EDITORS' INTRODUCTION

Authors

Piyush Khairnar and Alexis Arias Betancourt
Illinois Institute of Technology

The climate crisis is a global challenge that requires immediate action from all sectors of society. According to the United Nations Human Settlements Programme, UN-Habitat, cities consume 78 percent of the world's energy. They produce more than 60 percent of greenhouse gas emissions, making cities the most vulnerable to its impacts, such as heat waves, sea-level rise, and extreme weather events. Additionally, climate change disproportionately affects vulnerable communities and exacerbates existing social inequalities.

To address the climate and social crisis in cities, a regenerative approach is necessary to shift from our current anthropocentric-oriented perspective (people-oriented focus) toward an eco-centric approach. In a regenerative approach, the built environment, its inhabitants, and its surroundings, natural or manufactured, contribute positively toward better living conditions. The concept of regenerative design transcends sustainability as it strives to counteract the resource consumption and impact of the built environment on natural systems while improving the sociocultural conditions of society. Understanding the various processes contributing to forming a metropolis is essential to begin the discussion on regenerative urbanism. These processes can occur at different scales, including macro (infrastructure and region), meso (neighborhood and legislation), and micro (building technologies).

The sixth issue of *Prometheus*, titled "Regenerative Cities: Infrastructure, Landscape, Buildings, and Technologies," delves into regenerative urbanism at these different scales and explores its principles, practices, and potential for creating thriving, resilient, and equitable cities. This issue provides a platform for individuals from academic, scholarly, design, and creative backgrounds to share their innovative concepts, insights, and perspectives on achieving regenerative cities.

PhD symposium attendees, friends, and organizers pose for a picture during the closing ceremony at Tadao Ando designed Wrightwood659.

This edition follows the annual international symposium for graduate students in its sixth year. It is organized and edited by students of IIT's PhD Program in Architecture and showcases the extensive research of students from various parts of the world. It discusses promoting regenerative practices at different scales for urban environments. During the symposium, students discussed how to retrofit present urban infrastructure, create livable places for social equity, create circular economies, theorize on aesthetic and functional values of design, and achieve efficient construction techniques to design regenerative cities.

The sixth edition of *Prometheus* aims to encourage collaboration, stimulate innovative thinking, and promote environmental and social advancement by bringing together individuals from various backgrounds. It features interviews, articles, and transcriptions from keynote speakers, participants, scholars, and professionals. This publication is a valuable resource for anyone interested in urban sustainability and regenerative practices. It recognizes that cities are not just physical spaces but are also social and cultural entities. Therefore, achieving regenerative cities requires a holistic approach considering different perspectives and solutions.

The sixth edition of *Prometheus* is composed of four sections: An introduction to this volume and the symposium organized by the students of the PhD Program in Architecture. Section 1 is divided into four parts: 1.A) Regenerative Cities: A Chicago Story features the excerpt of our two keynote speakers, Maurice D. Cox (Commissioner of the Department of Planning and Development of Chicago) and Dr. Gail Fenske (Architectural Historian for Roger Williams University); 1.B) Regenerative Cities: Current Challenges and Opportunities features interviews from our panelists Peng Du and Vedran Mimica followed by excerpts from panelist presentations of Ron Henderson, Maria Villalobos, and Jordi Barri; 1.C) Regenerative Infrastructure and Landscape includes the research carried out by the participating students, focused on macro and mesoscale; and 1.D) Regenerative Technologies and Buildings includes student research on microscale subjects. Section 2 showcases the PhD program overview for academic years from 2021–2023. Lastly, Section 3 features interviews of PhD alumni and experts in regenerative urbanism.

This edition received a broad response to the call for papers from people worldwide representing institutions such as the Illinois Institute of Technology, Virginia Tech, Thomas Jefferson University, the Islamic Azad University of Mashhad, and the Lusíada University of North-Oporto. Student research papers were carefully curated and taken through a double-blind peer-reviewed process by a scientific committee to make this volume a valuable resource for anyone interested in urban sustainability and regenerative practices. This issue also serves as a call to action for all sectors of society to work together toward a more sustainable and equitable future through regenerative design.

Acknowledgments

Prometheus 6th edition was published two years after the fifth edition due to the circumstances of the COVID-19 pandemic. It has been the result of a great effort on the part of our organizers and collaborators to be able to publish this volume. We want to express our utmost appreciation to Dr. Michelangelo Sabatino, the director of the PhD program, for his unwavering support, invaluable guidance, and exceptional mentorship throughout this endeavor. Additionally, we extend our sincere gratitude to Provost Kenneth Christensen, Dean Reed Kroloff, and Vice Provost for Research Fred J. Hickernell, for their unwavering support during the symposium. We also want to acknowledge our keynote speakers, Maurice D. Cox and Dr. Gail Fenske, whose contributions were immensely valuable. We are deeply grateful to our panelists, Jordi Barri, Peng Du, Maria Villalobos, Vedran Mimica, and Ron Henderson, as well as all the paper presenters for their vital role in shaping the symposium's interdisciplinary values. We extend special thanks to our scientific committee for their insightful comments and constructive feedback during the peer-review process.

We want to express our heartfelt appreciation to Dr. Zahida Khan and Dr. Yohan Kim, the previous organizers and editors, for providing us with valuable insights on how to organize the symposium. Special thanks to PhD Student Sasha Zanko for supporting the organizers during the event. We are grateful to the College of Architecture and the staff at IIT for their unwavering support in ensuring the success of this event, especially to Christine Manuel, who provided constant support, and to Mark Osorio, who helped with the logistics. We also wish to extend our gratitude to PhD candidate Alejandro Saldaña Perales for his hard work and contribution. We thank all the participants for their involvement and open discussions. Finally, for helping us bring this publication to life, we would like to thank Melinda Van Leer for the copyediting process, and Bud Rodecker and Alyssa Arnesen for the design of *Prometheus 06*.