

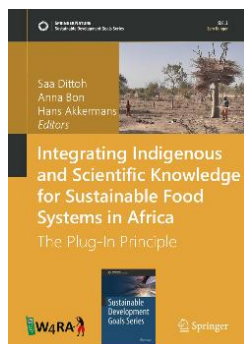
# The SDGs in the Light of the Digital Transformation

**Navigating the Anthropocene** VU-Conference - EURIDICE Conference Session  
Thu 30 January 2025, 10:30 – 12:00, Room Forum-2, Main Building (HGB) VU

Keynote talks moderator: Hans Akkermans; Round-Table discussion moderator Anna Bon

10:30 – 10:55 **Keynote 1:** Prof **Saa Dittoh** (UDS, Tamale, Ghana):

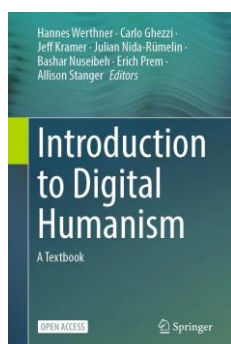
## **Integrating Indigenous and Scientific Knowledge for Sustainable Food Systems in Africa --- The Plug-In Principle**



*Prof. Saa Dittoh is professor of agro-economics at the University for Development Studies UDS, Tamale, Ghana.*

10:55 – 11:20 **Keynote 2:** Dr **Julia Neidhardt** (TU Wien, Vienna, Austria):

## **SDGs and Digital Transformation in the Light of Digital Humanism**



*Dr. Julia Neidhardt is assistant professor at TU Wien's Centre for AI and Machine Learning (CAIML), and UNESCO co-Chair for Digital Humanism.*

11:20 – 12:00 **Round-Table Discussion** (moderator Anna Bon)

Including the keynote speakers and 3 student ICT4D master project pitches and posters:

- \* Marcel Stelte – Gender Bias against LGBT+ in Software Design [SDG-5]
- \* Oleksandr Zakotianskyi – Predicting War with AI --- Explainable Probabilistic Forecasting of Conflict-Related Fatalities [SDG-16]
- \* Auke Schuringa – Energy-efficient resourcing of small indigenous languages [SDG-8/9]

## The SDGs in the Light of the Digital Transformation: Posters & Poster Abstracts

for session 1 (Anna, HansA) Anthropocene Conf 30Jan2025, Forum-2, 10:30-12:00

### Script practicalities

\* Posters 1) – 6) directly link to the session speakers, so these are placed at Forum-2; after the session (12:00h) they are moved to the general space (next to Aula, Boelelaan-zijde)

\* Posters 7) – 12) can be set up in the general space and stay there.

Poster 1) [Banner]

**Anna Bon & Hans Akkermans:**

### **EURIDICE --- European Inclusive Education for Digital Society, Social Innovation and Global Citizenship**

*Abstract.* To ensure a fair and inclusive digital transition, Europe needs all-round digitally skilled social digital innovators – intensively trained to understand the nexus of society and technology, equipped with advanced digital skills and social reflexivity, capable of driving human-centred innovation in inclusive and responsible ways in a rapidly changing society. To build this new generation of reflective professionals is the vision and ambition of EURIDICE.

Poster 2)

Prof **Saa Dittoh** (UDS, Tamale, Ghana):

### **Integrating Indigenous and Scientific Knowledge for Sustainable Food Systems in Africa --- The Plug-In Principle**

*Abstract.* Prof Saa Dittoh is the editor-in-chief of a new Open Access book with this title, scheduled to appear in 2025 at Springer Nature, Heidelberg, in its SDG series (SDG-2, zero hunger). In academic research, a negative bias towards traditional knowledge systems is often present. They are often dismissed as non-scientific, under-developed and primitive. This ignores the importance, experiences, and potential value of indigenous knowledge. The book aims at championing a more realistic and community-grounded view of sustainable development whereby both indigenous and formal scientific knowledge are taken into account and considered for their merits. The *plug-in principle* is proposed as an alternative to the dominant narratives of how to ensure appropriate and effective implementation of development interventions and the adoption of appropriate technologies to food production. It is a guiding theoretical and practical approach towards integration of knowledge systems. The perspective of the African smallholder farmer, who represents the largest producer of food on the continent, is central. The plug-in principle starts from existing situations and knowledges and tries to "better" the situations by plugging-in new ideas, techniques and practices.

Poster 3)

Dr **Julia Neidhardt** (TU Wien, Vienna, Austria):

### **SDGs and Digital Transformation in the Light of Digital Humanism**

*Abstract.* Dr Julia Neidhardt is the UNESCO co-Chair for Digital Humanism at TU Wien, Austria, Faculty of Informatics.

The Digital Humanism Initiative is an international collaboration seeking to build a community of scholars, policy makers, and industrial players who are focused on ensuring that technology development remains centered on human interests. Technology profoundly shapes the world we live in, and the stakes are high. Digital Humanism deals with digital technology development and policies based on human rights, democracy, inclusion, and diversity. Among others, the Digital Humanism initiative has published two Open Access books with many studies of the issues involved and a textbook (Springer 2022 and 2024), that together now have more than 1.1 Million downloads. Also, a book for use by high schools and their pupils has been written (2024) that is being translated in several languages.

Poster 4)

**Marcel Stelte** (VU Computer Science alumnus 2024) – **Gender Bias against LGBT+ in Software Design**

*Abstract.* Bias towards otherness is a reality in platforms or applications, and can be discriminatory and often detrimental towards minority groups, for example in gender. Is this bias introduced already by design, as part of the software engineering methodologies? And can this bias be explored, mitigated and inclusiveness increased? This is the problem tackled in the master research project by Marcel Stelte, focusing on bias in software design, towards members from the LGBT+ communities, who are often under-represented in many aspects of Society. This study is aligned with SDG5: Gender Inclusiveness.

Poster 5)

**Oleksandr Zakotianskyi** (VU Computer Science student)– **Predicting War with AI ---Explainable Probabilistic Forecasting of Conflict-Related Fatalities**

*Abstract.* Can we predict war using data and intelligent models? And how certain would we be in our predictions? Policymakers are interested in uncovering the conflict dynamics and making robust forecasts to take anticipatory actions and reduce the impact on vulnerable people. At the same time, regular citizens are looking for accurate and not biased forecasts for their own security and awareness. The master project by Oleksandr Zakotianskyi provides the first publicly available and explainable early conflict forecasting model, capable of forecasting the distribution of conflict-related fatalities on a country-month level. [SDG-16]

Poster 6)

**Auke Schuringa** (VU Computer Science & AI student)– **Energy-efficient resourcing of small indigenous languages**

*Abstract.* For rare indigenous languages, of which there are many in the Global South, speech applications are still largely lacking, due to high costs and high energy consumption to create these models. Auke Schuringa proposes an alternative method that requires less data and is more energy efficient. It uses an already trained model for a phonetically close popular language to create a phonetic transcription of a recording, thus generalizing context-specific or unique language specific aspects out to create a broader phonetic description of the spoken segments, and calculating similarities between phonetic descriptions to allow for matching spoken words. The obtained results open possibilities for creating speech-based applications. This method is energy-efficient and is therefore much more environmentally sustainable than conventional machine learning solutions that are commonly used to resource languages. [SDG-8/9]

Poster 7)

**W4RA Community – The Web alliance for Regreening in Africa**

*Abstract.* W4RA is a trans-disciplinary community for research and action on real world topics related to the Digital Society. It brings together academics and non-academics with a variety of backgrounds and knowledge domains. This includes information science, computer science, artificial intelligence, organization, business, and communication sciences, sustainable land management, rural development and web science, but also indigenous knowledge. W4Ra is hosted as a research and educational program at the Vrije Universiteit in Amsterdam. Since its inception in 2009, W4RA has been inspired by the African Regreening Initiatives, initiated and implemented by local farmers in Africa.

Poster 8)

**Wendelien Tuijp, Anna Bon, André Baart, Hans Akkermans (CIS-VU): SUMBALA --- Connecting Women Innovators in West Africa**

*Abstract.* How to "protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss? In our ongoing action research program W4RA, we work with innovative farmers – women and men – in rural regions in the Sahel.

Poster 9)

**Anna Bon, Derek van den Nieuwenhuijzen & Hans Akkermans: Digital Divide, Citizenship and Inclusion in Amsterdam**

*Abstract.* The Digital Divide is commonly associated with those parts of the world, where access to Internet and Web is poor or lacking. However, even in places such as the city of Amsterdam, where Internet infrastructure and access are commonplace, a Digital Divide exists. A significant part of the population (1 out of 5) is currently de facto excluded, for a variety of reasons including poverty, low literacy, lack of digital skills, problems with speaking and reading the official language (Amsterdam, a city of under 1 million, hosts 180 different nationalities), and homelessness. This book is based on several community-oriented Participatory Action Research projects by Information Science master students and staff at the Vrije Universiteit Amsterdam. It considers in depth the Digital Divide in an advanced metropolitan context and, even more importantly, lays out practical ways and solutions showing what can be done against digital inequalities and social exclusion in society — one of the UN's Sustainable Development Goals (SDGs)." (2020)

Poster 10)

**Anna Bon, Hans Akkermans, Francis Saa-Dittoh, Cheah WaiShiang & André Baart: The Master Course ICT4D in the Field.**

*Abstract.* The field of ICT4D (Information and Communication Technologies for Development) addresses problems of, and solutions for, the "unconnected people in the world". Artificial Intelligence is currently at the centre of attention, with claimed opportunities and benefits. Despite the high expectations, there are also doubts and concerns. Heavy investments to boost AI are taking place. However, what is the case for people in low resource environments? This requires independent and critical investigation. Accordingly, the course ICT4D in the Field undertakes to investigate these matters, thereby giving due attention to the specific contexts of people's needs as well as the different geographic, economic, cultural and socio-political contexts. (2018-2025)

Poster 11)

**Francis Saa-Dittoh et al.: Tibaṅsim: Information Access for Low-Resource Environments**

*Abstract.* In Africa, and other places around the world, there are numerous people who do not have access to information from the World Wide Web or other digital sources. This is not an issue of infrastructure only, but also of cultural and social factors, including low literacy. Tibaṅsim focuses on available technologies and appropriate information formats by providing a system that relies on GSM and FM Radio, in the local language(s) of the community. Tibaṅsim was deployed in 5 rural communities, reaching a total of almost 1000 people, providing them primarily farming-related information.

Poster 12) [A0 poster]

**Anna Bon & Hans Akkermans:  
EURIDICE ---**

**European Inclusive Education for Digital Society, Social Innovation and Global Citizenship**