Conference of the International Society for the Interdisciplinary Study of Symmetry

Symmetry, Structure, and Information

In the framework of
The 2021 Summit of the International Society for the Study of Information (IS4SI)

September 12-19, 2021

Announcement and Call for Submissions of Abstracts

The task of tracing the presence of the ideas of symmetry, structure, and information in the intellectual history of humanity would be impossible without taking into account every single step of the human mind in the exploration of reality. It is difficult to find any context entirely free from a direct or indirect presence of these ideas, even if they remained hidden under different names or convoluted or confused with other ideas such as harmony, form, knowledge, etc. They have manifested themselves in human culture from the very beginning without being trivial or obvious, continuously attracting attention of the intellectual giants of the format of Kant who attempted but failed to explain the meaning of symmetry. Their current conceptualizations formulated in full generality within last two centuries are still subject of intense discussions. More recently, their study acquired precise mathematical tools in the group or probability theories, and the development of modern science and technology would not have been possible without the analytic tools of the invariance or its breaking, or of entropy. However, the precision of mathematical formalisms would be blind and incomplete without the ability to gain better insight into the role of these fundamental ideas in getting understanding of reality or without knowledge of their mutual relations. The close relationships between symmetry and structure are well known, although sometimes, not sufficiently appreciated. The most ambitious attempt to bridge science and humanities in the form of philosophical structuralism influenced by Herman Weyl's book "Symmetry" and widely propagated by Jean Piaget's book "Structuralism" was its most recognized product. The bridge between science and humanities through symmetry-structure association stimulated multiple studies with an excellent example of the 1982 book with essays of Cyril Stanley Smith. The relationship between symmetry (or its breaking) and information is probably less known, but it is not less fundamental. After all, Gregory Bateson's celebrated concept of information as the "difference that makes a difference" had its early appearance in his 1972 paper "A Re-examination of 'Bateson's Rule' on breaking symmetry in the biological context. We are perfectly aware of the interrelations between the ideas of symmetry, structure, and information but we still know very little about them. The main goal of the 2021 IS4SI Summit is to build bridges between disciplines and to explore the potential of using information as a unifying theme. For this reason the inquiry of the relations between the ideas of symmetry, structure, and information should have the utmost importance and be worthy of the greatest interest from all participants.

We invite submissions of extended abstracts of papers intended for a presentation at the conference "Symmetry, Structure, and Information" on all topics related to the interdisciplinary study of symmetry. Naturally, the papers aiming to address the mutual relations between these ideas are in the highest demand and will be given preference.

However, papers on subjects focusing mainly on symmetry will be also welcome, since papers on a certain topic may induce associations with other topics in between members of the audience.

The intention of the conference, as well of the entire Summit is to bring together the widest possible range of perspectives from philosophical or scientific, to visionary and artistic. There will be an opportunity to present original and creative contributions without any restriction by disciplinary divisions or level of advancement of research.

ORGANIZING COMMITTEE

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CALL FOR SUBMISSIONS OF ABSTRACTS
We invite submission of extended abstracts for intended presentations at the workshop. **Extended abstracts should be in English and they should be sufficiently extensive to clearly describe the content of presented work. Their expected volume is within 300-500 words**. There is no required format of extended abstracts. All extended abstracts will be published on the IS4SI website prior to the Summit. This way the participants of all conferences within the Summit will be able to select presentations of special interest and to attend not only those belonging to this conference, but also presentations belonging to other conferences of the Summit. The subject matter of presentations is not restricted to specific disciplines or topics, but the originality of the presented work and relevance to the main theme of the workshop and the Summit is expected. The format of papers and information about the access to the template for the submission to Proceedings after the Summit will be announced later.

Contributed presentations are planned for 30 minutes including 20–25-minute lecture and 5–10-minute discussion.

NO REGISTRATION FEE

THE PRELIMINARY DEADLINE for extended abstract submissions: **May 1, 2021**. Acceptance notices will be sent soon after submitted extended abstracts are reviewed by organizers. Late submissions may be considered, but to secure full consideration, please meet the deadline. **Submissions can be sent any time after this announcement** to any of the members of the Organizing Committee.
Short papers (ca. 5 pages) based on accepted presentations will be published in the Proceedings of the Summit. High quality papers of any extension will be invited to be published in journals cooperating with IS4SI.