Preface: Proceedings of the STPIS 2026 Socio-Technical Workshop (STPIS 2026: STO)

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Abstract

This volume contains the proceedings of STPIS 2026: STO – Socio-Technical Workshop (Systems & Organisation), co-hosted by the 12th International Conference on Socio-Technical Perspectives in Information Systems (STPIS 2026). To address the rising complexity of contemporary digital and organizational ecosystems, the conference co-hosted two complementary workshops: the Socio-Technical Overall (STO) workshop and a sister workshop dedicated to Socio-Technical Security. While both tracks shared a foundational socio-technical philosophy, each targeted distinct areas of research and practice. To foster transdisciplinary collaboration, all conference participants enjoyed open access to both workshops, with submissions peer-reviewed and allocated based on thematic relevance.

Keywords

paper template, paper formatting, STPIS-WS

1. Introduction

The STPIS 2026: STO Workshop represents the contemporary core of the conference's decade-long tradition, focusing on the fundamental reality that contemporary organizational systems are inherently "human-intensive". It challenges the pervasive assumption that technology alone can resolve organizational challenges, reinforcing the principle that the social and technical dimensions of information systems are entirely inseparable. Hosted by the University of L'Aquila, Italy, at the historic Palazzetto dei Nobili, the physical venue mirrored the conference's core pursuit: balancing historical human paradigms with rapid modern transformations. Reflecting this collaborative environment, the STPIS 2026 conference hosted two distinct workshops, each resulting in its own dedicated proceedings volume. The Socio-Technical Overall workshop (STO) and the sister Socio-Technical Security workshop (SEC); this text serves as the preface to the STO volume.

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1.1. Key Themes and Philosophy

The workshop provided an interactive forum to explore how human-centric design navigates an increasingly complex digital landscape. The 20 accepted papers in this volume center on six vital thematic pillars:

1. **Human–AI Collaboration & Oversight:** Investigating the shift toward organizational augmented intelligence (AI+), human oversight frameworks, "emophilic" user behaviors, and the strategic value of productive human fallibility when partnering with AI systems.
2. **Generative AI & Knowledge Management:** Examining the structural adoption of Generative AI in modern workplaces, balancing individual employee agency with organizational support systems, and redefining corporate knowledge management.
3. **Inclusive & Resilient Systems Design:** Championing democratic information systems research, advocating for gender-inclusive design frameworks that transform users from participants to producers, and exploring digital infrastructures for resilient public healthcare.
4. **Industrial Applications & Digital Product Passports:** Analyzing the operational dimensions of industrial symbiosis alongside the organizational drivers, benefits, and data authenticity challenges connected to Digital Product Passport (DPP) adoption.
5. **Cognitive Roles & Foundational Toolboxes:** Traces the evolving cognitive role of humans from simple data analysts to systems orchestrators, exploring theoretical concepts like sociomateriality, and expanding socio-technical toolboxes to keep systems adaptable and business-centred.
6. **Socio-Technical Philosophy:** Emphasizing Theory Y management perspectives, where professionals act as active co-designers of their own operational environments, while explicitly promoting sustainability and diversity across volatile, uncertain, complex, and ambiguous (VUCA) environments.

1.2. The "STPIS Spirit"

True to the overarching ethos of the venue, both workshops shared a unique, interactive format designed to bridge theory and practice through specific collaborative elements:

- **Interactive Industry Case:** Practical sessions where researchers and practitioners co-solved real-world organizational and security "*messes*".
- **Tales from the Trenches:** First-hand accounts from industry that valued practical failures and successes equally with theoretical rigor.
- **Integrated Fika:** Shared coffee and networking sessions designed to cross-pollinate ideas between participants from both tracks.

1.3. The Workshop Case

While STPIS featured an identical industrial case study across both workshops to ground our discussions, it was analyzed through distinct lenses aligned with each workshop's specific scope. Within the STO workshop, the case was evaluated through a broad sociotechnical systems and organizational perspective.

The workshop case investigated the adoption of a digital twin based approach to the Urban Governance. A DigitalTtwin (DT) is an emerging technology that may transform society in

many dimensions. It is a virtual representation of a subject or object in the real-world, e.g., a person, organization, or machine that continuously exchanges data with its physical counterpart. Its adoption across multiple domains motivates the investigation on civic DTs and on the integration of ethical reasoning into civic and urban settings.

In particular, Civic Digital Twins (CDTs) may move citizens from subjects of monitoring to co-designers of urban governance, but the field largely stays at the level of vision, describing what a CDT should do without specifying how its concepts hang together. Even socio-technical digital twins that bring people, culture, and goals into the model leave ethics outside it: the values guiding collective choices and the uneven impact of policies on vulnerable groups remain context rather than first-class modeling concerns. Within this vision, workshop participants discussed the potentiality of a metamodel for ethics-aware CDTs, organized into three compartments. The Real World compartment captures the socio-technical fabric of the city, i.e., people, processes, infrastructure, and data. The Ethical Reasoning Layer models how policies are negotiated under goals, constraints, and the ethical and vulnerability profiles of the agents involved. The Virtual World compartment simulates the system's evolution and brings predicted outcomes back to decision-makers. By elevating citizens, their values, and their structural vulnerabilities to first-class entities, the model makes the asymmetric impact of civic decisions explicit at the metamodel level.

1.4. Review Process and Submission Statistics

The STPIS 2026 venue attracted a strong pool of global submissions, receiving 64 papers in total. All submissions underwent a rigorous, multi-stage evaluation process to ensure the highest academic quality:

1. **Initial Review Phase:** Each submission was subjected to a strict peer review by at least two independent expert reviewers from the program committee, followed by a detailed editorial review.
2. **Revision & Re-evaluation:** Selected papers underwent a comprehensive revision phase. Following their presentation, these revised manuscripts were subjected to a second round of review by committee members to verify that all reviewer feedback had been successfully addressed.

1. **Reviewer Representation:** Austria (1), Bulgaria (1), Cyprus (1), Czech Republic (2), Denmark (2), Finland (1), France (2), Italy (12), Netherlands (1), North Macedonia (1), Norway (1), Philippines (1), Portugal (1), Singapore (1), Sweden (8), United Kingdom (10), United States (1), Vietnam (1). Women accounted for roughly 34% of the reviewers.

Following this quality assurance process, 37 papers were accepted (out of 64) across the entire venue (yielding an overall acceptance rate of 57.81%) and allocated into two specialized volumes:

- **STPIS 2026: STO (This Volume):** 20 papers were accepted for final publication, representing 31.25% of the total submission pool.
- **STPIS 2026: SEC (Companion Volume):** 16 papers were accepted for final publication, representing 25.00% of the total submission pool.
- **Community Participation:** Reflecting the global reach of the venue, this specific volume features the work of 39 unique contributing authors and participants, fostering a diverse and collaborative exchange of transdisciplinary ideas. Across both workshops, women

accounted for approximately 32% of the unique authors. The percentage of women among authors for the Sociotechnical Workshop is roughly 23%, aligning closely with typical baselines for tech and systems conferences. The entire STPIS venue brought together 71 unique contributing authors, organizers, and participants across both specialized workshops, bringing together a community dialogue. A total of 12 unique countries are represented overall. Alphabetically, they are: Austria (2), Brazil (2), Canada (1), Finland (14), France (1), India (2), Italy (20), North Macedonia (1), Norway (5), Portugal (3), Sweden (16), United Kingdom (9).

1.5. Citation and Open Access

The papers included in this volume are published as an open-access proceedings collection, intended to freely advance research across systems sciences, cybernetics, and organizational management.

• Form of Citation: Papers in this volume should be cited as: *Author Name(s), "Paper Title", in Proceedings of the STPIS 2026 Socio-Technical Workshop (STPIS 2026: STO), L'Aquila, Italy, September 16-17, 2026.*

2. Accepted Papers in This Volume

Keynote Papers

- Artificial Emotional Intelligence: Emophilic Users — Bob Travica
- An Integrative Framework for Organizational Augmented Intelligence (AI+) for Smarter Organisations — Antoine Harfouche

Research Papers

- AI and Socio-Technical Transformation in the Creative Digital Industries — Marija Topuzovska Latkovikj
- A Socio-Technical Perspective of Industrial Symbiosis — Emanuele Gabriel Margherita
- From Error Eradication to Productive Fallibility: A Socio-Technical Perspective on Human–AI Oversight — Federico Cabitza and Luca Marconi
- Speculative Design of a Human-AI Interface for Collaborative Football Video Analysis Informed by In Situ Reflective Practices — António Correia, Antti Nyman, Dennis Paulino, Ramon Chaves, Daniel Schneider, Benjamim Fonseca and Tommi Kärkkäinen
- IS Expeditions in Democratic Avenues — A Systematic Literature Review of Democracy-Related IS Research — Sampo Noponen and Markus Salo
- Usability Benefits: An Update for the AI Age — Mikko Rajanen
- From Participation to Production: A Call to Action for Reconceptualizing Socio-Technical Systems through a Gender-Inclusive Design Framework — Laura Tarantino
- Extending Situation Awareness Theory to Non-Critical Domains with the Work System Perspective — Uttam Jodawat and Vishal Singh
- Generative AI Adoption: The Interplay of Individual Effort and Multi-Level Organizational Support — Henriika Sarilo-Kankaanranta and Lauri Frank
- Organizational Perspectives on Digital Product Passport Adoption: Results from an Industrial Survey — Görkem Kılınç Soylu, Erik Bergström, Joakim Kävrestad, Annika Moscati, Ulf Seigerroth, Linus Sönnerhed and Paraskeva Wlazlak

- Drivers, benefits, and challenges connected to authenticity in DPPs — Linus Sönnerhed, Erik Bergström, Ulf Seigerroth and Görkem Kılınç Soylu
- AI for Resilient Health Systems: An Information Infrastructure Perspective — Aysel Alizada, Paolo Spagnoletti and Francesco Nesta
- A Systematic Literature Review of the Use Cases of Generative Artificial Intelligence in Organisational Knowledge Management — Markus Makkonen, Krista Sorri and Jussi Myllärniemi
- Reclaiming Contemporary Information Systems: The Sociotechnical Toolbox — Peter Bednar
- Sociomateriality in the Age of Generative AI — Karsten Böhm and Katharina Breuss
- NOMIS Beyond Modelling: Towards Business-Centred Adaptable Information Systems — José Cordeiro
- Navigating the Misfit Between Rigid Security Standards and Human Activity Systems — Moufida Sadok
- From Analyst to Orchestrator: The Emerging Cognitive Role of Humans in Agentic Security Operations — Daniel Boughton and Iain Reid.

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4.1. Volume Editors & Workshop Co-Chairs

1. Peter Bednar, University of Portsmouth, UK & Lund University, Sweden
2. Laura Tarantino, University of L'Aquila, Italy
3. Mikko Rajanen, University of Oulu, Finland (Volume Editor)

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5. Declaration on Generative AI

During the preparation of this manuscript, the author utilized Google Gemini (Gemini 1.5 Pro) to improve the readability, narrative structure, and thematic cohesion of the text. The author reviewed, edited, and verified all outputs generated by the AI assistant and assume full accountability for the accuracy, originality, and integrity of final text and references.

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