STPIS'25: the 11th International Workshop on Socio-Technical Perspectives in IS[*]

STPIS 2025, September 17-18th 2025, Skopje, Republic of North Macedonia

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Abstract

The 11th International Conference on Socio-Technical Perspectives in Information Systems (STPIS 2025) was held as a two-day hybrid event, taking place both online and on-site in Skopje, North Macedonia, on September 17–18th, 2025. The local organization was led by Professor Marija Topuzovska Latkovikj and her team from the Department of Organizational Sciences at the Institute.

A total of 38 submissions were received in response to the call for papers, of which 33 were accepted, representing the research work of more than 70 authors from various countries. These figures reflect both the growing academic interest in STPIS and the diversity of socio-technical topics explored during the sessions. Participation included 30 on-site attendees and 15 online participants via Zoom, demonstrating the continued relevance of the hybrid format for promoting international collaboration and knowledge exchange.

Keywords

Socio-Technical Perspectives, Cybersecurity, Work-systems, Human Centered Design, Human Resource Management, Industry 4.0, Industry 5.0, Computer Supported Work, Information Systems, Systems Practice, Complex Problem Solving, Health informatics.

1. Introduction

The conference was officially opened with welcome addresses by Professor Jovan Bliznakovski, Deputy Director of the Institute, Professor Marija Topuzovska Latkovikj, Local Chair, and Professor Peter Bednar, General Chair of STPIS 2025, who warmly greeted the participants and highlighted the significance of the conference themes and the collaborative spirit that has characterized the STPIS community over the years.

This year's conference featured two distinguished keynote speakers, Professor Vladimir Trajkovikj and Professor Herbert P. Ricardo. Their keynote lectures offered deep theoretical insights and practical implications, sparking lively discussions and inspiring participants to explore new intersections between technology, organizations, and society.

The special guests of the workshop were Dragan Shahpaski and Darko Frtunik, representatives of SORSIX, a successful Macedonian company operating globally across five continents. Their engaging presentation of a real-world case study provided participants with an opportunity to connect academic theory with practical experience. The group sessions were widely praised as highly inspiring, intellectually challenging, and deeply relevant, encouraging fruitful dialogue between researchers and practitioners. The SORSIX contribution was recognized as an excellent example of how socio-technical thinking can be successfully applied in practice on a global scale.

STPIS is a long-standing professional and academic workshop and conference, held annually for 11 years, dedicated to advancing the understanding and application of Sociotechnical Approaches in the fields of Information Systems, Organizational and Management Sciences, Human Resource Management, Cyber security, including Systems Sciences and Cybernetics.

A socio-technical perspective sees an organization as a combination of two components, a social and a technical one. The pattern of behavior in the organization is determined by how well these parts fit each other. While analyzing system problems of getting things done, adequate consideration should be given to technology as well as informal and formal interactions of people.

The main purpose of this workshop-style conference is to foster discussions on applying socio-technical perspectives in the development and management of organizational systems. Its long-term goal is to establish a meeting place for researchers and practitioners interested in socio-technical approaches and their practical applications.

2. Proceedings Overview

This volume comprises contributions structured around seven thematic areas, each addressing aspects of the Socio-Technical Perspectives in Information Systems development:

1. AI, ChatBots and Smart Working

2. Human Resource Management and Work systems

3. Digitalization and Digital Transformation

4. Cyber security, Physical Security and Information Security

5. Diversity, equity, and inclusion (DE&I)

6. Health informatics

7. Sustainability

Topics of interest within those themes included, but were not limited to:

- Contemporary socio-technical approaches, in practice (case studies) and theory

- Human Resource Management and Sustainable Organizational Change

- Industry 5.0 / Society 6.0 as part of socio-technical practice and agenda

- AI, GenAI, ChatBots and Cobotics usage, practices, issues and concerns

- Methodological aspects of using socio-technical approaches in practice

- Socio-technical approach in education and training

- Information system design using socio-technical approaches

- Diversity, equity and inclusion of all things related to IS

- Societal Security from a socio-technical perspective

- Information Systems Security from a socio-technical perspective

- Ethnographic and Anthropological aspects of IS design and adoption

- Philosophical aspects of socio-technical practices

- Socio-technical human computer interaction

- Sociotechnical perspectives on Health informatics

- Digitalization and digital transformation from a socio-technical perspective

- Systems Thinking and Cybernetics integrated in Socio-technical practices

- Sociotechnical perspectives on Organizational and Professional Sustainability

- Knowledge Management, Organizational Learning and Organizational Excellence

For our STPIS'25 workshop we received overall 38 submissions (including both short and long papers, as well as position papers), and after a thorough review process where every submission got at least two reviews and an editorial review, 32 papers were selected for presentation at the conference/workshop. All reviews were quality reviews by members of the Program Committee and the editorial reviews were by members of the organizing committee.

After the workshop the presented papers were revised based on the peer-reviews and comments during the workshop, and every paper had a final review before publication in the proceedings. Among the papers in this STPIS'25 proceedings are regular research papers, two position papers based on keynotes and one industrial case study. The proceedings include submissions in the form of short papers (5–9 pages, excluding references) and long papers (10–20 pages, excluding references).

2.1.   Keynote talks:

- Vladimir Trajkovikj (Faculty of Computer Science and Engineering, University "Ss. Cyril and Methodus" in Skopje, North Macedonia). Bridging the Gap: Human-Centered AI Systems for Empowerment in Education and Aging.

- Herbert P. Ricardo, (School of Business, Indian River State College FL, USA). Education in Transition: From Disruption to Innovation, Preparing Students for a Technological AI-Driven Future.

2.2.   Industry case study:

- Dragan Shahpaski and Darko Frtunik (SORSIX): Preserving Human Connection in Digital Health Systems

Drawing upon the industry case study the workshop adopted a participatory approach to explore various aspects of the National Cancer Screening Program in New Zealand. Within this framework, the presenters posed two key socio-technical questions, which participants addressed in two parallel group sessions to propose potential solutions.

2.2.1.   The problem space and focus of the workshop:

- How can a national population screening program work with community service providers to implement data tracking and oversight mechanisms necessary for quality and audit, while preserving the culturally sensitive and authentic relationships that make their contribution to the service effective?

- What technological, procedural, and policy solutions might allow both accountability and intimacy to coexist?

2.3.   Best Student Paper:

This year the best student paper was: *An empirical study of socio-technical information security exercises as a tool to foster organizational learning and information security readiness development in Norwegian municipalities.* This paper was authored by: Guro B. Olsborg, Grethe Østby, Mohamed Abomhara and Sule Yildirim Yayilgan. Specifically, we liked the future oriented idea and propositions related to the triple-loop learning approach. This we believe is very promising for future directions in the cybersecurity culture building domain.

We had many good papers this year. But as particularly good student papers we also wish to make an honorable mention of two other papers: [a] *Evaluating Security and Data Privacy in Smart Home Devices*, written by Natalia Khetagourova, Christoffer Lundh and Joakim Kävrestad. Which was well executed and spot on for the STPIS perspective. Then [b] *Designing for Doctors in Training: User-Centered Design for Digital Continuing Medical Education*, written by Nirmela Poturovic, George Addo Yeboah, Paul Pålsson and Helena Vallo Hult. This paper was an exceptionally interesting inquiry, well written and the topic also integral to the STPIS perspective.

3. Outcomes from STPIS 2025 Conference and Workshop

The 11th International Workshop and Conference on Socio-Technical Perspectives in Information Systems (STPIS'25) successfully brought together researchers, practitioners, and policymakers to explore the intersections of technology, human factors, and organizational contexts. Key outcomes include:

1. Advancements in Socio-Technical Research: The conference showcased novel frameworks and empirical studies addressing cybersecurity, AI in workplaces, human-centered system design, and organizational ambidexterity, highlighting the importance of integrating technical and social dimensions in complex systems.

2. Cybersecurity and Digital Readiness: Discussions in sessions on CISOs' roles, CyBOK as an educational resource, and socio-technical resilience highlighted strategies for bridging cybersecurity skills gaps and fostering organizational preparedness, particularly in municipal and industrial contexts.

3. Human-Centered and Ethical Design: Papers and workshops emphasized designing systems that consider human behavior, cognitive differences, and ethical implications, including the adoption of AI in HR systems, healthcare apps for children, and continuing digital medical education for doctors.

4. Knowledge Exchange and Practical Applications: The case workshop and group discussions facilitated hands-on learning, collaborative problem-solving, and practical insights for designing socio-technical interventions in real-world organizational settings.

5. Future Directions: The conference underscored the need for ongoing research on AI governance, socio-technical transformations in digital ecosystems, and strategies for organizational learning, resilience, and inclusion. Participants identified opportunities for collaboration across industries, countries, and disciplines, laying the groundwork for STPIS 2026.

Overall, STPIS 2025 reinforced the value of socio-technical perspectives in understanding and addressing the challenges of digital transformation, cybersecurity, and human-technology interactions in diverse organizational contexts.

Acknowledgements

Online Resources – Links to STPIS and previous proceedings

Since 2016 editions of STPIS, are available on-line via CEUR services, and index the volume in DBLP, Google Scholar, Scopus, CiteSeer/CiteSeerX, etc. For Scandinavian researchers, the publisher is in the Norska systemet rated as level 1 (which is the highest level for conferences and workshops), as well as in Finnish JuFo system as level 1.

Proceedings for the previous editions of STPIS 2016 - 2024 can be found here:

- STPIS 2015 – http://ceur-ws.org/Vol-1374/

- STPIS 2016 – http://ceur-ws.org/Vol-1604/

- STPIS 2017 – http://ceur-ws.org/Vol-1854/

- STPIS 2018 – http://ceur-ws.org/Vol-2107/

- STPIS 2019 – http://ceur-ws.org/Vol-2398/

- STPIS 2020 – http://ceur-ws.org/Vol-2789/

- STPIS 2021 – https://ceur-ws.org/Vol-3016/

- STPIS 2022 – https://ceur-ws.org/Vol-3239/

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Declaration on Generative AI

The author(s) have not employed any Generative AI tools.