



## ARCHSUD\_LAB

ARCHitectural SUstainable Design LABoratory

### Ciclo di conferenze

A.A. 2023/24

ARCHSUD\_LAB (Architectural Sustainable Design Laboratory) raccoglie esperienze di ricerca e didattica nel campo della progettazione tecnologica dell'architettura, con un'attenzione particolare ai processi di trasformazione dell'ambiente costruito orientati alla sostenibilità ambientale, sulla base di una visione olistica e di un approccio sistematico e multiscalare. Questo contributo si inserisce in una serie di iniziative programmate per l'A.A. 2023/24, rivolte soprattutto agli Studenti del corso di laurea magistrale a c.u. in Architettura e ai Dottorandi di ricerca in Architettura, Arti e Pianificazione, ma aperte a tutti gli interessati.

### RESPONSABILE SCIENTIFICO

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CORSO DI LAUREA MAGISTRALE  
IN ARCHITETTURA [LM4]  
DIPARTIMENTO  
DI ARCHITETTURA DI PALERMO



DOTTORATO DI RICERCA  
IN ARCHITETTURA,  
ARTI E PIANIFICAZIONE  
DIPARTIMENTO  
DI ARCHITETTURA DI PALERMO

Intervento di

### RAMI DARBEL

Assistant Professor of Architecture and Urban Design, Saga University, Japan

# NAVIGATING URBAN FUTURES: AI-DRIVEN RESILIENCE AND REGENERATIVE DESIGN

Lunedì 26 febbraio 2024 ore 14:30

Aula Gregotti - Dipartimento di Architettura, Viale delle Scienze, Ed. 14, Palermo

### ABSTRACT DELL'INTERVENTO

In the face of rapidly evolving urban challenges, the pursuit of urban resilience has become imperative for the sustainable development of our cities. Small towns are subject to several factors, including depopulation, and climate change, necessitating innovative approaches to ensure their adaptability and vitality. This lecture explores the intersection of urban resilience and the transformative role of new technologies, notably Artificial Intelligence (AI).

By harnessing the power of AI, urban practitioners can analyze vast amounts of data to anticipate and mitigate potential risks, optimize resource allocation, and foster more inclusive and sustainable urban environments. Moreover, AI facilitates the development of adaptive strategies that enable cities to bounce back stronger in the face of shocks and disruptions, enhancing their resilience and capacity to thrive amidst uncertainty.

Through case studies and practical examples, this lecture highlights the practical applications of AI in enhancing urban resilience and advancing regenerative urban design principles. From optimizing infrastructure systems to enhancing community engagement and decision-making processes, AI emerges as a powerful tool in shaping the resilient and regenerative cities of tomorrow.



### NOTA BIOGRAFICA

Architect (2015), Ph.D. in Architecture and Urban Design (2020), Post-doctoral Researcher (2020 and 2021), since 2021 he has been an Assistant Professor at the Department of Civil Engineering and Architecture, Saga University, Japan, where he teaches regenerative design and urban resilience. Dr. Rami Derbel's multidisciplinary expertise bridges the fields of architectural heritage preservation and cutting-edge Artificial Intelligence (AI) applications in urban analysis. With a profound understanding of international cultures and transformation contexts, Dr. Derbel has spearheaded numerous research projects focusing on the integration of AI methodologies to analyze and evaluate historic urban landscapes. His dedication to advancing sustainable urbanization and preserving architectural heritage has garnered him accolades such as the ASIAN RIM International Professors Award and the Best Presentation Award from the Conference of the Japanese Society of Urbanism.

