Alessio Russo, Ph.D.

Senior Lecturer and Academic Course Leader in the Master of Landscape Architecture, University of Gloucestershire – Cheltenham

Country: United Kingdom

Title: "Urban Ecosystem Services: Toward a Sustainable Future"

Abstract: The school of thought surrounding the urban ecosystem has increasingly become in vogue among researchers worldwide. Since half of the world's population lives in cities, urban ecosystem services have become essential to human health and well-being. Rapid urban growth has forced sustainable urban developers to rethink important steps by updating and, to some degree, recreating the human–ecosystem service linkage. This talk addresses topics such as ecosystem services, green infrastructure, nature-based solutions, urban green spaces, edible green infrastructure, human health, and more. It highlights current knowledge, gaps, and future research with the focus on building a sustainable future.

Biography: Alessio Russo is Senior Lecturer and Academic Course Leader in the Master of Landscape Architecture at the University of Gloucestershire, Cheltenham, United Kingdom. Before joining the University of Gloucestershire, he worked in Russia as an Associate Professor at RUDN University in Moscow and Professor and Head of Laboratory of Urban and Landscape Design at Far Eastern Federal University in Vladivostok. He holds a Bachelor in Science in Plant Production from the University of Naples, Post-Graduate Specialization in Healing Garden Design from the University of Milan, and Master in Science in Landscape Design and Planning from the University of Pisa. He received his Ph.D. in Urban Forestry from the University of Bologna. Outside of academia, he has worked as a Landscape Architect in the United Kingdom, Italy, and the United Arab Emirates, dealing with sustainable design and planning. He is a member of the International

He also serves as an Associate Editor for the Journal Urban Agriculture & Regional Food Systems

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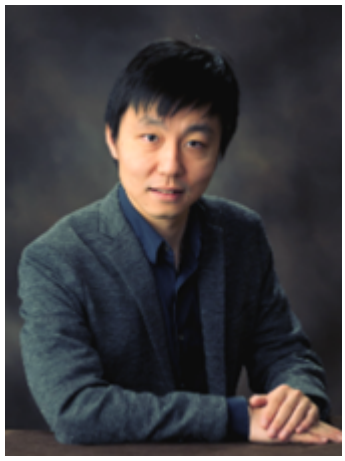

Title: "Global Multi-model Projections of Local Urban Climates"

Abstract: Cities are where major human-perceived climate change impacts occur. Many globally recognized climate threats such as heat stress, water scarcity, air pollution, energy shortage, extreme rainfall, and flooding are either rooted from or exacerbated by the unique urban climatology combined with the concentrated population and infrastructure. These hazardous risks are projected to be further worsen due to climate change coupled with rapid urbanization. Effective urban planning and adaptation for climate-driven risks relies on robust climate modeling that are specific to built landscapes with quantitative characterization of uncertainties. Such projections, however, are largely absent because of a near-universal lack of urban representation in global-scale Earth system models. In this seminar, I will present a newly developed urban climate emulator framework that combines process-based Earth system modeling and data-driven Physics-Guided Machine Learning (PGML), and its applications on understanding the local urban climate change, variability, and uncertainty, and climate impacts to built environments at the global scale.