Proceedings of the

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International Society for the Systems Sciences
(#ISSS2022 Online)

Advances in Systems Sciences and Systems Practice

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FORWARD

Every field of endeavor with publication venues periodically reflect on the advancements in that field that had been made over the prior decade. The underlying assumption is that the field progresses with new discoveries or innovations. In the sciences as well as in application practice fields we look for those discoveries and innovations that propel the field forward, make the body of knowledge more useful and lead to yet more discoveries. Perhaps it is time for the systems community to reflect on advances that have been made in systems science and systems practice as part of our efforts to understand how the ISSS is now, or can be in the future, impacting the world for the better.

Of course, with faster computers, larger memories, and advancements in software development there have been obvious advancements in various systems-related tools, such as modeling languages and platforms. But what have these advancements brought to systems theory or methodologies?

For the conference theme for ISSS 2022 We considered what sorts of advancements we find across the field as a whole. What has been happening in the systems sciences and practices over the last decade? What developments can you point to as having had a major impact on those who use systems science in their work? Alternatively, if we have difficulty coming up with examples, why? What areas within the systems sciences and practice need to be improved or advanced?

We received papers/presentations that provide a critical review of newer thinking, models, theories, and methodologies. To qualify as an advance the proposed subject must have been developed in the last ten years, be considered as important by a significant number of systemists, and ideally have demonstrated uses in furthering research or practice.

The International Society for the Systems Sciences (ISSS) is among the first and oldest professional organizations devoted to interdisciplinary inquiry into the nature of complex systems and remains perhaps the most broadly inclusive. We invited papers from systems scientists, researchers and practitioners in all domains of this dynamic human activity system in which we live need to cooperate to deliver cohesive solutions.

These proceedings enhance the body of knowledge of the Systems Sciences. Contributions from our community of researchers and practitioners cover broad areas of systems science, including the design and application of systems approaches to the natural and social sciences (natural and social), concept or position papers, and provide a platform for speculative (novel) thinking to deliver valuable insights that benefit business, management, science, education, and public policy. The ISSS Editorial Committee only accept and review original, previously unpublished research proposals and papers. The Committee ensure submissions support the conference theme and are written in English. At the conference papers are peer reviewed as authors present their papers in chaired paper sessions. The Vice President Publications and Research and the Editorial Committee conduct a final review and publish those papers that meet the quality standards.

I sincerely thank all the authors for their contributions, the Editorial Committee and the Chairs. I hope you will enjoy, be informed and inspired by these original works.

George Mobus
President 2021-22
International Society for the Systems Sciences (ISSS)

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