

ENC – Enhancing Nature in Cities

Frameworks and strategies for resilient and healthy urban environments

Napoli, 13/14.11.2025

College of Engineering – AULA MAGNA, Piazzale Tecchio 80

PROGRAM - 13.11.2025

14.00 Registrations

14.30 Institutional Welcome:	Francesco Pirozzi	Director DICEA, Department of Civil, Building, and Environmental Engineering, Università degli Studi di Napoli Federico II
	Fabio Fatiguso	President Ar.Tec., Scientific Society of Architectural Engineering, Politecnico di Bari
	Lorenzo Diana	National Coordinator of Greenwork Research Project, DICEA – Università degli Studi di Napoli Federico II
	Simona Colajanni	Local Coordinator of Greenwork Research Project, DARCH – Università degli Studi di Palermo
Introduction:	Gaetano Sciuto	Local Coordinator of Greenwork Research Project, DICAR – Università di Catania

15.00 KEYNOTE LECTURE: Thermal resilience of urban green infrastructure - Performances under urban heat

Lecturer:	Aude Zingraff-Hamed	ENGEEES - Ecole nationale du génie de l'eau et de l'environnement de Strasbourg, Université de Strasbourg
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15.30 SESSION 1: RESILIENCE TO URBAN RISKS

Chair:	Francesco Pugliese	(DICEA – Università degli Studi di Napoli Federico II)
	John Sansalone	(University of Florida)

15.45 SESSION 1 – FLASH PRESENTATIONS (5 min. each) 1st half

Co-creating Nature-based Solutions in City-Port Areas. Reflecting on the role of environmental regeneration measures in the SPArTaCHus project.

Libera Amenta

presenter: **Libera Amenta**, Università degli Studi di Napoli Federico II

Green roofs: A preliminary Computational Fluid Dynamics approach. (A046)

Felipe Rezende Da Costa

presenter: **Felipe Rezende Da Costa**, Università degli Studi di Napoli Federico II

Nature-Based Solutions for the regeneration and resilience of Smart Villages: design, strategies and case studies in Mediterranean Inner Areas.

Luisa Lombardo

presenter: **Luisa Lombardo**, Università degli Studi di Palermo

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Urban green barriers as Nature-based Solutions to reduce airborne particulate matter and associated pollutants.

Linda Signorini, Domenico Toscano, Antonio G. Caporale, Paola Adamo

presenter: Linda Signorini, Università degli Studi di Napoli Federico II

Participatory validation of Nature-based Solutions (NbS) for urban resilience: a Mediterranean case study.

Awais Naeem Sarwar, Cristina Caramiello, Francesco Pugliese, Daniele Secci, Rafael Magnabosco de A. Gomes, Elif Bal, Chiara Ceseracciu, Irem Daloglu Cetinkaya, Nadim Copty, Seifeddine Jomaa, Salvatore Manfreda

presenter: Awais Naeem Sarwar, Università degli Studi di Napoli Federico II

Urban green spaces environmental performance during heatwave events: remote sensing and GIS mapping for assessing the temporal response and support NbS climate resilient design.

Sabrina Puzone, Maria Fabrizia Clemente, Enza Tersigni

presenter: Sabrina Puzone, Università degli Studi di Napoli Federico II

16.25 Question time

16.40 Break

17.00 SESSION 1 – FLASH PRESENTATIONS (5 min. each) 2nd half

In-stream Nature-based Solutions in river engineering: Cross vanes and J-Hook vanes in city rivers.

Stefano Pagliara

presenter: Stefano Pagliara, Università di Pisa

Constructing composite indicators for assessing the feasibility of green walls in urban contexts.

Mariantonietta Ruggieri, Gianna Agrò, Ornella Giambalvo

presenter: Mariantonietta Ruggieri, Università degli Studi di Palermo

Modeling green roof aging with HYDRUS-1D: first insights into parameter tuning.

Roberta D'Ambrosio, Antonia Longobardi

presenter: Roberta D'Ambrosio, Università degli Studi di Salerno

Nature for sustainable cities: planning cost-effective and just solutions for urban issues.

Daniele La Rosa, Michele Grimaldi, Marialuce Stanganelli, Viviana Pappalardo, Alessandra Marra, Carlo Gerundo

presenter: Alessandra Marra, Università degli Studi di Salerno
Carlo Gerundo, Università degli Studi di Napoli Federico II

Towards an urban eco-energy balance: a geospatial framework for integrating carbon sequestration and renewable energy production in local planning.

Stella Pennino, Romano Fistola

presenter: Stella Pennino, Università degli Studi di Napoli Federico II

Cities, nature and care reflections on urban regeneration as a relational device in times of crisis.

Ferdinando Trapani

presenter: Ferdinando Trapani, Università degli Studi di Palermo

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Making cities green and sustainable through co-creation of Nature-based Solutions.

Diana Dushova, Olga Ivlieva

presenter: Diana Dushova, Helmholtz Centre for Environmental Research – UFZ Leipzig

How a neighborhood park can become a common ground for multispecies coexistence: the case of Sorelle Mirabal Garden in Milan.

Eugenio Morello, Luca Lazzarini, Israa Mahmoud, Asef Ayatollahi

presenter: Luca Lazzarini, Politecnico di Milano

Between benefits and burdens: understanding the complex relationship with urban trees as Nature-based Solutions.

Diana Dushova, Dagmar Haase

presenter: Diana Dushova, Helmholtz Centre for Environmental Research – UFZ Leipzig

18.10 Question time

PROGRAM - 14.11.2025

9.00 Work presentation

9.30 KEYNOTE LECTURE: Cooling the city: how urban surfaces, form, and green infrastructure shape heat

Lecturer: Agnese Salvati

AiEM - Arquitectura, energia i medi ambient

ETSAB - Escola Tècnica Superior d'Arquitectura de Barcelona

Universitat Politècnica de Catalunya

10.00 SESSION 2: URBAN MICROCLIMATE AND OUTDOOR SPACES

Chair: Alessandro Lo Faro

(DICAr – Università degli Studi di Catania)

Stefano Cascone

(DICAr – Università degli Studi di Catania)

10.15 SESSION 2 – FLASH PRESENTATIONS (5 min. each) 1st half

Greenery systems for the improvement of outdoor comfort in urban built environment with artificial ground depression. A case study in Sicily.

Kevin Aarón Castro Morales, Rossella Corrao

presenter: Kevin Aarón Castro Morales, Università degli Studi di Palermo

Effectiveness of pocket green spaces within the built environment in Mediterranean historic city centers in improving urban microclimate: a case study in Rome.

Federica Rosso, Simona Mannucci

presenter: Federica Rosso, Sapienza Università di Roma

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Recovery tools for particulate matter in traffic-dominated urban microclimates benefits human health, ecology and sustainability.

Saurabh Raje, Muhammad Hamza Naveed, John Sansalone

presenter: John Sansalone, University of Florida

Light in urban parks: balancing humans' needs, nature's health, and sustainability goals.

Laura Bellia, Francesca Diglio, Francesca Fragliasso

presenter: Laura Bellia, Università degli Studi di Napoli Federico II

Integrating climate adaptation and heritage values in Aachen: a climate-legibility assessment for historic urban areas.

Lailly Vaz de Miranda, Timurul Hoque Kazi, Leah Versluis, Axel Timpe

presenter: Lailly Vaz De Miranda, Institute of Landscape Architecture, RWTH Aachen University

How much can urban roads be depaved to accommodate Nature-based Solutions? Exploring possibilities in old towns.

Giulia Jelo, Riccardo Privitera, Daniele La Rosa

presenter: Giulia Jelo, Università di Catania

Promote a new human and social development through the defense of climate and nature.

Maria Coppa, Massimo Pellingra Contino

presenter: Massimo Pellingra Contino, Università degli Studi di Palermo

11.00 Question time

11.15 Break

11.30 SESSION 2 – FLASH PRESENTATIONS (5 min. each) 2nd half

A decision support system to promote effective solutions for climate change adaptation and energy saving in urban open spaces.

Gerardo Carpentieri, Carmela Gargiulo, Tonia Stiuso, Floriana Zucaro

presenter: Floriana Zucaro & Tonia Stiuso, Università degli Studi di Napoli Federico II

Evaluating climate regulation benefits and social perception of an urban park in northern Italy.

Nicoletta Denaro, Daniele La Rosa, Riccardo Privitera

presenter: Nicoletta Denaro, Università di Catania

Enhancing urban ecosystem service assessment through a vegetation structure index.

Francesca Ardito, Simone Pietro Garofalo, Vincenzo Giannico, Giovanni Sanesi

presenter: Francesca Ardito, Università degli Studi di Bari

When solar meets green: toward resilient, sustainable, and smart urban landscapes.

Letizia Giusti, Marianna Rotilio, Gianni Di Giovanni

presenter: Letizia Giusti, Università degli Studi dell'Aquila

Designing for well-being: a multi-disciplinary framework for urban regeneration through biophilia and community engagement.

Silvana Kühtz, Leonardo Tizi

presenter: Leonardo Tizi, Università della Basilicata

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Multicriterial framework for technical, ecological, economical, and social indicators of green walls in urban environments: the case study of the University Campus in Palermo.

Mariantonietta Ruggieri, Marco Bellomo, Luisa Lombardo, Tiziana Campisi, Simona Colajanni

presenter: **Simona Colajanni**, Università degli Studi di Palermo

Inclusive paths for the experimentation of ecological solutions. Application of participatory strategies at the Unipa Campus.

Simona Colajanni, Luisa Lombardo, Marco Bellomo, Tiziana Campisi

presenter: **Tiziana Campisi**, Università degli Studi di Palermo

Evaluation of a simulation system for ecological strategies for outdoor comfort: a case study on the UNIPA University Campus in Palermo.

Luisa Lombardo, Marco Bellomo

presenter: **Marco Bellomo & Luisa Lombardo**, Università degli Studi di Palermo

12.30 Question time

12.50 Break

14.00 KEYNOTE LECTURE: Barriers and opportunities: how to incorporate greenery into buildings?

Lecturer: **Montserrat Bosch González**

GICITED - Interdisciplinary Group on Building Science and Technology

EPSEB - Escola Politècnica Superior d'Edificació de Barcelona

Universitat Politècnica de Catalunya

14.30 SESSION 3: INTERVENTIONS AT THE BUILDING SCALE

Chair: **Simona Colajanni**

(DARCH – Università degli Studi di Palermo)

Rossella Corrao

(DARCH – Università degli Studi di Palermo)

14.45 SESSION 3 – FLASH PRESENTATIONS (5 min. each)

Retrofitting school open spaces for climate resilience: thermal and environmental metrics from a French pilot project.

Giambattista Brizzi, Ornella Ferlito, Matilde Cedrone, Matthieu Majour, Marcella Benini

presenter: **Giambattista Brizzi & Matilde Cedrone**, Deerns

Vertical greenery for sustainable building redevelopment.

Roberto Castelluccio, Francesco Sommesse, Veronica Vitiello, Roberta Tassiero, Lorenzo Diana

presenter: **Roberta Tassiero**, Università degli Studi di Napoli Federico II

A site-specific methodology for the sustainable design of green roofs in urban climates.

Cristina Passarelli

presenter: **Cristina Passarelli**, Università degli Studi di Napoli Federico II

Investigating the indoor-outdoor cooling potential of Nature-based Solutions from the building to the district scale.

Federica Melotta, Agnese Salvati

presenter: **Federica Melotta**, Universitat Politècnica de Catalunya

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Biochar-enhanced green roofs for mediterranean climate.

Stefano Cascone, Salvatore Polverino, Manfredi Saeli

presenter: Stefano Cascone, Università di Catania

Non-invasive energy efficiency techniques applied to an office building in Southern Italy.

Diana D'Aqostino, Federico Minelli, Francesco Minichiello, Claudia Pagano

presenter: Claudia Pagano, Università degli Studi di Napoli Federico II

Thermal benefits evaluation of a construction system for green facades in existing buildings.

Gaetano Sciuto, Livia Lauria, Alessandro Lo Faro, Grazia Lombardo, Angela Moschella

presenter: Gaetano Sciuto, Università di Catania

Robust design of cost-effective and low emission building-HVAC systems under uncertainties: a new possibilistic approach.

Diana D'Aqostino, Federico Minelli, Francesco Minichiello

presenter: Federico Minelli, Università degli Studi di Napoli Federico II

Cultivating belonging: everyday aesthetics, shared care, and sensory well-being in urban Nature-based Solutions.

Elisabetta Di Stefano

presenter: Elisabetta Di Stefano, Università degli Studi di Palermo

Climate change and the building sector: trends in mitigation, adaptation, and green strategies in scientific research.

Rossella Marmo, Salvatore Polverino, Federica Pascale, Roberto Castelluccio

presenter: Rossella Marmo, Università degli Studi di Napoli Federico II

Bioclimatic redevelopment of Villa IX Maggio: an integrated design approach.

Sara Lanzoni, Silvia Federici, Augusto Scipioni

presenter: Sara Lanzoni, Alma Mater Studiorum Università di Bologna

Vertical greenery systems: critical evaluation of management phase.

Alessandro Lo Faro, Grazia Lombardo, Angela Moschella, Gaetano Sciuto

presenter: Alessandro Lo Faro, Università di Catania

16.10 Question time

16.30 BEST PRESENTATION AWARDS

16.40 CLOSING REMARKS AND CONCLUSIONS