The impacts of digitalization on science and society in the quest for more sustainable futures

06.Juil - 10.Juil 2026

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Workshop

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06.Juil - 10.Juil 2026

Location
Miramar Palace

Langues
Anglais

Reconnaissance officielle par l'État
50 heures

Comité d'organisation

Description

Science has been significantly shaped by digitalization over the past decades, affecting multiple levels of research and practice – knowledge production, methodology, cultures of collaboration, science-society interactions and, finally, the very idea of science as such. There are different transformations in science happening, e.g. via data science tools, research software, modelling tools, AI tools, data ecosystems or other digitalized research tools and infrastructures. This is significant not only for data generation and data processing, but also for knowledge production itself. For instance, new digital technologies such as digital twins (future labs) are claimed to revolutionize sustainability research and planning. However, new digital technologies should not simply be conceived as tools for enhancing the scope and speed of scientific knowledge production, collaboration, communication and interaction. There are also wicked relationships with other fields of society (e.g. policy, citizens) emerging (Hocquet et al. 2024).

In that respect, recent discussions increasingly recognize that digitalization should support broader social and cultural changes—especially socio-ecological transformations—that aim to lead societies toward a more sustainable future. However, the specific importance of new digital technologies and innovations—alongside other societal changes and developments—remains largely unclear and is rarely the subject of thorough investigation. A widespread optimism can be observed regarding the ability of digitalization in the face of urgent socio-ecological problems such as the climate crisis and growing social injustice worldwide. Yet critical questions remain: what are the actual contributions and the intended and unintended impacts of digitalization on science and on science-society interactions within these complex and long-term socio-technical change processes? To what extent can digitalization truly be considered an enabler of a sustainable future?

The transformative effects of the digitalization of science are evident at various levels, but its interactions with, and future impacts on, the broader socio-cultural transformations of science and society remain largely unknown and call for further research.

Objectifs

Objective 1. Analyze how digitalization transforms scientific knowledge production for sustainability and climate research

Examine how digital tools and data practices reshape scientific cultures, everyday research activities, and global knowledge production relevant to addressing climate challenges and sustainability transitions.

Objective 2. Understand emerging forms of science–society collaboration in sustainability and climate action

Explore transdisciplinary and transformative research approaches —including real-world experiments and digital twins— that foster new modes of interaction between science and society aimed at supporting sustainable and climate-resilient futures.

Objective 3. Develop conceptual and methodological skills to assess and govern digital transformations for sustainability

Introduce frameworks and methods for evaluating and guiding digital transformation initiatives in research and governance, with particular attention to their role in enabling evidence-based climate policy and sustainable development pathways.

Organisée par

EHU
Euskal Herriko Unibertsitatea
University of the Basque Country

Karlsruhe Institute of Technology

c:o/re Käte Hamburger Kolleg Cultures of Research | RWTH AACHEN UNIVERSITY

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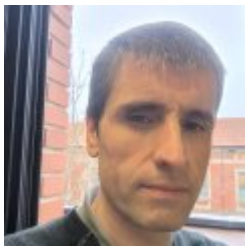

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Tarifs inscription

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Lieu

Miramar Palace

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Gipuzkoa