



symmetry



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Symmetry in Nonlinear Partial Differential Equations and Rogue Waves

Guest Editors:

Dr. Natanael Karjanto

Department of Mathematics,
Sungkyunkwan University,
Suwon 16419, Gyeonggi-do,
Korea

Dr. Angelo Favini

Dipartimento di Matematica,
Universita' degli Studi di
Bologna, P.zza di Porta S.
Donato, 540126 Bologna, Italy

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Message from the Guest Editors

Dear Colleagues,

Study of rogue waves has assisted many people not only to better understand natural phenomena but also to progress in the knowledge of nonlinear waves in general. The nonlinear Schrödinger (NLS) equation and its exact analytical solutions have been used as a mathematical model and for prototypes of rogue waves, also known as freak or extreme waves. Although the family of solitons on nonvanishing backgrounds was discovered in the 1970s and 1980s, it was not until the 2010s that experimental observations confirmed those theoretical predictions. In this Special Issue of *Symmetry*, we seek contributions from researchers on the topic of Symmetry in Rogue Waves. All types of contribution are welcome, including modeling, mathematical, physical, numerical, statistical, and experimental.

Prof. Angelo Favini
Dr. Natanael Karjanto
Guest Editors



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Special Issue



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Prof. Dr. Sergei D. Odintsov

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

Tel: +41 61 683 77 34
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