

INSTITUTE FOR GLOBAL SUSTAINABLE DEVELOPMENT



IGSD Whole Team meeting

Wednesday 12th July 2023

IAS Seminar Room

Zeeman Building

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Session's outline:

10.00-10.30 – IGSD reporting

10.30-11.00 – welcome to IGSD TFs

11.00-11.45 – brainstorming on thematic activities

11.45-11.55 – Q&A and conclusion

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IGSD sets to become the **gateway** to research on global sustainable development at Warwick, working across all faculties & cognisant centres and institutes. This way IGSD contributes to the University's Research and **Sustainability Strategy**.

At the core of its development, the IGSD aims to grow its own **cutting-edge research** and **impact**, to be recognised for its leadership, regionally, nationally and internationally.

Three thematic research directions:

environmental policy and **governance** - led by Nikoleta Jones
complex eco-systems/ climate change – led Feng Mao
resilience community – led by Vangelis Pitidis & Elene Korosteleva
KPIs over the next five years:

Mapping & visualization of our research across **SDGs** at Warwick
Launch of the **ECR STS** (June 2023)
Research with Impact via **Annual Sustainability Conference** (July 2024)
Research synergies and large funding opportunities (2022+)



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IGSD 2022/23 major achievements: see [here for more info](#)

- (Re-)Launched in Sept 23; shaped Warwick's Sustainability Strategy
- Grown from 3 to 6 permanent staff, and a bunch of IGSD Research Fellows!
- Welcomed IGSD thematic (15) and honorary fellows (8)
- Developed 15 projects - <https://warwick.ac.uk/fac/arts/schoolforcross-facultystudies/igsd/research/>
- Our staff received WOW & ECR Impact awards; became members of ACU & NERC Advisory Boards; advisors to UK & EU governments
- Published books; articles; policy papers & blogs

IGSD KPI 1: Visualisation project

What is this project about?

- Support SDG-related cross-disciplinary research using visualisations

What do we want to achieve?

- Visualise the landscape of the university's SDG-related research
- Help facilitate cross-disciplinary and cross-faculty collaboration within the university
- Contribute to improving the reporting and evaluation practices of the University's SDG-relevant research, including the Way to Sustainable strategy.

Where are we now?

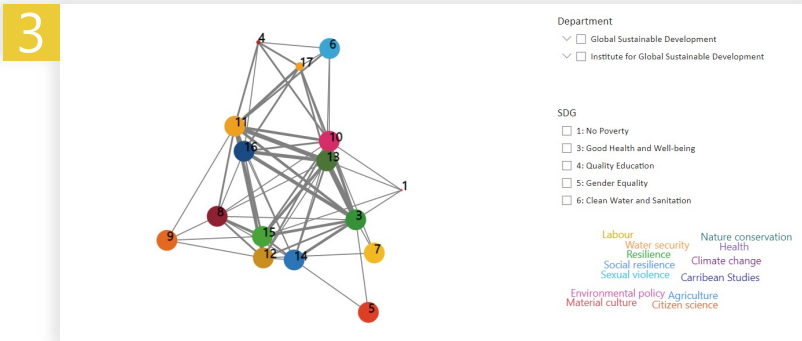
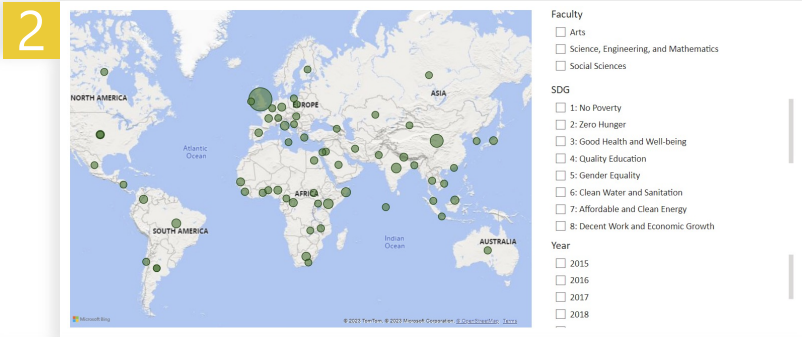
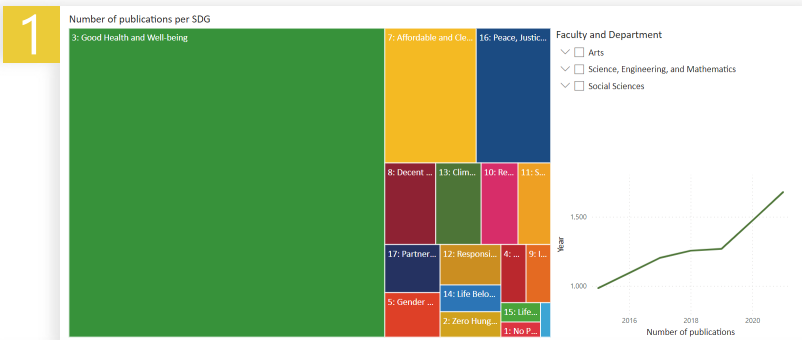
- A pilot project started earlier this year, supported by an IGSD intern, Greta Timaite
- Building a visualisation prototype based on the data of academic publications (WRAP), projects (IDEATE), and research profile pages.
- Presented a demo at the Environment and Social Sustainability Action Group (ESSAG) meeting in June 2023

What questions can we answer using visualisations?

1. How are our researchers, papers, and projects related to SDGs?
2. What is the geographical distribution of our challenge-led research?
3. What are our strengths and opportunities in cross-disciplinary collaboration?

How can you get involved?

- Feedback on the current and future design (see [project description](#) and demo)
- Fill in the SDG-information collection [form](#)
- Use the dashboard to support networking and designing workshop topics



STS – Group Project

- Participants were divided into five interdisciplinary groups
- Group projects related to different sustainability challenges were developed and presented
- Several creative presentation forms and media were employed
- The two most fascinating group projects were acknowledged and awarded at the end of the Training School



IGSD KPI 3: KE & Consultancy

- Opportunities to commercialise research at Warwick University (e.g. Proof of Concept, CRoSS project)
- Support provided by [Warwick Innovations](#) and RIS
- Potential routes: a. Direct allocation of grant or b. tender
- Successful example from IGSD: Contract with [WWF-UK](#) (direct allocation) to develop an assessment framework (Dr Vangelis Pitidis and Dr Nikoleta Jones)-Contract signed Friday 7th July.
- Pros: not as competitive as research grants, high daily rates
- Cons: tight deadlines, requires time to negotiate contracts

Thank you!

Follow us on:

- [IGSD website](#)
- **IGSD twitter:** @IGSD_UoW
- **IGSD email:**
IGSD@warwick.ac.uk
- [IGSD ECR STS LinkedIn group](#)



A gateway
to **sustainable
development**

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**Welcome to our IGSD
Thematic Fellows**

Dr Simón Da Ros: Teaching Fellow in Sustainable Materials and Manufacturing

WARWICK

Teaching:

- ❑ ES3E4 Lifecycle Engineering of Manufacturing Systems;
- ❑ ES4A8 Design for Sustainability;
- ❑ WM318-Sustainable Energy Systems;
- ❑ WM309-Materials for advanced applications.



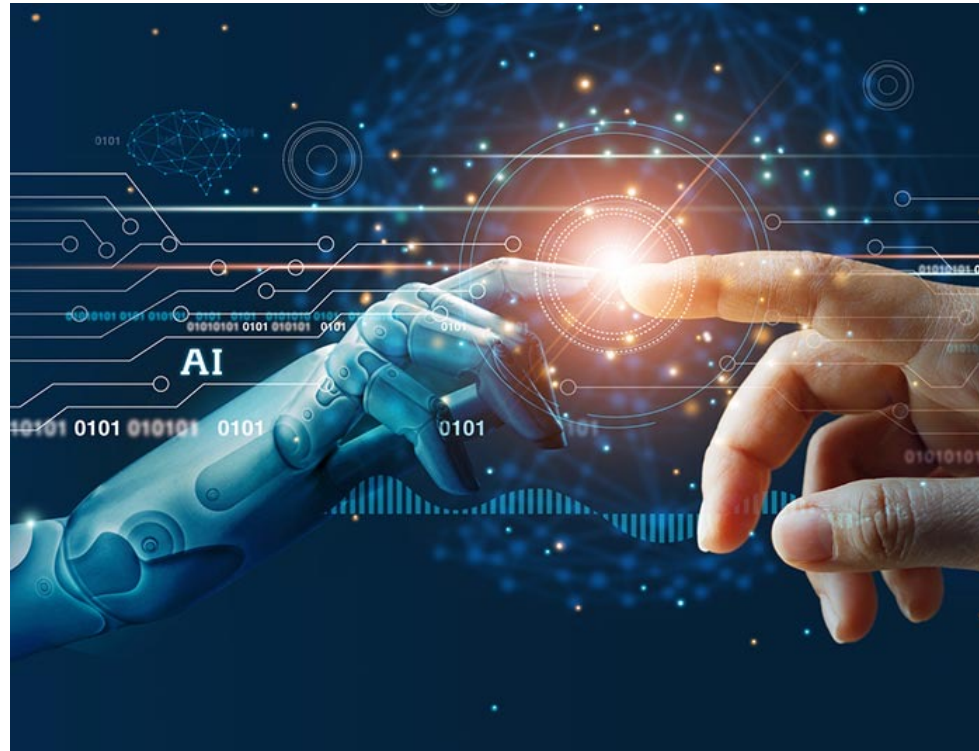
Research:

- ❑ Sustainability Metrics
- ❑ Polymer Degradation;
- ❑ Chemical Recycling of Polymeric Waste;
- ❑ Platform Chemicals and Polymers from alternative Resources;



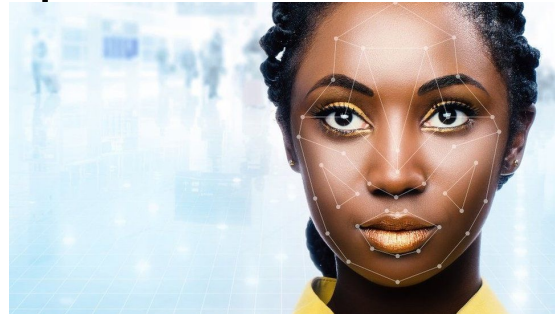
Sustainability via Responsible Artificial Intelligence(AI)

Dr. Shweta Singh



Sustainability Goals via Responsible AI

- AI & Biased/Discriminatory Outcomes (COMPASS, Amazon Hiring etc)
- UK Passport Scanning Case
- LLMs (ChatGPT4) spread fake information



Dr Rachel Hand – Analytical/Polymer Chemist

Integrated
GHG roadmaps
for all key materials
and ingredients



35%
estimated reduction since
2010 in the GHG footprint of
the palm oil that we buy



Replace fossil-fuel derived
carbon with renewable or
recycled carbon by 2030 in
home care formulations

MSc Global Decarbonisation and Climate Change

- 🌱 Sustainable Futures, STEM Grand Challenge
- 🌐 Transdisciplinary
- 🌱 Science/Policy
- 🌱 Chemistry, Life Sciences, Engineering, GSD, WMG, Politics, Law, IATL . . .



Up to **60%**
reduction in product GHG
emissions through
concentration and
compaction

Unilever

12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



13 CLIMATE
ACTION

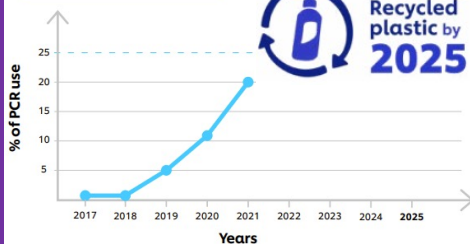


- 📖 **Decarbonisation** (noun):
“Reduction or elimination of carbon dioxide emissions from a process such as manufacturing or the production of energy.”

Percentage of PCR use



At least 25%
Recycled
plastic by
2025



LOVE
beauty
AND
planet

<https://www.unilever.com/files/92ui5egz/productio n/56a097ca6baaa654e78dfa8a820257d9a9edabf0.p df>

<https://warwick.ac.uk/fac/sci/chemistry /admissions/masters/decarbonisation> ¹³



- **Adela Glyn-Davies** Director, Design Studies
Designer, Artist.

- **Area:** Complexity & Systemic Design
- **Practice-led methods:** Radical Systems Mapping,
Data Visualization,
Social Design Practice.

- **Application:** Explicating excluded or often neglected data in life-centred research, towards agile sense-making methods in systemic practice.
- **Themes:** Social Complexity, Systems Change, Reciprocal Systems, Climate, Migration, Belonging.



Dr You Wu,

Assistant Professor (Research Focussed), WMG

Sustainability Assessment by Using Life Cycle Assessment

- Life Cycle Assessment
- Quantitative evidences
 - Environmental LCA
 - Social LCA
- Implemented by using software tools and databases
- Experience with FP7, Horizon 2020 & Europe, contracts from industries and government departments



RESILIENCE

Ability to sustain and thrive through disturbance,

Requires adaptive capacity in systems and society,

This is supported by infrastructure – water, energy & green infrastructure,

Our conception of infrastructure needs to grow - community, maps, ecology, wellbeing and state capacity,

Governance – decision making, institutional learning, co-creation, policy and shared vision.

Dr Jonathan Clarke

July 2023 - IGSD

Ronghui (Kevin) Zhou



Email: r.zhou.6@warwick.ac.uk



Early Career Fellow
Institute of Advanced Studies (IAS),
University of Warwick

PhD in Education
Department of Education Studies,
University of Warwick

Current Works



Working on a few publications surrounding
Education for Sustainable Development,
Epistemic and Environmental Justice,
SDGs and Higher Education.

Co-Editing with Dr. David Brown (JEA) and
Dr. Mandy Sadan (GSD, Warwick) the Special
Issue "Rare Earths and Critical Minerals in the
Planetary Just Transition" in the Journal of
The Extractive Industries and Society

Research Interests



Critical Minerals
Policy Enactment
SDGs
Epistemic Justice
Just Transition
Education for Sustainable
Development Environmental Education
Environmental
Justice China
Higher Education Discourse
and Power
Interdisciplinary Research

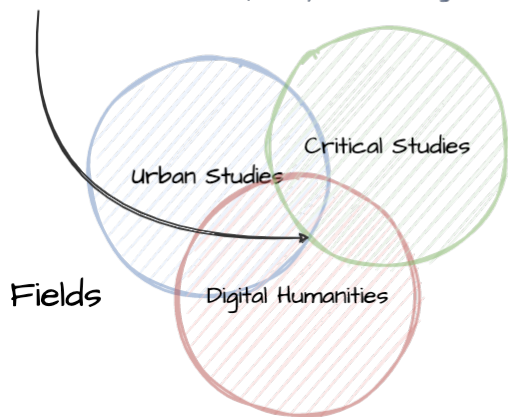
Engage in IGSD Themes and Future



- Environmental Policy and Governance
 - Complex Eco-Systems and Climate Change
 - Community and Inter-Species Resilience
- Interdisciplinarity of the Three Themes
 - The Role of Education
 - Sustainable Development Goals and Higher Education

Carlos Cámara-Menoyo

Senior Research Software Engineer,
Centre for Interdisciplinary Methodologies



Mixed Methods

Data visualisation, Mapping, Participatory methods, interviews, questionnaires, ethnographies, data driven.

SDGs



Projects

Urban Commons (2013-2018)

PhD, No funder



Fields

Methods

Topics



Study Cases,
Ethnography
Interviews
Grounded Theory

Commons
Spatial justice
Collective action
Right to the city
Critical urban theory

Accessible Zaragoza (2016-2019)

PI, €3,600



Participatory Mapping
GIS
Data visualisation

Citizen Science
Critical geography
VGI
Spatial justice

Creating Interfaces (2021)

€1.7M across partners



Participatory Design
Data visualisation
Dialogical approach

Food, Energy Water Nexus
Citizen Science
Visualisation tool
Data literacies

RDF Walkability (2022)

£3,000, Warwick, RDF



Spatial Methods
ML: Image segmentation
Surveys

Walkability
Feminist geography

Platform Migration (2023)

£3,300, Warwick, RDF



Surveys
Ethnography
Data extraction
Data visualisation

Digital Methods
Technopolitics
Critical data studies
Social media platforms
SCOT

Mayen Cunden - IGSD Thematic Fellow

- **Interests: RI and AI ([Responsible AI](#))**
 - [RI](#): (RRI) Alignment with the values, needs and expectations of society
 - AI: Algorithmic techniques to learn associations of prediction from data
- **IGSD Theme Connection**
 - EP&G: Contributions: Capturing, assessing, exploring and developing ...
 - CECC: Research across multiple disciplines, sectors and regions
 - RaSG: Understanding change and complexity through QHM not AI
- **Aspirations**
 - Sustainable AI ecosystem.
 - (ATI: [Tackling climate change with data science and AI](#))



Ed Smith

Assistant Professor – School of Life Sciences

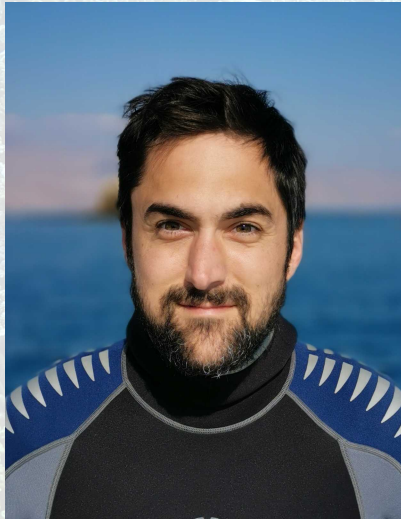
Research Topics:

Coral Reef Ecosystems
Climate Change
Genomics

Aims:

Use contemporary extreme environments to help understand coral reef responses to climate change.

Guide conservation and management through research



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India Holme

**Research and Impact Development Manager
(Regional)**

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Jess Savage

Deputy Head of the [School for Cross-faculty Studies](#) (Global Sustainable Development)



Dr. Nursen Aydin

Associate Professor of Operational Research, WBS

Research Interests

- **Sustainable transport** – *Optimisation models for low-carbon maritime and land transport and logistics*
- **Circular economy** – *Revenue management and demand analytics driven decision models for B2C circular products*
- **Renewable energy** – *Scheduling and maintenance models for wind energy systems*
- **Responsible AI** – *Interpretable and unbiased data driven decision making*

IGSD Themes

- Sustainable Cities and Communities
- Responsible consumption and production
- Climate action

Aspiration

Establish cross-disciplinary network to deliver value for sustainable future with data-driven decision making.



THEMATIC FOCUS: Biodiversity and environmental governance

KEYWORDS: Rare Earth Elements, Myanmar, China, Green Energy Transition, Critical Minerals

CURRENT RESEARCH PROJECT: Local Impact of Rare Earths Elements Extraction in the Myanmar-China borderlands (2022-2024)

RESEARCH INTERESTS:

- Challenges of environmental governance in conflict-affected environments
- The distributive impacts of efforts to tackle the climate crisis and promote planetary sustainability
- Global partnerships; working with local communities and amplifying marginalized voices in climate change debates



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11.00am – 11.45am Brainstorming on Thematic Activities
How do you want to work together?
How would you like to present it?
How will you represent it as ASC in July 2024?

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11.45am – 11.55am Q&A and Conclusions

12.00pm – 1.00pm Networking Buffet lunch in IAS Common Room