



LEEDS  
BECKETT  
UNIVERSITY



**INTERNATIONAL  
SUSTAINABLE  
ECOLOGICAL  
ENGINEERING  
DESIGN FOR SOCIETY  
(SEEDS)  
CONFERENCE 2024**

**27 28 29 AUG 2024**

**IEMA** Transforming the world to sustainability

**CIOB**  
The Chartered Institute of Building

**CALL FOR ABSTRACTS  
DEADLINE - 11 MARCH 2024**

**emerald PUBLISHING**

 Loughborough University

 University of Suffolk

**UWE Bristol** | University of the West of England

# **CALL FOR ABSTRACTS**



## **International SEEDS Conference 2024**

Sustainable Ecological Engineering Design  
for Society

10th Annual Conference

***Achieving Resilience through  
Sustainable Digitalization and  
Ecological Engineering in the 21st  
Century.***

Leeds Beckett University, Leeds, UK

27, 28 & 29 August 2024



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# FOCUS

In the year 2023, we find ourselves in a world transformed by rapid advancements in digital technology. Generative Artificial Intelligence (AI), exemplified by models like ChatGPT, has emerged as a transformative force that is reshaping industries and revolutionizing the way we approach problem-solving, creativity, and sustainability. Generative AI, with its ability to generate human-like text and assist in complex decision-making processes, has found applications far beyond its origins. In 2023, industries spanning from healthcare to finance, from education to entertainment, have witnessed significant shifts in the way they operate. AI-driven insights, automation, and creative assistance have become the new norm, empowering professionals across sectors. In the field of ecological engineering, generative AI plays a pivotal role in the design and optimisation of sustainable solutions. It enables engineers and researchers to simulate and model intricate ecological systems with unprecedented accuracy, leading to more efficient resource management and environmentally friendly designs.

At the nexus of digitisation and sustainability, we find an evolving landscape where technological advancements not only complement but also enhance the core tenets of Sustainable Ecological Engineering Design for Society (SEEDS). While we embrace the vast potentials of digital technologies in improving efficiency, predictive capabilities, and data-driven decision-making, it is crucial to integrate these tools without losing sight of the fundamental principles of ecological design. These principles—centred around harmony with nature, resource conservation, and sustainable development—remain as relevant today as they ever were. The challenge and opportunity for SEEDS 2024 lie in marrying the innovation and agility of these advancements with the wisdom and foresight of ecological design. This integration aims to foster solutions that are not only technologically advanced but also deeply rooted in ecological responsibility and sustainability.

Thus, this year’s conference serves as a bridge between three essential elements:

1) Embracing cutting-edge innovations



2) Preserving time-tested ecological wisdom



3.) Fostering resilience in our communities and ecosystems



This year we ask:



How do we leverage the advancements in digital technology and industry 4.0 to promote sustainable and ecological engineering for society?

To answer this key question the conference themes will encompass:

- **Digital Transformation for Sustainability:** Exploring the role of digitalization, industry 4.0, and generative AI in ecological engineering.
- **Resilient Communities in a Changing World:** Strategies for building societal resilience and adapting to environmental challenges.
- **Nature-Inspired Engineering and Biomimicry:** Harnessing the wisdom of nature for innovative sustainable solutions.
- **Balancing Tradition and Innovation:** Integrating time-tested practices with cutting-edge technologies for ecological sustainability.
- **Ethics, Responsibility, and Sustainability:** Navigating the moral and ethical dimensions of sustainable ecological engineering.
- **Urban Sustainability and Smart Cities:** Promoting sustainable urban planning, infrastructure, and digital solutions for future cities.

# KEY DATES



# AUDIENCE

The SEEDS community is a confluence of experienced and early career researchers from across the world and from diverse disciplines.

This melting pot encourages exciting conversations and opportunities to collaborate.

Members of the SEEDS community, who have met during previous years of the conference, are now working on projects and submitting research papers together.

Submissions are encouraged from researchers at all levels, including doctoral students.

So, if you're passionate about your research and eager to connect with a diverse community of like-minded individuals, the International SEEDS conference is for you.





# CHAIRS



## Conference Chair 2024

Professor Saheed Ajayi

## Co-Chairs



Professor Chris Gorse



Professor Lloyd Scott



Professor Darryl Newport



Professor Colin Booth

# FORMAT AND PRICING

The conference will follow a hybrid delivery model. The first day of the conference (27 Aug) will be online only, and the following two days (28 & 29 Aug) held in-person at Leeds Beckett University's City Campus.

There will be a gala dinner and awards ceremony hosted nearby on the 28 Aug, which you are welcome to attend as a part of the full conference pricing option.

	<b>Full Conference</b> (27, 28, 29 Aug. Gala Meal and Awards Ceremony)	<b>In person day only</b> (28 Aug or 29 Aug)	<b>Online only</b> (27 Aug)
<b>Standard Early Bird</b> (on or before 1st July 2024)	<b>£350</b>		<b>£150</b>
<b>Student Early Bird</b> (on or before 1 July 2024)	<b>£200</b>		<b>£100</b>
<b>Standard</b> (after 2 July 2024)	<b>£450</b>	<b>£250</b>	<b>£200</b>
<b>Student</b> (after 2 July 2024)	<b>£300</b>	<b>£175</b>	<b>£150</b>

# ACCOMMODATION AND TRAVEL

This year's International SEEDS Conference is being held in the vibrant city of Leeds, UK. The main conference will be hosted in The Rose Bowl at Leeds Beckett University's city campus, with the gala dinner and awards ceremony at a venue, yet to be decided, but within walking distance of the city centre.

The Rose Bowl building is located in the North of the city, around a 15-minute walk from Leeds Train Station. If you need more information about the location, please see the [Leeds Beckett campus map](#).

If arriving internationally, Leeds Bradford Airport is around 9 miles from the city centre with a frequent and affordable bus service offered by the A1, A2 & A3 Flyer.

There are many accommodation options within the vicinity including the following:

- Radisson Blu Hotel, Leeds City Centre (0.2 miles)
- Premier Inn Leeds City Centre (Leeds Arena) hotel (0.3 miles)
- ibis Styles Leeds City Centre Arena (0.4 miles)
- Dakota Leeds (0.4 miles)
- Mansio Suites Headrow (0.4 miles)
- easyHotel Leeds City Centre (0.5 miles)

# ABSTRACT THEMES

## **Digital Transformation for Sustainability:**

- Digital Twins and Sustainability: Leveraging Industry 4.0 for Ecological Engineering.
- AI-Driven Sustainable Design: From Concepts to Real-World Applications.
- Data-Driven Ecological Engineering: Enhancing Sustainability through Digitalization.
- Industry 4.0 and Environmental Monitoring: A Path to Greener Futures.
- Generative AI in Ecological Engineering: Innovations for Sustainable Practices.

## **Resilient Communities in a Changing World:**

- Building Resilient Societies: Strategies for Climate Adaptation and Mitigation.
- Community-Centred Resilience: Engaging and Empowering Local Populations.
- Adapting to Environmental Challenges: Resilience through Innovation and Collaboration.
- Case Studies in Resilience: Lessons from Communities Worldwide.
- Resilient Infrastructure Design: Safeguarding Communities for the Future

## **Urban Sustainability and Smart Cities:**

- Sustainable Urban Planning: Balancing Growth with Ecological Preservation.
- Smart Cities and Environmental Sustainability: The Role of Digital Solutions.
- Future-Proofing Cities: Sustainable Infrastructure for Growing Urban Populations.
- The Human-Centric Smart City: Enhancing Quality of Life and Sustainability.

## **Nature-Inspired Engineering and Biomimicry:**

- Biomimetic Solutions for Sustainable Design: Learning from Nature's Innovations.
- Ecological Engineering Inspired by Ecosystem Services: A Biomimicry Approach.
- Bionics in Engineering: Translating Biological Insights into Sustainable Solutions.
- Lessons from the Wild: Nature-Inspired Materials and Structures.
- Biomimicry in Urban Planning: Creating Sustainable, Nature-Inspired Cities.

## **Balancing Tradition and Innovation:**

- Traditional Wisdom in Ecological Engineering: An Essential Component of Sustainability.
- Innovation and Tradition in Sustainable Organisation: A Holistic Approach.
- Integrating Indigenous Knowledge with Modern Technology for Ecological Sustainability.
- Traditional Building Techniques Meet Modern Sustainability Standards.
- Case Studies in Sustainable Development: Finding Harmony between Old and New.

## **Ethics, Responsibility, and Sustainability:**

- Ethical Dilemmas in Ecological Engineering: Navigating Sustainability's Moral Landscape.
- Responsible Innovation in Sustainable Design: Ethical Considerations and Best Practices.
- Sustainability and Social Responsibility: Creating Equitable, Eco-Friendly Solutions.
- Environmental Justice in Ecological Engineering: Ethical Dimensions of Community Impact.
- Codes of Ethics for Ecological Engineers: Ensuring Responsible Practices.

# PUBLICATIONS

The conference has a powerful reputation for working with established publishers. Papers will be put forward for publication with our publishing partners including Emerald Publishing and Springer Nature.

## International Journal of Building Pathology and Adaptation



Five to seven papers from each annual conference will be selected for this special issue.

## Springer Nature Book



Each year a selection of papers will be published by Springer Nature in a book format of the proceedings.

## SEEDS Conference Proceedings



Remaining accepted papers will be published in the general conference proceedings, where an ISSN number will be available to cite.

# SUBMISSION PROCESS

Please submit Abstracts by 11th March 2024 via the SEEDS MyPortal platform using the instructions below:

- 1** Sign up or sign in on the [SEEDS MyPortal](#) (ensure to verify your email which may be in you junk inbox)
- 2** Select 'submit new abstract' (maximum length 300 words)
- 3** Complete the details of your abstract, co-authors and up to 5 key words
- 4** Press submit and wait for the portal to acknowledge the delivery of your application.

If you have any questions please email [lsiconference@leedsbeckett.ac.uk](mailto:lsiconference@leedsbeckett.ac.uk)



# RISE AWARDS

The RISE Awards are returning this year for a unique celebration of all those who are helping to change the way we build and live in the future.

These highly regarded awards seek to recognise, celebrate, and showcase exemplar case studies from the Built Environment sharing emerging best practice in Research, Innovation, Sustainability and Enterprise for new and innovative products, technologies, processes, projects, and schemes. Our awards invite academic, industry, third sector and community groups to submit an A2 poster detailing their sustainable projects to [LSIConference@leedsbeckett.ac.uk](mailto:LSIConference@leedsbeckett.ac.uk)

The RISE awards will be presented at the conference dinner on Wednesday 28th August 2024.

Please keep an eye out for more details of the awards, which will be released shortly.







[international-seeds.co.uk](http://international-seeds.co.uk)



[International SEEDS Conference](#)



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