------------|-------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Mon, Sep 5 | 9:30  | Keynote Lecture                                                                                                 |                                                                                               |
|            |       | Ruth Dalton                                                                                                     |                                                                                               |
|            | 11:00 | Moving through Space I                                                                                          |                                                                                               |
|            |       | Collaborative wayfinding under distributed spatial knowledge                                                    | Laure De Cock, Nico Van de Weghe, Steven Verstockt and Christophe Vandeviver                  |
|            |       | Improving pedestrians traffic priority via grouping and virtual lanes in shared spaces                          | Yao Li, Vinu Kamalasanan, Mariana Batista and Monika Sester                                   |
|            |       | Smart crowd management: the data, the users and the solution                                                    | Panagiotis Mavros, Saskia Kuliga, Ed Manley, Hilal Fitri, Michael Joos and Christoph Hölscher |
|            | 14:00 | Envisioning the Future of Space                                                                                 |                                                                                               |
|            |       | Are psychological variables relevant to evaluating geoinformatics applications? The case of landmarks.          | Daniel Sui and Shih-Lung Shaw                                                                 |
|            |       | New human dynamics in the emerging metaverse: Towards a quantum phygital model by integrating space and place   | Jakub Krukar and Angela Schwering                                                             |
|            | 16:00 | Moving through Space II                                                                                         |                                                                                               |
|            |       | I can tell by your eyes! Continuous gaze-based turn-activity prediction reveals spatial familiarity             | Negar Alinaghi, Markus Kattenbeck and Ioannis Giannopoulos                                    |
|            |       | Eye blink-related brain potentials during landmark-based navigation in virtual reality                          | Bingjie Cheng, Enru Lin, Klaus Gramann and Anna Wunderlich                                    |
|            |       | Abnormal situation simulation and dynamic causality discovery in urban traffic networks                         | Yadi Wang, Yicheng Pan, Meng Ma and Ping Wang                                                 |
|            | 17:05 | Poster Pitches                                                                                                  |                                                                                               |
|            |       | aMPdist: Improving the performance of time series similarity computation using approximation and indexing       | Mihalis Tsoukalos, Georgios Chatzigeorgakidis, Nikos Platis and Spiros Skiadopoulos           |
|            |       | Towards improving pilots' spatial awareness through cross-sectional weather visualizations                      | Adrian Sarbach, Peter Kiefer and Raubal Martin                                                |
|            |       | Place-based semantic similarity                                                                                 | Sarah Battersby, Grant McKenzie and Vidya Setlur                                              |
| Tue, Sep 6 | 9:15  | Seeing Space                                                                                                    |                                                                                               |
|            |       | Rethinking route choices! On the importance of route selection in wayfinding experiments                        | Bartosz Mazurkiewicz, Markus Kattenbeck and Ioannis Giannopoulos                              |
|            |       | Generalized, inaccurate, incomplete: how to comprehensively analyze sketch maps beyond their metric correctness | Angela Schwering, Jakub Krukar and Charu Manivannn                                            |
|            | 10:30 | Moving through Space III                                                                                        |                                                                                               |
|            |       | Spatial information, the brain, and the potential cognitive benefits of the environment                         | May Yuan and Kristen Kennedy                                                                  |
|            |       | Abnormal trajectory-gap detection                                                                               | Arun Sharma, Jayant Gupta and Shashi Shekhar                                                  |
|            |       | Spatial and spatiotemporal matching framework for causal inference                                              | Kamal Akbari and Martin Tomko                                                                 |
|            | 14:00 | Themed Session                                                                                                  |                                                                                               |
|            |       | Walking space                                                                                                   | Ehsan Hamzei, Martin Tomko, Nico van de Weghe, Laure de Cock, Stephan Winter, and others      |
|            | 16:00 | Keynote Lecture                                                                                                 |                                                                                               |
|            |       | Jeremy Wolfe                                                                                                    |                                                                                               |
| Wed, Sep 7 | 9:15  | Computing Space I                                                                                               |                                                                                               |
|            |       | An online algorithm for handling qualitative spatio-temporal information                                        | Zhiguo Long, Qiyuan Hu, Hua Meng and Michael Sioutis                                          |
|            |       | Predicting distance and direction from text locality descriptions for biological specimen collections           | Ruoxuan Liao, Pragyan Das, Christopher Jones and Kristin Stock                                |

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|            | 10:30 | Reasoning about Space I                                                                                   |                                                                                                                                      |
|            |       | Qualitative spatial reasoning over questions                                                              | Mohammad Kazemi Beydokhti, Matt Duckham, Yaguang Tao, Maria Vasardani and Amy Griffin                                                |
|            |       | Representing computational relations in knowledge graphs using functional languages                       | Yanmin Qi, Heshan Du, Amin Farjudian and Yunqiang Zhu                                                                                |
|            |       | Transects: Connecting entity representations across conceptual views on spatial information               | Eric Top and Simon Scheider                                                                                                          |
|            | 14:00 | Themed Session                                                                                            |                                                                                                                                      |
|            |       | Spatial question answering                                                                                | Ehsan Hamzei, Martin Tomko, Simon Scheider, Chris Jones, Bill Palmer, and others                                                     |
|            | 16:00 | Reasoning about Space II                                                                                  |                                                                                                                                      |
|            |       | Perceptions of qualitative spatial arrangements of three objects                                          | Ningran Xu, Ivan Majic and Martin Tomko                                                                                              |
|            |       | Empirical evidence for concepts of spatial information as cognitive means for interpreting and using maps | Enkhbold Nyamsuren, Eric Top, Haiqi Xu, Niels Steenbergen and Simon Scheider                                                         |
|            | 17:00 | Reasoning About Space III                                                                                 |                                                                                                                                      |
|            |       | An entropy-based model for indoor self-localization through dialogue                                      | Kimia Amoozandeh, Ehsan Hamzei and Martin Tomko                                                                                      |
|            |       | A computational method for the classification of mental representations of objects in 3D space            | Samuel S Sohn, Panagiotis Mavros, Mubbasir Kapadia and Christoph Hölscher                                                            |
|            |       | Platial rhythm                                                                                            | Daniel Romm and Grant McKenzie                                                                                                       |
| Thu, Sep 8 | 9:15  | Keynote Lecture                                                                                           |                                                                                                                                      |
|            |       | Nippon Telegraph and Telephone Corporation (NTT): "4D digital platform"                                   |                                                                                                                                      |
|            | 10:30 | Computing Space II                                                                                        |                                                                                                                                      |
|            |       | Large-scale spatial prediction by scalable geographically weighted regression: Comparative study          | Daisuke Murakami, Narumasa Tsutsumida, Takahiro Yoshida and Tomoki Nakaya                                                            |
|            |       | A comparison of geographically weighted principal components analysis methodologies                       | Narumasa Tsutsumida, Daisuke Murakami, Takahiro Yoshida, Tomoki Nakaya, Binbin Lu, Paul Harris and Alexis Comber                     |
|            |       | A weather-aware framework for population mobility modelling                                               | Vanessa Brum-Bastos, Kamil Smolak, Witold Rohm and Katarzyna Sila-Nowicka                                                            |
|            | 11:30 | Doctoral Mentoring Presentations / 2 parallel streams                                                     |                                                                                                                                      |
|            | 12:30 | (COSIT Steering Committee Meeting)                                                                        |                                                                                                                                      |
| aft & eve  |       | Excursion and Banquet Dinner                                                                              |                                                                                                                                      |
| Fri, Sep 9 | 9:15  | Best Full Paper Session                                                                                   |                                                                                                                                      |
|            |       | Automatically discovering conceptual neighborhoods using machine learning methods                         | Ling Cai, Krzysztof Janowicz and Rui Zhu                                                                                             |
|            |       | What do you mean you're in Trafalgar Square? Comparing distance thresholds for geospatial prepositions    | Niloofer Aflaki, Kristin Stock, Christopher B Jones, Hans Guesgen, Jeremy Morley and Yukio Fukuzawa                                  |
|            | 10:30 | Best Short Paper Session                                                                                  |                                                                                                                                      |
|            |       | Geographically varying coefficient regression: GWR-exit and GAM-on?                                       | Alexis Comber, Paul Harris and Chris Brunsdon                                                                                        |
|            |       | 3D sketch maps: Concept, potential benefits, and challenges                                               | Kevin Gonyop Kim, Jakub Krukar, Panagiotis Mavros, Jiayan Zhao, Peter Kiefer, Angela Schwering, Christoph Hölscher and Martin Raubal |
|            |       | The effect of abstract vs. realistic 3D visualization on landmark and route knowledge acquisition         | Armand Kapaj, Enru Lin and Sara Lanini-Maggi                                                                                         |
|            | 12:00 | Farewell                                                                                                  |                                                                                                                                      |