

# SEEDS 2024



LEEDS  
BECKETT  
UNIVERSITY

INTERNATIONAL SUSTAINABLE  
ECOLOGICAL ENGINEERING  
DESIGN FOR SOCIETY



Loughborough  
University

**UWE  
Bristol**

University  
of the  
West of  
England



**University  
of Suffolk**

IN-PERSON AWARDS

THURSDAY 29<sup>th</sup> AUGUST 2024

# AI-Driven Sustainable Design: From Concepts to Real-World Applications

**SEEDS**  
2024

**WINNER**

**#511 – Adoption of Artificial Intelligence (AI) in Real Estate Valuation Practice in Lagos, Nigeria**

**Adejumo Abiodun, Timothy Oluwafemi Ayodele,  
Mathew Oluwole Oyewole, Oyinloluwa Beatrice  
Adebara, Christianah Oluwatumilara Hassan,  
Olawande Julianah Adeosun**

Sponsored by



**IEMA** Transforming the world  
to sustainability



# Building Resilient Societies: Strategies for Climate Adaptation and Mitigation

**SEEDS**  
2024

**WINNER**

**#561 – Integrating Data into Community Resilience: A Bayesian Approach to Assessing Flood Resilience in Built Environments**

**Pavithra Rathnasiri, Onaopepo Adeniyi, Niraj Thuraiirajah**

Sponsored by



**IEMA** Transforming the world to sustainability



# Building Resilient Societies: Strategies for Climate Adaptation and Mitigation

**SEEDS**  
2024

HIGHLY COMMENDED

#532 – Life Cycle Assessment (LCA) for a School Building Retrofit Regarding Embodied and Operational Carbon Emissions

**Hatice Bıyık, Ali Murat Tanyer, İrem Dikmen**

Sponsored by



**IEMA** Transforming the world to sustainability



# Case Studies in Sustainable Development: Finding Harmony between Old and New

**SEEDS**  
2024

**WINNER**

#577 – Investigating Attitudes Towards the use of Electrical Prefabrication in Relation to Time, Cost, And Quality in the Electrical Industry in Ireland

**Áine Foley, Aoife Corcoran, Shane Carmody  
and John Spillane**

Sponsored by



**IEMA** Transforming the world  
to sustainability



# Case Studies in Sustainable Development: Finding Harmony between Old and New

**SEEDS**  
2024

HIGHLY COMMENDED

## #476 – On the Shore of the Lough: Navigating Sustainability in the Rural Context

**Philippa Boyd, Graeme D Larsen**

Sponsored by



**IEMA** Transforming the world  
to sustainability





# Community-Centered Resilience: Engaging and Empowering Local Populations.

**SEEDS**  
2024

**WINNER**

## #473 – A Community-Scale Framework for Evaluating Flood Resilience Across Socially Diverse Communities

**Ezekiel Olatunji, David Proverbs, Chaminda Pathirage, Subashini Suresh, Jamie Cooper, Lucinda Capewell**

Sponsored by



**IEMA** Transforming the world to sustainability



# Digital Twins and Sustainability: Leveraging Industry 4.0 for Ecological Engineering

SEEDS  
2024

WINNER

## #582 – Digital Twins in the Net-Zero Carbon Transition for the Built Environment

**Sitsofe Yevu, Chris Gorse, Patricia Carrillo,  
Kambiz Rakhshanbabanari**

Sponsored by



**IEMA** Transforming the world  
to sustainability





# Environmental Justice in Ecological Engineering: Ethical Dimensions of Community Impact

SEEDS  
2024

WINNER

#571 – Navigating Environmental Disputes: Lawyers’  
Insights into ADR Strategies and Experiences

**Sneha Selina Bonomally, Andrew Agapiou**

Sponsored by



**IEMA** Transforming the world  
to sustainability



# Industry 4.0 and Environmental Monitoring: A Path to Greener Futures

SEEDS  
2024

WINNER

## #512 – Embodied Water Monitoring for Sustainable Construction: A Case of India

**Vishakha Chawla, Naeimeh Jafarifar, Michele Victoria, Huda Salman and Gokay Deveci**

Sponsored by



**IEMA** Transforming the world to sustainability



# Industry 4.0 and Environmental Monitoring: A Path to Greener Futures

**SEEDS**  
2024

HIGHLY COMMENDED

## #551 – Digitalization of the Offshore Wind Sectors Supply Chain

**Mary Atolagbe, Bassam Bjeirmi, Norman McLennan**

Sponsored by



**IEMA** Transforming the world to sustainability



# Innovation and Tradition in Sustainable Organisation: A Holistic Approach

SEEDS  
2024

HIGHLY COMMENDED

#504 – Systematic Analysis of Capability Maturity Models for Enhancing Circular Economy Adoption in the Construction Supply Chain

**Hafize Büşra Bostancı, Ali Murat Tanyer**

Sponsored by



**IEMA** Transforming the world to sustainability



# Lessons from the Wild: Nature-Inspired Materials and Structures

**SEEDS**  
2024

**WINNER**

#555 – Local Resources Inform Design: Mid-Point  
Results from the Building from England's Woodlands  
Project

**Gabriele Tamagnone, Finbar Charleson,  
Marlene Cramer, Paola Seminara, Wojciech  
Plowas, Daniel Ridley-Ellis, Robert Hairstans**

Sponsored by



**IEMA** Transforming the world  
to sustainability



# Responsible Innovation in Sustainable Design: Ethical Considerations and Best Practices

SEEDS  
2024

WINNER

## #505 – Do Built Environment Students Want Feedback?

**Greg Watts**

Sponsored by



**IEMA** Transforming the world  
to sustainability



# Smart Cities and Environmental Sustainability: The Role of Digital Solutions

SEEDS  
2024

HIGHLY COMMENDED

#469 – An Evaluation of Regulatory Documents Towards Automated Compliance Checking in Green Building Design

**Muhammad Aliyu Yamusa , Muhammad Abdullahi, Yahaya Makarfi Ibrahim, Hassan Adaviriku Ahmadu, Mu'awiya Abubakar, Abdullahi Babatunde Saka and Abdullahi Sulaiman Salisu**

Sponsored by



**IEMA** Transforming the world to sustainability





# Sustainability and Social Responsibility: Creating Equitable, Eco-Friendly Solutions

**SEEDS**  
2024

HIGHLY COMMENDED

## #508 – Quantifying the Social Value of the UK Construction Industry

**Greg Watts, Mo Maleki Sadabad and Waleed Khan**

Sponsored by



**IEMA** Transforming the world to sustainability



# Sustainable Urban Planning: Balancing Growth with Ecological Preservation

SEEDS  
2024

WINNER

#579 – Determining the Effectiveness of Risk Process Practice in Malaysia's Urban Landscape Planning Project Lifecycle

**Adam Aruldewan S.Muthuveeran, Zahirah  
Mokhtar Azizi, Mohd Firdaus Mustaffa Kamal,  
Izuandi Yin, Chen Wenyi**

Sponsored by



**IEMA** Transforming the world  
to sustainability



# Traditional Building Techniques Meet Modern Sustainability Standards

**SEEDS**  
2024

**WINNER**

#480 – On the Origin of Methodology: An MMC Sustainable Construction Assessment Framework for UK Housing

**Elliot McKendrick and Sam Zulu**

Sponsored by



**IEMA** Transforming the world to sustainability



# Sponsorship Award: CIOB Award for Best Practice Based Paper

**SEEDS**  
2024

£100 CASH PRIZE

#580 – Work Breakdown Structures Within Data Centre Projects: Assessing Influence and Application Strategies

**Anthony McElwee, John P. Spillane, and James G. Bradley**



# Sponsorship Award: CIOB Award for Best Technical Paper

**SEEDS**  
2024

£100 CASH PRIZE

## #574 – Effects of Occupant Behaviour and Air Filtration on Indoor Air Quality in Social Housing

**Vishnupriya Narayanan, Arman Hashemi,  
Heba Elsharkawy, Darryl Newport**

Sponsored by



**IEMA** Transforming the world  
to sustainability



# Sponsorship Award: Emerald Publishing

**SEEDS**  
2024

**£80 CASH PRIZE**

**#515 – Standard Forms of Contracts and the intricacies of Force Majeure in Demystifying Unexpected Events in Construction Projects.**

**Tracey Lancaster, Temitope Omotayo, Ping Yung**



# Sponsorship Award: Emerald Publishing

**SEEDS**  
2024

**£80 CASH PRIZE**

## #578 – The Impact of Attitudinal Engagement When Implementing Digitalisation in Construction Projects

**Gabriele Crotty, Saoirse Cowman, John. P. Spillane, Michael R. Curran and James G. Bradley.**

Sponsored by



**IEMA** Transforming the world to sustainability





# Sponsorship Award: IEMA

**SEEDS**  
2024

1YEAR AFFILIATE MEMBERSHIP OF IEMA

## #582 – DIGITAL TWINS IN THE NET-ZERO CARBON TRANSITION FOR THE BUILT ENVIRONMENT

**Sitsofe Yevu, Chris Gorse, Patricia Carrillo,  
Kambiz Rakhshanbabanari**

Sponsored by



**IEMA** Transforming the world  
to sustainability



# Chair's Award

**SEEDS**  
2024

**PROFESSOR SAHEED AJAYI**

**#542 – Application areas and potential benefits of blockchain smart contract in infrastructure Public-private partnership (PPP) projects**

**Emmanuel Eze**

Sponsored by



**IEMA** Transforming the world  
to sustainability



# Chair's Award

**SEEDS**  
2024

**PROFESSOR CHRIS GORSE**

**#517 – The Impact of Varying Future Weather Condition on the Energy Consumption within Leeds City Centre with Reference to the Urban Heat Island Effect**

**Oliver Barker**

Sponsored by



**IEMA** Transforming the world to sustainability



# Chair's Award

**SEEDS**  
2024

DR ALISON POOLEY

## #571 – Navigating Environmental Disputes: Lawyers' Insights into ADR Strategies and Experiences

**Sneha Selina Bonomally and Andrew Agapiou**

Sponsored by



**IEMA** Transforming the world  
to sustainability



# Chair's Award

**SEEDS**  
2024

**PROFESSOR COLIN BOOTH**

**#561 – Integrating Data into Community Resilience: A Bayesian Approach to Assessing Flood Resilience in Built Environments**

**Pavithra Rathnasiri, Onaopepo Adeniyi, Niraj  
Thurairajah**

Sponsored by



**IEMA** Transforming the world  
to sustainability



# Chair's Award

**SEEDS**  
2024

**PROFESSOR DARRYL NEWPORT**

**#570 - Bio-Electrochemical Evaluation of Constructed Wetland-Microbial Fuel Cells for Wastewater Treatment and Simultaneous Bioenergy Recovery**

**Onyedikachi Emereole**

Sponsored by



**IEMA** Transforming the world  
to sustainability



# Chair's Award

**SEEDS**  
2024

**PROFESSOR LLOYD SCOTT**

**#585 - Bridging the Global North and South for Sustainable Environmental Governance: Equitable Resource Sharing, Citizen Science, Technology Transfer and Cultural Synergy**

**Phyllis Ndonu, Ufuoma Egbegbedia**

Sponsored by



**IEMA** Transforming the world  
to sustainability





# SEEDS 2024



LEEDS  
BECKETT  
UNIVERSITY

INTERNATIONAL SUSTAINABLE  
ECOLOGICAL ENGINEERING  
DESIGN FOR SOCIETY



Loughborough  
University



University  
of Suffolk

THANK YOU FOR COMING

THURSDAY 29<sup>th</sup> AUGUST 2024