

# 12<sup>th</sup> Joint Workshop on Interfaces and Human Decision Making for Recommender Systems (IntRS) 2025

Prague, Czech Republic, September 22, 2025

## Proceedings

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in conjunction with

19<sup>th</sup> ACM Conference on Recommender Systems (RecSys 2025)

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# Preface

This volume contains the papers presented at the 12<sup>th</sup> Joint Workshop on Interfaces and Human Decision Making for Recommender Systems (IntRS), held on September 22 as part of the 19<sup>th</sup> ACM Conference on Recommender Systems (RecSys), the premier international forum for the presentation of new research results, systems and techniques in the broad field of recommender systems.

Recommender systems were originally developed as interactive intelligent systems that can proactively guide users to items that match their preferences. Despite its origin on the crossroads of HCI and AI, the majority of research on recommender systems gradually focused on objective accuracy and ranking criteria paying less and less attention to how users interact with the system as well as the efficacy of interface designs from users' perspectives. This trend is reversing with the increased volume of research that looks beyond algorithms, into users' interactions, decision making processes, and overall experience.

The series of workshops on Interfaces and Human Decision Making for Recommender Systems focuses on the *“human side”* of recommender systems. The goal of the research stream featured at the workshop is to improve users' overall experience with recommender systems by integrating different theories of human decision making into the construction of recommender systems and exploring better interfaces for recommender systems. The event brings together an interdisciplinary community of researchers and practitioners who share research on novel (psychology-informed) recommender systems, including new design technologies and evaluation methodologies, and who aim to identify critical challenges and emerging topics in the field.

The main research strands covered by the workshop are:

- User interfaces for recommender systems (e.g., visual interfaces, explanation interfaces, conversational recommender systems, incorporating User Experience into interfaces);
- Interaction, user modeling and decision making (e.g., cognitive, affective, and personality-based user models for recommender systems, decision biases, cognitive biases, persuasive recommendation and argumentation, explainable recommendation models);
- Evaluation (e.g., user-centric evaluation, beyond-accuracy objectives and metrics, case studies, benchmarking platforms, empirical studies of new interfaces and interaction designs, evaluations in real-world contexts);
- Influence of recommender systems on user's behavior. An interesting research direction that has recently received renewed interest is to investigate how users interact with recommenders based upon their cognitive model of the system. We believe that the paradigm that describes the relationship between humans and recommender systems is changing and evolving toward “symbiotic recommender systems”, in which both parties learn by observing each other.

The 12<sup>th</sup> Joint Workshop on Interfaces and Human Decision Making for Recommender Systems (IntRS'25) complements the technical aspects mainly discussed at the Conference with specific topics related to cognitive modeling, decision making, human-centered AI.

Recent research on human-AI collaboration involves several critical areas of investigation, such as Human-in-the-loop, Symbiotic AI, Explainable AI, User-centered design, and Intelligent Interfaces. Overall, this area of research is aimed at developing systems that can work effectively with human users, considering their preferences, cognitive abilities, and ethical values. They should be transparent, interpretable, adaptable, and respectful of the user's autonomy and privacy. The ultimate goal is to develop recommender systems that can support the user's decision-making process, enhance their well-being, and promote social good. This means respecting cultural, social, and individual differences when crafting recommendations. Inclusive design translates to recommendations that truly represent the diverse individuals who use these systems. Human-AI collaboration and Human-Centered AI are pivotal in the development of recommender systems.

IntRS'25 follows successful workshops on the same topic organized at RecSys conferences in 2014 - 2024. The workshop series was created by merging two original RecSys workshops series: Human Decision Making and Recommender Systems (Decisions@RecSys, 2010–2013) and Interfaces for Recommender Systems (InterfaceRS'12). The idea of merging the two workshops was motivated by the strong inter-relationship between the user interface and human decision-making topics. The combination of these two aspects seems to be highly attractive. Earlier workshops, such as the IntRS'15 workshop in Vienna, the IntRS'16 in Boston, the IntRS'17 in Como, the IntRS'18 in Vancouver, the IntRS'19 in Copenhagen were attended by over 50 participants. The virtual edition of IntRS'20 and hybrid sessions at IntRS'21-IntRS'24 opened workshop participation to a broader audience and further increase the number of attendees. IntRS'25 has continued this trend with over 50 participants.

The proceedings include 9 technical papers, selected through a rigorous reviewing process, where each paper was reviewed by three PC members.

The IntRS chairs would like to thank the RecSys 2025 workshop chairs, Ludovico Boratto and Martijn C. Willemsen, for their guidance during the workshop organization. We also wish to thank all authors and all presenters, and the members of the program committee. All of them secured the usual workshop's high-quality standards.

September 2025

Peter Brusilovsky  
Alexander Felfernig  
Pasquale Lops  
Marco Polignano  
Giovanni Semeraro  
Martijn C. Willemsen

# IntRS 2025 Workshop Organization

**Chairs:** Peter Brusilovsky, *School of Information Sciences, University of Pittsburgh, USA*  
Alexander Felfernig, *Institute for Software Technology, Graz University of Technology, Austria*  
Pasquale Lops, *Dept. of Computer Science, University of Bari Aldo Moro, Italy*  
Marco Polignano, *Dept. of Computer Science, University of Bari Aldo Moro, Italy*  
Giovanni Semeraro, *Dept. of Computer Science, University of Bari Aldo Moro, Italy*  
Martijn C. Willemsen, *Eindhoven University of Technology, The Netherlands*

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Marco Polignano, *Dept. of Computer Science, University of Bari Aldo Moro, Italy*

**Web Chair:** Alexander Felfernig, *Institute for Software Technology, Graz University of Technology, Austria*

**Program Committee:** Veronika Bogina, *Tel Aviv University, Israel*  
Ludovico Boratto, *University of Cagliari, Italy*  
Robin Burke, *University of Colorado, Boulder*  
José A. Galindo, *University of Seville, Spain*  
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Erasmus Purificato, *Joint Research Centre, European Commission*  
Behnam Rahdari, *University of Pittsburgh, United States*  
Giuseppe Spillo, *University of Bari Aldo Moro, Italy*  
Alain D. Starke, *University of Amsterdam, The Netherlands*  
Marko Tkalčič, *University of Primorska, Slovenia*  
Chun-Hua Tsai, *University of Nebraska at Omaha, United States*  
Wolfgang Würndl, *Technical University of Munich, Germany*

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