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Second International Workshop on Recommender Systems for Sustainability and Social Good (RecSoGood 2025)

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In the rapidly evolving landscape of technology and sustainability, leveraging Recommender Systems has emerged as a powerful tool for driving positive change. With a foundation in AI and data analytics, Recommender Systems can be effective in various domains, from e-commerce to energy management, inclusion and well-being. By harnessing the power of recommendation algorithms under a multi-stakeholder perspective, organizations and researchers can guide users towards more sustainable choices and behaviors, contributing to broader environmental and social goals. With this aim, our workshop provides a unique platform for researchers, practitioners, and platform owners to explore the integration of sustainability principles into Recommender Systems. Through presentations, discussions, and panels, participants can explore the theoretical foundations, practical implementations, and ethical and environmental considerations of sustainable Recommender Systems. By fostering collaboration and knowledge exchange, the workshop aims to catalyze innovation and inspire collective action towards a more sustainable future.

Additional Key Words and Phrases: Sustainability, Sustainable Development Goals, Social Good, Recommendation, Behavioural Change

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1 WORKSHOP DESCRIPTION

1.1 Motivation and Relevance to RecSys

UN defines sustainability as a development process capable of “*meeting the needs of the present without compromising the ability of future generations to meet their own needs*”. It is an increasingly pressing global issue, and technology, including Recommender Systems (RS), has a role to play in addressing it. Differently from existing approaches that

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primarily evaluate the impact of RS by focusing on individual stakeholders' value [3, 5, 6], when dealing with social aspects, ethical issues [2, 9], and environmental aspects [11, 12], we propose a multi-stakeholder perspective that focused on integrating environmental, social, and economic considerations [10] into the recommendation process [4, 7]. We analyze the impact of recommender systems in achieving sustainability development goals [1, 8, 13] under a broad sustainable perspective.

Proposing this workshop on sustainability to the RS community has several compelling reasons:

- (1) **Impact:** RS significantly influence user behavior and consumption patterns. By incorporating sustainability criteria into recommendation algorithms, we can promote more environmentally friendly, inclusive and socially responsible choices, ultimately contributing to broader sustainability goals.
- (2) **Opportunity for Innovation:** Sustainability presents a new frontier for innovation within the field of RS. By exploring how recommendation technologies can be leveraged to support sustainability objectives, we open up opportunities for research, development, and experimentation in this emerging area.
- (3) **Community Engagement:** Engaging the RS community in discussions around sustainability fosters awareness and collaboration on this topic. By bringing together researchers, practitioners, and industry professionals, we can leverage collective expertise to develop innovative solutions and best practices for integrating sustainability into RS.

1.2 Vision and Objectives

We propose a second edition of this workshop to collect contributions and bridge the gap between recent advances in RS and their impact in terms of sustainability. By integrating sustainability principles into recommendation algorithms, we aim to drive positive societal and environmental change.

The main objectives of our workshop are:

- (1) Increase awareness within the RS community about the importance of sustainability and the potential role of recommendation technologies in supporting sustainability goals.
- (2) Facilitate interdisciplinary dialogue and collaboration among researchers, practitioners, and industry professionals from diverse fields, including RS, sustainability science, ethics, and human-computer interaction.
- (3) Identify key challenges and barriers to integrating sustainability into RS, including technical, ethical, and societal considerations, and explore potential solutions and mitigation strategies.
- (4) Encourage innovative approaches and methodologies for designing and implementing sustainable RS, leveraging cutting-edge technologies and interdisciplinary insights.
- (5) Inspire participants to take concrete actions to incorporate sustainability principles into their research and development of RS, fostering a culture of responsibility and accountability within the community.

1.3 Topics

Submissions should focus on the sustainability perspective, and key topics of interest include but are not limited to:

- Sustainable Recommender Systems Development
 - Multi-criteria Recommender Systems
 - Multistakeholder Recommender Systems
 - Energy efficient and low-carbon model learning
 - Generative AI's Impact on sustainable Recommendation Systems

- User interfaces for sustainable Recommender Systems
- Sustainable Recommender Systems Features
 - Explainability & trustworthy
 - Privacy and safety
 - Diversity and inclusion
 - Behavioural change
- Evaluation of Sustainable Recommender Systems
 - Long-term effect of Recommender Systems
 - Simulation techniques
 - Beyond accuracy evaluation
- Application Areas
 - Health
 - Media and information
 - Travel and tourism
 - Agriculture

1.4 Desired Outcome

We expect the workshop to generate consistent outcomes by:

- Collecting papers, i.e. workshop proceedings, with new contributions on emerging aspects in this research area. Following the consolidated practices of some organizers with past workshops, our plan is to publish the proceedings on a volume of the CCIS series by Springer.
We aim to collect at least 10 papers falling into the full and reproducibility categories and at least 3 papers belonging to short and position categories. This count makes it possible to meet the requirements for proceedings to be published in the Springer CCIS series. An extensive dissemination of the workshop’s call for papers has facilitated achieving this objective.
- Collecting the presentations associated with the accepted papers. We plan to gather and share slides on the workshop website before the workshop day. This process allows attendees to become familiar with the content in advance and let them prepare questions for more engaging discussions.
- We also plan to publish extended versions of the most relevant workshop papers in a special issue of a top-tier journal right after the workshop.

1.5 Related Workshops

This is the second edition of the International Workshop on sustainability and social good through a holistic approach at RecSys, with a significant success of the first edition held at RecSys 2024 in Bari (<https://recsogood.github.io/recsogood24/>).

A list of the most relevant workshops on sustainability and social good in the broader field of AI, including hosting conferences, has grown in the past few years. A representative list of these workshops and special tracks is presented in the following:

- Sustainable AI Workshop - AAAI Conference (since 2022)
- Multi-Year Track On AI And Social Good - IJCAI Conference (since 2022)

- Workshop on Knowledge Graphs for Sustainability - ESWC Conference (since 2022)
- Workshop on Artificial Intelligence for Sustainability - ECAI Conference (since 2022)

The growing adoption of sustainability and recommendation technologies in the real world and the rapidly changing techniques driving search and recommendation constantly require novel and evolving definitions, techniques, and applications that timely address contexts, challenges, and emerging issues. Having a dedicated event on this theme allows the international RecSys community to stay updated and continue fostering a core contribution to this field with a holistic perspective on the societal, economic, and environmental impact of RecSys technologies.

2 WORKSHOP ORGANIZERS

Given the great success of last year, we have expanded the workshop organizers both thematically—by introducing experts in agriculture and social sustainability—and in terms of effort, to accommodate the high number of submissions received last year, the review process, the preparation of the Springer volume for the post-proceedings, and the organization of a special issue.

Ludovico Boratto is an Associate Professor of Computer Science at the University of Cagliari (Italy). His research interests focus on recommender systems and their impact on the different stakeholders, both considering accuracy and beyond-accuracy evaluation metrics. He has authored over 60 papers and published his research in top-tier conferences and journals. He is editor of the book “Group Recommender Systems: An Introduction”, published by Springer. He is an editorial board member of the “Information Processing & Management” journal (Elsevier) and “Journal of Intelligent Information Systems” (Springer), and guest editor of several journals’ special issues. He is regularly part of the program committees of the main Web conferences, where he received four outstanding contribution awards. In 2012, he got his Ph.D. at the University of Cagliari (Italy), where he was a research assistant until May 2016. From May 2016 to April 2021, he joined Eurecat as a Senior Research Scientist in the Data Science and Big Data Analytics research group. In 2010 and 2014, he spent ten months at Yahoo! Research in Barcelona as a visiting researcher. He is a member of ACM and IEEE.

Allegra De Filippo is an Assistant Professor at the Department of Computer Science and Engineering at the University of Bologna. She received her Ph.D. in Computer Science and Engineering at the University of Bologna (2020). Her research focuses on decision support systems, stochastic optimization, and methods for integrated offline/online optimization under uncertainty in complex systems. Her doctoral thesis was identified as being of exceptional quality during the evaluation process of the EurAI 2021 PhD Thesis Award. Allegra has deepened her knowledge of the aspects of artificial intelligence and sustainability through various academic and professional experiences, presenting her research results in international events such as the Business Forum AI Italia Canada with a panel on the current state of AI and its impact on the circular economy and sustainability goals. She has published papers in international conferences and journals in the field of Artificial Intelligence, and she collaborated with research groups and universities. She is an editorial board member of the journal ACM Computing Survey and has served in organizational roles for several events.

Elisabeth Lex is a Full Professor of Computer Science at Graz University of Technology, Austria, where she also heads the AI for Society Lab. Her research interests include recommender systems, user modeling, information retrieval, and data science, with a particular focus on psychology-informed recommender systems and trustworthy information access systems. Elisabeth has (co-)authored more than 160 peer-reviewed publications on the aforementioned topics. She frequently takes on the role of a track chair at distinguished conferences such as The ACM Web Conference or ACM UMAP; besides, she regularly organizes workshops at the core venues in her field.

Francesca Maridina Malloci is Assistant Professor at the Department of Mathematics and Computer Science of the University of Cagliari (Italy). She has been visiting scientist at the EURECAT Technology Centre. Her research focuses on predictive analytics, with attention to decision-making systems, such as recommender systems, for multi-stakeholder contexts. She has co-authored papers in international journals and conferences. Francesca has chaired workshop at ACM UMAP, ECML-PKDD, ECIR and SIGIR.

Noemi Mauro is a Tenure-track Assistant Professor at the Computer Science Department of the University of Torino where she obtained a PhD in Computer Science with Honors. Her research interests concern user modeling, recommender systems, cultural heritage, information filtering, and information visualization. She is a PC member of the top conferences in her research areas and a reviewer for several related journals. She co-edited the special issue "Recommender Systems for Good" in the ACM Transactions on Recommender Systems journal. She is an Editorial Board Member of the User Modeling and User-Adapted Interaction journal.

Francesco Ricci is senior full professor of the Faculty of Engineering, Free University of Bozen–Bolzano. He has established a reference point for the research on recommender systems in Bolzano. He was previously Senior Researcher and Technical Director of the E-commerce and Tourism Research Lab (eCTRL), ITC-IRST, Trento, Italy, from 2000 to 2006. From 1998 to 2000, he was System Architect with the Research and Technology Department (process and reuse technologies), Sodalìa S.p.A. His research interests include recommender systems, user modeling, machine learning and ICT applications to tourism and media. He is the author of more than two-hundred refereed publications. According to Google Scholar, he has an h-index of 67 and around 27,000 citations. He is a Co-Editor of the Recommender Systems Handbook (Springer 2011, 2015 and 2022).

3 WORKSHOP FORMAT

3.1 Format

The workshop is organized as an in-person event. Accepted contributions are scheduled for an oral presentation, followed by a Q&A slot for each contribution.

Thanks to our prior experience, we organize the workshop to consider (1) the limited attention span associated with presentations and (2) the need for interaction between participants, often a key but challenging aspect in events like conferences or workshops.

For this reason, our workshop is structured as a sequence of spot thematic and interactive sessions, lasting 40 minutes each. In particular, we split the accepted contributions into groups of 3 to 4 papers based on the topic or application domain. Each session is organized as follows:

- Paper presentations (10 minutes each) - 30 minutes in total;
- Discussion on the outcomes of these papers - 10 minutes.

The workshop organizers facilitate the discussion, preparing a list of key lessons learned from each session's papers and providing brainstorming points on the session's theme. These thematic sessions are paired with a keynote talk from academia that gives a presentation on the state of the art on a novel perspective of sustainability in AI, technology, and RecSys research.

The insights coming from each thematic session and from the keynote talk will shape a road map for shared initiatives (e.g. other editions of the workshop, special issues in top journals, research funding opportunities, etc.).

3.2 Description of Activities

Overall, the workshop is structured as follows:

- Opening Remarks
- Academic Keynote
- Spot thematic session 1
- Coffee break
- Spot thematic sessions 2 and 3
- Panel and Open discussion
- Closing remarks

3.3 Intended Audience Background and Participation

This workshop targets individuals working at the intersection of technology and sustainability, in the Recommender Systems community. Participants may include: (1) academics who are conducting research in Recommender Systems, sustainability science, ethics, and related fields, and are interested in exploring the potential for integrating sustainability criteria into recommendation algorithms; (2) industry professionals working in the development and implementation of Recommender Systems, who seek to understand how to incorporate sustainability considerations into their products and services; (3) policymakers interested in understanding the implications of Recommender Systems on sustainability and exploring policy frameworks to promote ethical and sustainable technology development; (4) students interested in exploring the intersection of technology and sustainability and looking to gain insights into potential research topics and career opportunities in this emerging field; (5) decision-makers within tech companies, startups, and corporations who are interested in understanding the business case for incorporating sustainability into their Recommender Systems and developing strategies for ethical and responsible technology development.

Overall, the workshop aims to provide a platform for individuals from diverse backgrounds and expertise to come together, share knowledge, exchange ideas, and collaborate on advancing the role of Recommender Systems in promoting sustainability and social good. The authors' participants are invited through the following initiatives:

- Setup of a website describing the abstract, the call for papers, the submission details, and the organising and program committees;
- Setup of dedicated channels or pages into the main social media platforms and periodic posts that foster participation (e.g. Twitter/X and LinkedIn);
- Posting the call for papers on mailing lists with interested users;
- Sending invitations to renowned researchers to maximise the diffusion of the call for papers and bring high-quality contributions to the workshop.

4 WORKSHOP SUBMISSIONS

4.1 Peer-review Process

We welcome works at different stages of development: papers can describe applied systems, empirical results or theoretically grounded positions. Papers should be formatted according to the ACM template: all authors should submit manuscripts for review in a single-column format. Submissions are single-blinded, i.e., authors' names should be included in the submissions. The selection process is through peer-review: each paper is assigned to at least two Program

Committee members. The acceptance decisions take into account the relevance to the workshop, novelty/originality, significance, technical quality, and correctness, quality and clarity of presentation, quality of references, and reproducibility. Submitted papers, written in English and compliant with the LNCS guidelines, include:

- (1) Full papers of max 12 pages plus additional pages for references;
- (2) Reproducibility papers of max 12 pages plus additional pages for references;
- (3) Short papers of max 6 pages plus additional pages for references;
- (4) Position papers of max 4 pages plus additional pages for references.

Moreover, to enable potential attendees to articulate their views on the topics of the workshop, share already-published works, bring awareness to ongoing European projects in this area, etc., we also elicit 1 page-extended abstracts. This type of informal submission is editorially reviewed by workshop organizers to gauge fit as well as themes of interest for group discussions. Accepted contributions are presented at the workshop, but not published in the proceedings.

The program committee comprises researchers and professors from academia, research centers and the industry. Our goal is to provide the authors of the submitted papers with comments from the different backgrounds of the reviewers. The auditing participants is invited to register through a call for participation shared in the above-mentioned channels once the program is ready.

4.2 Programme Committee Members

- Ayush Agarwal, Walmart Global Tech
- Ashmi Banerjee, Technical University of Munich
- Alejandro Bellogin, Universidad Autonoma de Madrid
- Veronika Bogina, Tel Aviv University
- Robin Burke, University of Colorado
- Michael Ekstrand, Boise State University
- Alexander Felfernig, TU Graz
- Angelo Geninatti Cossatin, University of Torino
- Dietmar Jannach, University of Klagenfurt
- Shah Noor Khan, Utrecht University
- Bart Knijnenburg, Clemson University
- Masoud Mansoury, Delft University of Technology
- Alessandro Martina, University of Bari
- David Massimo, Public Value Technologies
- Giacomo Medda, University of Cagliari
- Cataldo Musto, University of Bari
- Julia Neidhardt, TU Wien
- Alessandro Petruzzelli, University of Bari
- Alejandro Plaza, Pontificia Universidad Católica de Chile
- Antonio Purificato, Sapienza University of Rome
- Erasmo Purificato, Joint Research Centre, EU Commission
- Fabrizio Silvestri, University of Rome

- Giuseppe Spillo, University of Bari
- Marko Tkalčic, University of Primorska
- Tobias Vente, University of Siegen
- Lukas Wegmeth, University of Siegen
- Wolfgang Worndl, Technical University of Munich

REFERENCES

- [1] Edward B Barbier and Joanne C Burgess. 2017. The Sustainable Development Goals and the systems approach to sustainability. *Economics* 11, 1 (2017), 20170028.
- [2] Ludovico Boratto, Francesco Fabbri, Gianni Fenu, Mirko Marras, and Giacomo Medda. 2023. Counterfactual graph augmentation for consumer unfairness mitigation in recommender systems. , 3753–3757 pages.
- [3] Alvise De Biasio, Andrea Montagna, Fabio Aiolli, and Nicolò Navarin. 2023. A systematic review of value-aware recommender systems. *Expert Systems with Applications* 226 (2023), 120131.
- [4] Alexander Felfernig, Manfred Wundara, Thi Ngoc Trang Tran, Seda Polat-Erdeniz, Sebastian Lubos, Merfat El Mansi, Damian Garber, and Viet-Man Le. 2023. Recommender systems for sustainability: overview and research issues. *Frontiers in big Data* 6 (2023), 1284511.
- [5] Nada Ghanem, Stephan Leitner, and Dietmar Jannach. 2022. Balancing consumer and business value of recommender systems: A simulation-based analysis. *Electronic Commerce Research and Applications* 55 (2022), 101195.
- [6] Dietmar Jannach and Michael Jugovac. 2019. Measuring the business value of recommender systems. *ACM Transactions on Management Information Systems (TMIS)* 10, 4 (2019), 1–23.
- [7] Pavel Merinov and Francesco Ricci. 2024. Positive-Sum Impact of Multistakeholder Recommender Systems for Urban Tourism Promotion and User Utility. In *RecSys*. ACM, 939–944.
- [8] Henrik Skaug Sætra. 2022. AI for the sustainable development goals.
- [9] Markus Schedl, Vito Walter Anelli, and Elisabeth Lex. 2024. *Technical and Regulatory Perspectives on Information Retrieval and Recommender Systems: Fairness, Transparency, and Privacy*. Vol. 50. Springer Nature.
- [10] Jamie Schnurr, Susan Holtz, Greg Armstrong, Anne K Bernard, et al. 2023. The cornerstone of development: integrating environmental, social, and economic policies.
- [11] Giuseppe Spillo, Allegra De Filippo, Cataldo Musto, Michela Milano, and Giovanni Semeraro. 2023. Towards sustainability-aware recommender systems: analyzing the trade-off between algorithms performance and carbon footprint. In *Proceedings of the 17th ACM Conference on Recommender Systems*. 856–862.
- [12] Giuseppe Spillo, Allegra De Filippo, Cataldo Musto, Michela Milano, and Giovanni Semeraro. 2024. Towards green recommender systems: Investigating the impact of data reduction on carbon footprint and algorithm performances. In *Proceedings of the 18th ACM Conference on Recommender Systems*. 866–871.
- [13] Aimee Van Wynsberghe. 2021. Sustainable AI: AI for sustainability and the sustainability of AI. *AI and Ethics* 1, 3 (2021), 213–218.