

# ABIS 2026: The Effects of the Adaptive Web on Society

Laura Stojko  
University of the Bundeswehr Munich  
Neubiberg, Germany  
laura.stojko@unibw.de

Eelco Herder  
Utrecht University  
Utrecht, Netherlands  
e.herder@uu.nl

Jannis Strecker-Bischoff  
University of St. Gallen  
St. Gallen, Switzerland  
jannis.strecker-bischoff@unisg.ch

Julia Seitz Sanger  
Karlsruhe Institute of Technology  
Karlsruhe, Germany  
julia.seitz@kit.edu

Thomas Neumayr  
University of Applied Sciences Upper  
Austria  
Hagenberg, Austria  
thomas.neumayr@fh-hagenberg.at

Enes Yigitbas  
Paderborn University  
Paderborn, Germany  
enes.yigitbas@upb.de

Mirjam Augstein  
University of Applied Sciences Upper  
Austria  
Hagenberg, Austria  
mirjam.augstein@fh-hagenberg.at

## Abstract

ABIS is an international workshop organized by the SIG on Adaptivity and User Modeling in Interactive Software Systems of the German Gesellschaft fur Informatik. For more than 30 years, the ABIS workshop has served as a highly interactive forum for discussing the state of the art in personalization, user modeling, and related areas. The 2026 edition will focus on personalization and recommendations, with particular attention to adaptation on the Web and its societal effects. To explore and discuss the effects of the adaptive Web on society, the workshop aims to bring together researchers and practitioners to share insights and discuss emerging findings and future developments. Our goal is to identify current trends, newly observed effects, and future research directions, with the overarching aim of fostering the development of this discipline and encouraging new collaborations.

## CCS Concepts

- **Information systems** → **Personalization; Recommender systems; • Human-centered computing** → *User models; User studies;*
- **Social and professional topics** → *Socio-technical systems.*

## Keywords

Adaptive Web, Personalization, Recommendations, Societal Effects

### ACM Reference Format:

Laura Stojko, Eelco Herder, Jannis Strecker-Bischoff, Julia Seitz Sanger, Thomas Neumayr, Enes Yigitbas, and Mirjam Augstein. 2026. ABIS 2026: The Effects of the Adaptive Web on Society. In *18th ACM Web Science Conference (WebSci Companion '26)*, May 26–29, 2026, Braunschweig, Germany. ACM, New York, NY, USA, 2 pages. <https://doi.org/10.1145/3795513.3810983>



This work is licensed under a Creative Commons Attribution 4.0 International License. *WebSci Companion '26, Braunschweig, Germany*  
© 2026 Copyright held by the owner/author(s).  
ACM ISBN 979-8-4007-2492-3/26/05  
<https://doi.org/10.1145/3795513.3810983>

## 1 Introduction

User modeling and adaptive systems focus on creating and maintaining user models to adapt interactive systems [1]. These models can be derived from implicitly observed user behavior or explicitly provided inputs, such as profile data, location, or past interactions (e.g., browsing, searching, purchases) [5], typically collected via web or mobile applications. Recent advances in pattern detection further enable the use of sensor-based data for personalization. Applications include item recommendations, location-based services, social updates, educational games, and personalized guidance.

With the ongoing transition from classical computing devices to ubiquitous environments [3], the need for more and better user modeling and personalization to adapt to changing contexts in various situations is even more crucial. Observing this trend, the online world increasingly invades the reality of our daily lives through smartphones or smartwatches. Such devices enable the connection between the *human and online layers* [4], e.g., the Web and reality. With the growing use of these immersive technologies, particularly as artificial intelligence (AI) has gained widespread interest among users and is now integrated into many applications, the question arises: how do they affect the human and online layers, and, ultimately, probably change society?

Consequently, this workshop aims to gather *observations, trends, and potential future directions* on how personalization and recommendation approaches affect society, particularly in web-based contexts. It focuses on examples from the online layer, such as adaptive applications and personalized recommendations, and their impact on the human layer [4].

This workshop is organized by a special interest group (SIG) on Adaptivity and User Modeling in Interactive Software Systems of the German Gesellschaft fur Informatik (ABIS), which has been held annually since 1993. Motivation and topics for potential contributions are summarized in the following sections.

## 2 Motivation

Online layers in which personalization and recommendations are increasingly prevalent include, e.g., CSCW, website recommendations, personalized shopping, and customer service, often aimed at improving teamwork support and user experience. This affects the human layer and raises privacy concerns, as shown below.

The transition away from classical computing enables more flexible, spontaneous collaboration through the Web and always-on personal devices, and this shift also manifests in workplace technologies, such as CSCW tools, which have undergone rapid change. While modern work practices (e.g., hybrid work, New Work [2]) challenge established assumptions, technologically mediated communication still frequently falls short compared to face-to-face encounters. Personalization may help provide better support for individuals and teams, or recommendations for suitable partners or tasks. In this context, personalization in web-based environments affects not only individual interactions but also organizational and societal structures. Essential questions remain open to debate and suggest a need for personalization approaches: When to do which task in which reality? How to coordinate and personalize the tasks optimally across realities and spaces? How does it affect workers' relationships with coworkers?

In addition, the user experience is becoming more critical in a mobile and connected world. It may be less important to deliver the absolute best recommendations than fast and “good enough” ones that support users in navigating through the real world daily, and help them make decisions on activities to carry out or transactions to perform [4]. At the same time, there is a battle for users' attention, trust, and reliance on technology, while the cost of unsuitable adaptation is very high: users may quickly switch to different applications, platforms, and services if they become frustrated. This raises further questions: How does growing reliance on technology affect society if users become unable to act without it? And how does the oversupply of applications, platforms, and services influence user behavior or contribute to an increased carbon footprint?

Personalization need not be limited to generating lists of recommendations: adaptations such as personalized maps, tailored menus, link annotations, and scripting may potentially have a greater effect on the user experience. A particular design issue is explaining why items are recommended, which interface elements have been adapted, and how this can be undone, if needed. Additionally, it becomes even more important to encourage users to review and adjust their user profiles, collected data, and privacy settings [7], as these serve as a basis for personalization or AI functionalities, such as generating personalized recommendations.

These examples show the increasing prevalence of personalization across many (web) applications. Consequently, this workshop examines the societal effects of this development.

## 3 Topics

This workshop welcomes a range of topics concerning the adaptive Web and its effects on society, including but not limited to:

- *Personalization and Recommendation*: Personalization applications exist across various domains, from e-learning to online retail, automotive domains, assistance for the elderly or handicapped, or mobile computing scenarios. What are

suitable use cases for meaningful personalization? What uniform patterns are visible across domains?

- *AI-fueled Personalization*: By leveraging the large amounts of available data, AI has the potential to enhance existing personalization approaches across various domains. What can recent advances in AI (e.g., LLMs) bring to the table when it comes to personalization? What risks does AI bring to personalization efforts and, in combination, to society?
- *Moving the Needle on the Reality/Virtuality Continuum*: Emerging technologies such as AI tools, AR, VR, and XR increasingly blur the lines between online and offline experiences. Personalization may help users navigate this continuum and support more effective joint interactions. This raises the question of what societal risks or challenges emerge when hybrid environments become increasingly personalized, and how these developments may change social dynamics.
- *Personalization for Groups*: Personalized support for groups can help in our contemporary, inter-connected workplaces: topics include adaptive ad-hoc support for meetings, suggestions of suitable collaboration partners, and similar approaches (for an overview, see [6]).
- *Adaptive Support for Learning and Teaching*: Tailored learning experiences can benefit knowledge acquisition and learning. However, adaptive supports should account for a range of factors, including individual learning styles and collaborative environments. What are the methods and tools for individual and collaborative learning support, and how do they affect the users?
- *Serendipity, Bubbles, and Long Tail*: Personalization is in latent danger of strictly limiting content to individual preferences, effectively preventing the chance to find interesting items that are part of the long tail. What can be done to avoid the resulting bubbles?
- *Privacy Issues*: With advances in personalization, users' concerns over transparency, user control, and data scrutability become even more important to address. How can personalization systems provide transparency and ensure ethical, privacy-compliant use of the data without overwhelming users with complexity?

## References

- [1] Peter Brusilovsky. 1998. *Methods and Techniques of Adaptive Hypermedia*. Springer Netherlands, Dordrecht, 1–43. doi:10.1007/978-94-017-0617-9\_1
- [2] Arjan De Kok. 2016. The new way of working: Bricks, bytes, and behavior. *The impact of ICT on work* (2016), 9–40. doi:10.1007/978-981-287-612-6\_2
- [3] Richard Harper, Tom Rodden, Yvonne Rogers, and Abigail Sellen. 2008. *Being Human: Human-Computer Interaction in the Year 2020*. Microsoft Research Ltd, 7 J J Thomson Avenue, Cambridge, CB3 0FB, England. <https://www.microsoft.com/en-us/research/publication/being-human-human-computer-interaction-in-the-year-2020/>
- [4] Eelco Herder, Laura Stojko, Jannis Strecker, Thomas Neumayr, Enes Yigitbas, and Mirjam Augstein. 2024. Towards new realities: implications of personalized online layers in our daily lives. *i-com* 23, 2 (2024), 221–229.
- [5] Folasade Olubusola Isinkaye, Yetunde O Folajimi, and Bolande Adefowoke Ojokoh. 2015. Recommendation systems: Principles, methods and evaluation. *Egyptian informatics journal* 16, 3 (2015), 261–273.
- [6] Thomas Neumayr and Mirjam Augstein. 2020. A Systematic Review of Personalized Collaborative Systems. *Frontiers in Computer Science* 2 (2020), 1–23. doi:10.3389/fcomp.2020.562679 Publisher: Frontiers.
- [7] Anna Trapp, Mersedeh Sadeghi, and Andreas Vogelsang. 2025. From Facts to Foils: Designing and Evaluating Counterfactual Explanations for Smart Environments. doi:10.48550/arXiv.2510.03078 arXiv:2510.03078 [cs] version: 1.