SAIS-2025: Swedish AI Society Workshop
16-17 June 2025, Halmstas, Sweden

The Workshop

Yearly workshops of the Swedish AI Society aim to bring together researchers and practitioners from the field of Artificial Intelligence to present and discuss ongoing work and future directions for AI. It provides a forum for networking among researchers as well as building links with related research fields, practitioners and businesses.

It is our pleasure to present the proceedings of the 2025 Swedish AI Society Workshop (SAIS-2025), held on 16–17 June 2025 at the Centre for Applied Intelligent Systems Research (CAISR), School of Information Technology, Halmstad University. Building on the mission of the Swedish AI Society, this workshop offers a vibrant forum for researchers, practitioners, and industry stakeholders to share emerging work, debate challenges, and explore future trajectories within Artificial Intelligence.

Professor **Kalle Åström** from Lund University opened the workshop by charting the evolution of the AI Lund network since its 2018 inception—an open, interdisciplinary platform integrating teaching, research, and industry collaboration. He described the network's growth into a vital hub for cutting-edge initiatives across image, audio and geometric AI. Professor Åström then continued with presenting his research on the limitations of deep learning in tasks requiring spatial understanding—such as mapping and positioning—and introduced feature-metric learning as a compelling alternative. Unlike conventional deep feature extractors, feature-metric methods optimise deep features specifically for geometric estimation tasks. The talk showcased experimental results and prototypes that demonstrate this approach's superior robustness and precision in vision and audio, pointing to emerging opportunities in robotics, autonomous systems, and sensor fusion.

Markus Lingman, Chief Strategy Officer at Halland Hospital Group and Adjunct Professor at Halmstad University, presented a talk on "Routes to AI-driven Value in Health – When Opportunity Hits Reality." In a candid, practice-oriented keynote, Markus tackled the challenging transition from AI promise to real-world impact in healthcare. With deep experience as both a physician-executive and academic, he surveyed the regional AI infrastructure being built in Halland, where siloed innovation is giving way to scalable, data-driven care. The keynote highlighted critical enablers such as data governance, ethical oversight, and clinician engagement, which are often overlooked in theoretical discourse, and shared concrete case studies: early detection systems

for cardiovascular risk in collaboration with UC Berkeley, and smartwatch-based monitoring initiatives in partnership with Stanford Medicine—all showing how international cooperation accelerates practical benefits.

The final keynote was delivered by Assistant Professor **Benyou Wang** from Chinese University of Hong Kong, Shenzhen) and concerned the journey towards trustworthy medical Large Language Models. Benyou presented a forward-looking roadmap for medical LLMs, building on recent successes such as ChatGPT and LLaMA 3. His talk outlined the development of HuatuoGPT—a specialist LLM trained for medical reasoning—and its multilingual, multimodal successor, the Apollo series. Professor Wang detailed how his team addressed interpretability and chain-of-reasoning robustness through architectural enhancements in HuatuoGPT-o1. He then proposed training virtual "patient agents" using AIGC (AI-generated content) to simulate real clinical interactions, which could streamline the "last mile" of LLM adoption. His vision is to cultivate generalist medical AI systems capable of both diagnosing and teaching across languages and modalities—grounded in patient-centred trust and accountability.

Over two days, SAIS-2025 hosted a rich mix of full papers, lightning talks, extended abstracts, posters and demonstrations. This year's contributions spanned theoretical exploration, application-oriented case studies, human-in-the-loop design, ethics, trustworthiness, hybrid and neurosymbolic methods, cognitive robotics, multi-agent systems, and real-world deployments. This diversity underscores our commitment to nurturing an inclusive community that bridges disciplinary and sectoral divides.

The workshop further fostered networking and collaboration through communal breaks, a poster session, an MSc thesis award, the annual SAIS meeting, and a group dinner—a testament to our belief that meaningful progress arises from both scholarly exchange and interpersonal connections. We were also pleased to invite attendees to the "Socially Responsible and Trustworthy AI Day" co-located on 18 June, reinforcing SAIS-2025's emphasis on ethical and sustainable AI.

SAIS-2025 would not have been possible without the engagement from all contributors, reviewers, and participants who made SAIS-2025 a success. We particularly thank Halmstad University, Region Halland, and the Swedish AI Society for their generous support, and we look forward to continuing the dialogue at next year's workshop.

We invite readers to explore the high-quality contributions that follow, which showcase robust scientific insights, practical applications, and forward-thinking visions for the future of AI. We hope that these proceedings catalyse new collaborations, spur innovation, and contribute to the vibrant growth of the Swedish and international AI communities.

Workshop Organisers

Sławomir Nowaczyk
Thorsteinn Rögnvaldsson
Marlena Nowaczyk
Anna Vettoruzzo
Grzegorz J. Nalepa
Aurora Esteban
Stefan Byttner

Program Committee

Abdallah Alabdallah, Halmstad University
Anders Holst, RISE SICS
Anna Vettoruzzo, Eindhoven University of Technology
Emmanuella Budu, Halmstad University
Eva Blomqvist, Linköping University
Fredrik Heintz, Linköping University
Gideon Mbiydzenyuy, University of Borås
Grzegorz Nalepa, Halmstad University
Kalle Åström, Lund University
Martin Boldt, Blekinge Institute of Technology
Panagiotis Papapetrou, Stockholm University
Parisa Jamshidi, Halmstad University
Paul Davidsson, Malmö University
Vincenzo Buono, Halmstad University
Yuantao Fan, Halmstad University