



symmetry



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Symmetry Applied in Special Engineering II

Guest Editors:

Dr. Chiara Bedon

Department of Engineering and
Architecture, University of Trieste,
Via Valerio, 6/1, 34127 Trieste,
Italy

Dr. Lucia Figuli

Faculty of Security Engineering,
University of Žilina, 010 08 Žilina,
Slovakia

Dr. Makovická Osvaldová

Linda

Department of Fire Engineering,
University of Žilina, Žilina,
Slovakia

Deadline for manuscript
submissions:

closed (30 November 2023)

Message from the Guest Editors

Dear Colleagues,

Special engineering is reserved for emergencies. The situation where an incident occurs is regarded as a failure of the system's symmetry. The causes of a system failure are investigated in the field of material engineering only, not in the field of social sciences. This Special Issue could contain technical articles from two areas: the investigation of emergencies and the treatment of materials for special purposes. The following topics are explored:

- the interplay between regular and chaotic dynamics in final systems, exceeding the limit load up to the collapse;
- the disruption of the local symmetry (fire development, explosion, static collapse, etc.);
- competition between order, failure, and symmetry is possible given the coexistence of different types of asymmetry leading to an emergency and a possible domino effect;
- symmetry in nanosciences (material treatment, e.g., flame retardant treatment of combustible materials, self-extinguishing treatment, enhancement of mechanical resistance, etc.).



mdpi.com/si/139375

Special Issue



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Editor-in-Chief

Prof. Dr. Sergei D. Odintsov

1. Institutió Catalana de Recerca
i Estudis Avançats (ICREA),
Passeig Luis Companys, 23,
08010 Barcelona, Spain
2. Institute of Space Sciences
(ICE-CSIC), C. Can Magrans s/n,
08193 Barcelona, Spain

Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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Contact Us

Symmetry Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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symmetry@mdpi.com
X@Symmetry_MDPI