



## Symmetry Application in Signal and Data Processing Techniques, Devices and Systems

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### Message from the Guest Editors

Dear Colleagues,

This Special Issue on Advances in Signal Processing Techniques, Devices and Systems highlights various principles of signal processing, which utilize symmetry and modern physical implementation. In today's information age, the amount of data is constantly growing, making efficient processing a necessity. It is reasonable to stay ahead of the curve and explore the cutting-edge advancements that will shape the future of signal processing.

Symmetry principles are utilized in the field of signal and data processing in various ways. For instance, symmetrical Siamese neural networks deliver very high efficiency in image recognition tasks. On the other hand, symmetry is widely used in superconductive quantum interferometric devices that form a basis for energy-efficient signal processing devices. Authors from various areas, from artificial intelligence and probability theory to microelectronics, are encouraged to exchange their ideas in this Special Issue, leading to shared scientific knowledge when it comes to signal processing.

For this Special Issue, you are invited to submit a paper on whatever aspect of symmetry in signal processing excites you the most.





# symmetry



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## Editor-in-Chief

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## 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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