

NETWORKS, MARKETS & PEOPLE - NMP2024

THEMATIC SESSIONS - TS

TS-22-SUPERSESSION INTERLCUSTER SITDA TSPA2 - CIRCULAR DESIGN AND PROCESS EFFICIENCY WITH REDUCTION OF WASTE, MATERIAL AND ENERGY CONSUMPTION

Keywords: Circular Strategies; Resource Efficiency Processes; Advanced Materials; Adaptive Technologies; Open Innovation.

The challenges of decarbonization in transition processes require accelerating the application of circular economy principles in raw material consumption and waste reduction for the purpose of mitigating environmental, economic, and social impacts. The strategic role of Design widely reiterated by European strategies, from the Green New Deal to the New Action Plan for the Circular Economy (CEAP), promote innovative models of intervention in response to decarbonization goals, drawing attention to the activation of Open Innovation dynamics, Circular design thinking, User-driven Strategies, at all scales of intervention. In this context, the application of circular design strategies require multicyclic design, for the recovery of functional and economic value, regenerative symbiosis, and the involvement of stakeholders involved in the design process from a local and global perspective. The focus of the session is therefore oriented toward applied research experiences and theories that assume Circular design as an enabling factor for digital and green transition processes throughout the project life cycle. Innovative research approaches that describe environment- and human-centered strategies at all scales of intervention and their social, economic, and environmental impacts transferred to and promoted on the territory.

CHAIRS

Francesca Giglio - Mediterranea University of Reggio Calabria, Italy.

Francesca Giglio, Associate Professor in Architectural Technology. From 2008 to 2022 she was Assistant Professor, since 2002 PhD, since 1998 Graduated in Architecture. Currently Member of the Administrative Board of the Mediterranea University of Reggio Calabria. Since 2009 she is Member of the PhD's Professor Board of the same University. Since 2004, she is lecturer of mandatory courses in the ICAR 12 sector, transferring her scientific experience, through laboratory and experimental activities also in Degree and PhD theses and for the purposes of Technology Transfer and Third Mission activities. She is Member of the Executive Board of the Italian Society of Architectural Technology (SiTda).

Ernesto Antonini - University of Bologna, Italy.

Graduated with honors in Architecture (IUAV 1984) and PhD in Architectural Technologies (Rome 1991), he is Full Professor at the University of Bologna, where he is Coordinator of the international LM „Architecture and creative practices for the city and landscape“ and Member of the teaching board of the PhD in Architecture. From 1994 to 2001 he was Head of the Research & Development service of QUA.S.CO. Bologna, from 1997 to 2005 contract professor at the Faculty of Architecture of the IUAV of Venice; from 2005 to 2015 associate professor of Architectural Technology at the University of Bologna.

Maria Federica Ottone - University of Camerino, Italy.

Full Professor in Environmental Design at School of Architecture and Design “Eduardo Vittoria” of the University of Camerino, Ascoli Piceno. She has written numerous essays and articles on the topic of urban open spaces and on the relationship between the different dimensions of the project in urban regeneration and transformation, with particular attention to climate and environmental issues. She has written numerous essays and articles on urban open spaces in regeneration and transformation, with a particular focus on climate and environmental issues. From 2021 to 2023 she has directed the Master of Unicam School of Architecture and Design „CIRCUL_AR - Circular Architecture“.

Domenico Lucanto - Mediterranea University of Reggio Calabria, Italy.

Domenico Lucanto, architect, holds a PhD in Technological and Environmental Design of Architecture and is a team member of the Prototyping Section of the University Laboratory ABITAlab at the Department of Architecture and Territory of the Mediterranean University of Reggio Calabria. His studies have always focused on the in-depth study of the theoretical and applied aspects of circular design, upcycling and the use of digital technologies for eco-design and additive manufacturing, robotics and machine learning. During his Ph.D. he carried out applied research at the manufacturing laboratories of NYIT_ New York Institute of Technology and as a post-doctoral fellow he continued his research on prototypes and demonstrators with biogenic materials and printed components at the University of Basilicata.