

Editorial

Shaping Resilient and Sustainable Futures: The Launch of Urban and Building Science Journal

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A Critical Juncture for Built World

Humanity resides at a critical juncture. Unprecedented urbanization, compounded by the escalating climate crisis, necessitates a renewed, integrated, and scientifically rigorous approach towards our built environments. It is therefore with considerable enthusiasm and a sense of profound responsibility that we introduce *Urban and Building Science (UBS)*, an international, open-access journal committed to advancing the fundamental and applied sciences requisite for cultivating inclusive, safe, resilient, and sustainable urban and building systems.

Honoring Legacies, Recognizing Limits

Acknowledging our foundation is based upon the profound legacies within architecture, planning, engineering, and environmental science, contemporary systemic challenges—ranging from urban heat islands to climate-induced impacts on infrastructure—distinctly transcend traditional disciplinary boundaries. Consequently, the historically siloed disciplinary approaches, though foundational, prove insufficient to address the integrated solutions mandated by present exigencies.

The Imperative of Integration: A Unified Physics

Urban and Building Science engages this imperative by centering upon the critical nexus interconnecting the urban macrocosm and the building microcosm. Our central mission entails fostering an integrated comprehension of urban and building physics, alongside the complex outdoor-indoor interactions modulating phenomena related to heat, sound, light, wind, air, water, energy/carbon, and waste. The appellation 'science' epitomizes our commitment to academic rigor, achieved through theoretical exploration, empirical experimentation, and numerous robustly validated methodologies. Primacy is accorded to reproducible findings, and we actively promote applied scientific endeavors dedicated to translating fundamental insights into emerging technologies, methods, and materials designed to strengthen tangible sustainability and resilience.

Mapping the Terrain: A Spectrum of Inquiry

UBS encompasses a purposefully broad scope, reflecting the intrinsically multifaceted nature of built environment challenges. We solicit contributions addressing a wide spectrum of themes, spanning climate change impact assessment, low-carbon design strategies, urban resilience enhancement, disaster risk management, sustainable resource systems, human health and well-being within built spaces, intelligent urban technologies, and the analysis of synergies, conflicts, and trade-offs inherent in urban interventions. Effectively addressing this thematic breadth mandates a genuinely interdisciplinary methodology. Correspondingly, UBS functions as a crucible wherein diverse fields—including architecture, engineering, atmospheric science, ecology, geography, and the social sciences—converge. We encourage submissions that effectively bridge disciplinary chasms, holistically address inherent complexities, and critically explore the intricate feedback mechanisms operating



between physical design parameters, environmental processes, technological systems, and human behavioral patterns.

Synthesizing Wisdom, Sparking Innovation

We endeavor to cultivate a dynamic synthesis, respecting established paradigms whilst concurrently advocating for the exploration of emergent frontiers. This necessitates the rigorous evaluation and judicious deployment of advanced computational modeling, artificial intelligence, the integration of high-resolution datasets, nature-based solutions, and sophisticated decision-support frameworks.

An Invitation to Build the Future, Together

Urban and Building Science extends an invitation to the global community of researchers and practitioners to disseminate your most rigorous and impactful research; contribute to advancing the frontiers of knowledge in this domain; and collaborate with us in fostering a global intellectual community committed to shaping more salubrious, equitable, resilient, and sustainable built environments for posterity.

Conflicts of Interest

The author declares no conflict of interest.