

Preface: TimelyAI, When Should Generative AI Assistants Intervene?

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Abstract

This volume contains the proceedings of TimelyAI, a workshop held in person at Linz Science Park, Linz, Austria, co-located with the 5th Symposium on Human-Computer Interaction for Work (CHIWORK 2026), June 22 to 25, 2026. All paper presentations were delivered in person by at least one author of each accepted paper; a remote attendance option was additionally offered for audience members unable to travel to Linz. The workshop brought together Human-Computer Interaction (HCI) researchers interested in AI, psychological science, and social science to examine when generative AI (GenAI) assistants should intervene in knowledge work, and to establish a shared research agenda around this question. This preface introduces the workshop's motivation and topics, summarises the submission and review process, and presents the programme, organisers, and programme committee.

Keywords

Generative AI, Proactive AI, AI Intervention, Intervention Timing, Human-AI Interaction, Knowledge Work

1. Introduction

“When should Generative AI (GenAI) assistants intervene, if at all?” While current GenAI assistants in knowledge work primarily operate reactively, responding only when users initiate an interaction, there is significant potential for these assistants to proactively assist in tasks [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]. To tap into this potential, it is important to examine when interventions are useful, when they are harmful, and how such judgements can be made reliably. TimelyAI [16] at CHIWORK 2026 brought together HCI researchers interested in AI, psychological science, and social science to examine the timing of GenAI intervention in knowledge work and to establish a shared research agenda. The workshop addressed four topics:

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- **What signals matter:** cognitive, behavioural, motivational, emotional, task-level, and broader contextual and social signals that suggest an intervention is needed, as well as signals suggesting intervention would be excessive, redundant, or contextually inappropriate.
- **How to detect these signals:** appropriate data sources (e.g., interaction logs, keystroke dynamics, physiological sensors, eye tracking) and computational methods (e.g., affective computing, multimodal fusion) for reliable real-time interpretation, alongside proportionality, consent, and privacy trade-offs.
- **How to combine signals into a timing judgement:** computational or theoretical frameworks for integrating multiple signals into a reliable decision to intervene or remain silent, accounting for individual differences across users, tasks, and contexts.
- **How to evaluate intervention timing:** metrics, benchmarks, and evaluation approaches capturing both the immediate effects of intervention timing (e.g., user responsiveness, task disruption) and its longer-term consequences (e.g., trust, engagement, task outcomes).

2. Submission and Review Process

Submission to TimelyAI was open to the international research community and not restricted to any project or institution. Authors were invited to submit a Regular paper (at least 10 pages, including references) or a Short paper (5 to 9 pages, including references), using the official single-column CEURART template, addressing one or more of the four workshop topics. Submissions were not anonymous. There were 36 papers submitted for peer review to this workshop. Out of these, 12 papers were accepted, comprising 2 regular papers and 10 short papers, each reviewed for quality and relevance to the workshop topics by the organising and programme committee. Of the 12 accepted papers, 11 are included in this volume with author consent, comprising 2 regular papers and 9 short papers; one paper's corresponding author elected not to publish their paper via CEUR Workshop Proceedings, and that paper is instead listed on the workshop website only.

3. Papers in this Volume

1. *Timing-Aware Detection of Emergent Infinite Loops in TCG Design Workflows.* Yuanzhe Jin (University of Oxford), Zihan Xu (Zhejiang University), Shuhan Liu (Zhejiang University).
2. *The Illusion of Progress: Dialogue-Derived Signals for Proactive Intervention Timing in Student-GenAI Interaction.* Fangwei Lin (University of Hong Kong), Khe Foon Hew (University of Hong Kong).
3. *Final Answer Is Too Late: Prompt-as-Intervention for Evidence-Bounded Multimodal Interpretation.* Haorui Yu (University of Dundee), Yunfei Wang (Newcastle University), Qiufeng Yi (University of Birmingham).
4. *Glanceable Verification Indicators for AI-Assisted Storytelling: Signals and Evaluation for Verification Interventions.* Muhan Xu (University of the Arts London), Ziwei Zhao (University of the Arts London and Beijing Institute of Graphic Communication), Junyi Zeng (Royal College of Art), Tianhong Wang (Peking University), Francesca Panetta (University of the Arts London), Rebecca Fiebrink (University of the Arts London), Nick Bryan-Kinns (University of the Arts London), Mick Grierson (University of the Arts London).
5. *Beyond Fixed Loops: Estimated RPE as a Master Signal for Timely Proactive Coaching in Physical Workouts.* Thomas Baldassarre (University of Mons), Evelyne Meurisse (University of Mons), Kevin El Haddad (University of Mons), Thierry Dutoit (University of Mons).
6. *Friction or Breakdown? Rethinking the Timing of GenAI Intervention in Knowledge Work.* Zhitong Guan (University of Texas at Austin).
7. *One Body, Many Masters: The Timely Politics of Domestic Robot Attention.* Botao Amber Hu (University of Oxford).
8. *When Groups Struggle: A Framework of Trigger Events and Regulatory Breakdown in Socially Shared Regulation of Learning for Proactive AI Intervention.* Wenxin Zhang (King's College London).

9. *Governing the Timing of Generative AI Assistance in Undergraduate Academic Writing: A Comparative Policy Analysis of Universities in China and the UK*. Lurong Yin (King's College London), Qi Zhang (Tsinghua University).
10. *Whose Readiness? Rethinking Intervention Timing for Polyadic AI Facilitation*. Echo Chuqiao Wan (Imperial College London, and NIHR Biomedical Research Centre at the Royal Marsden and the Institute of Cancer Research).
11. *Detection of Induced Psychosis-Like Thinking in User-GenAI Interaction: A Retrieval-Augmented Generation (RAG) Approach*. Yi Huang (Pan-European University).

4. Accepted Paper Not Included in this Volume

One paper was accepted by the organising and programme committee but is not included in this volume, as its corresponding author elected not to publish via CEUR Workshop Proceedings. It was presented at the workshop and is listed on the workshop website only.

- *The Timing of GenAI Intervention in Remote Kick-off Meetings: An Interaction Ritual Chains Theory Perspective*. Mingnan Lin (Imperial College London), Yuan Yin (Imperial College London).

5. Programme

On June 22, 2026, at Linz Science Park, Linz, Austria (Linz local time, CEST, UTC+2):

- **9:00–9:10:** Workshop Overview. Introduction to workshop objectives, structure, and schedule.
- **9:10–10:00:** Keynote. “Out of Our Minds: What is AI Doing to Us and for Us?” by Professor Yvonne Rogers, University College London.
- **10:00–11:00:** Lightning Talks. Each of the 12 accepted papers was represented by one author, presenting a 5-minute self-introduction and summary of their contribution.
- **11:00–12:00:** Towards a Research Agenda. Participants collaborated on a shared Miro board organised around the four workshop topics, contributing points drawn from their own papers and from discussion with peers. The finalised board was exported and published as a shared research agenda on the workshop website, followed by closing remarks from the organisers.

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- Qing Xia, University College London, United Kingdom
- Amy Rechkemmer, King's College London, United Kingdom
- Yiwen Xing, University of Oxford, United Kingdom
- Lise Stork, University of Amsterdam, Netherlands
- Albert Meroño-Peñuela, King's College London, United Kingdom
- Mark Whiting, Pareto.AI and University of Pennsylvania, United States
- Advait Sarkar, Microsoft Research, University of Cambridge, and University College London, United Kingdom
- Duncan Brumby, University College London, United Kingdom
- Elena Simperl, King's College London, United Kingdom, and Technical University of Munich, Germany

7. Programme Committee

- Xi Hu, King's College London, United Kingdom
- Yanzheng Xiang, Meta Research, London, United Kingdom
- Neal Reeves, University College London, United Kingdom
- Johanna Walker, University of Southampton, United Kingdom
- Wei Lan, Imperial College London, United Kingdom
- Lin Luo, University of Glasgow, United Kingdom
- Hao Chen, University of Cambridge, United Kingdom
- Chengliang Wang, East China Normal University, China

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