

# RecSys'18 Joint Workshop on Interfaces and Human Decision Making for Recommender Systems

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## ABSTRACT

As an interactive intelligent system, recommender systems are developed to give recommendations that match users' preferences. Since the emergence of recommender systems, a large majority of research focuses on objective accuracy criteria and less attention has been paid to how users interact with the system and the efficacy of interface designs from users' perspectives. The field has reached a point where it is ready to look beyond algorithms, into users' interactions, decision making processes, and overall experience. This workshop will focus on the "human side" of recommender systems research. The workshop goal 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.

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## 1 INTRODUCTION

The complexity of decision tasks, limited cognitive resources of recommender systems users, and a tendency to keep decision efforts as low as possible are related to the phenomenon of bounded

rationality [12], i.e., users tend to employ decision heuristics rather than exhaustive search for optimal decisions. Furthermore, preferences of users are typically constructed within, and often changed throughout a recommendation session [1].

These issues are gaining increasingly more attention in the recommender systems community as demonstrated by the growing number of papers focused on interfaces and decision making in recommender systems [4, 6, 7, 14]. Chang et al. [3] show that preference elicitation can be completed more efficiently if the interface does not support initial personalization by letting users express their preferences on individual items but rather on groups of items. Stettinger et al. [10] analyze anchoring effects in the preference acquisition phase of group decision scenarios. The earlier the preferences of other group members are visible the lower is the standard deviation of individual user ratings. Teppan and Felfernig [13] analyze the impact of decoy effects in recommendation scenarios where disliked items as part of a result set can have an impact on the selection behavior of the user. Chen and Pu [5] and O'Donovan et al. [11] show the positive impact of explanations on the trustworthiness of recommender systems. For an overview of different explanation approaches in recommender systems see e.g., [14]. Knijnenburg et al. [9] and Verbert et al. [16] explore the issues of explorability, transparency, and control in recommender interfaces. Bollen et al. [2] show that larger recommendation sets that contain solely good items do not necessarily trigger higher choice satisfaction since increased difficulty in selection choice counteracts the attractiveness of the recommendation set. Willemsen et al. [17] showed that such choice difficulty can be reduced by latent feature diversification, an algorithm adaptation based on psychological theory. Finally, Tkalcic et al. provide an overview of the role of emotions in recommender systems. Specifically, they discuss models and acquisition methods for emotions and personality [15]. For further related discussions see e.g., [7, 8].

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The continuous aim of the workshop is to bring together researchers and practitioners around the topics of designing and evaluating novel intelligent interfaces for recommender systems in order to: (1) share research and techniques, including new design technologies and evaluation methodologies, (2) identify next key challenges in the area, and (3) identify emerging topics.

## 2 TOPICS AND CONTRIBUTIONS

The workshop covers *three interrelated themes*:

- (1) *user interfaces* (e.g., visual interfaces, explanation interfaces, collaborative multi-user interfaces, spoken and natural language interfaces, trust-aware and social interfaces, context-aware interfaces, ubiquitous and mobile interfaces, Example-and demonstration-based interfaces and decision making interfaces);
- (2) *interaction mechanisms, user modeling, and decision making* (e.g., cognitive modeling for recommender systems, human-recommender interaction, controllability, decision theories, preference construction, interfaces that take into account the role of emotions, argumentation and persuasive recommendation, cultural differences, approaches to high-quality group decision making, and the detection and avoidance of decision biases);
- (3) *evaluation* (e.g., case studies, benchmarking platforms, empirical studies of new interfaces and interaction designs, and evaluation methods and metrics).

Topics in the *14 contributions submitted* to this year's workshop include:

- explainable recommendations;
- eye-tracking to analyze user behavior;
- novelty, diversity and familiarity in Music recommender systems;
- social recommender systems;
- the role of trust, transparency and personality in recommendations;
- interactive recommender interfaces;
- Willingness to use recommender technologies.

## 3 WORKSHOP FORMAT

The 5<sup>th</sup> *Joint Workshop on Interfaces and Human Decision Making for Recommender Systems (IntRS'18)* follows successful workshops on the same topic organized at RecSys conferences in 2014 - 2017. 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 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 and IntRS'17 in Como all had attendance rates over 50 participants.

IntRS'18 accepted both long (8 pages max plus 1 page references) and short (4 pages max plus 1 page references) papers. For short papers, alternative modes of presentation were encouraged, such as demos, playing out of scenarios, mock-ups, and alternate media

such as video. Each accepted contribution was included in the workshop proceedings and presented in a workshop session.

An invited talk by Kathrien Verbert titled "*Mixed-initiative Recommender Systems: Towards a Next Generation of Recommender Systems through User Involvement*" enriched the workshop program.

The list of accepted IntRS'18 papers and the workshop schedule can be found at: [intrs18.wordpress.com](http://intrs18.wordpress.com).

## 4 CONCLUSIONS

IntRS aims to bring together researchers and practitioners from areas related to users interfaces and decision making in recommender systems. This year's contributions are high quality and are expected to attract a large audience.

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