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Parity-Time Symmetry in Optics and Photonics

Guest Editor:

**Prof. Dr. Blas Manuel
Rodríguez-Lara**

Instituto Nacional de Astrofísica,
Óptica y Electrónica, Calle Luis
Enrique Erro No. 1, Santa María
Tonantzintla, Puebla Código
72840, México

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Message from the Guest Editor

Dear Colleagues,

Optical systems with balanced linear gain and loss have proved a fertile ground to realize PT-symmetric models. Collections of thin films, engineered volumetric optical potentials, scattering centers in waveguides, discrete systems involving effective coupled modes, in general, any optical systems that obeys a Schrödinger-like equation, where an idea of spacetime reflection is created via linear loss and gain, can be used to realize optical analogs of quantum systems described by non-Hermitian PT-symmetric Hamiltonians.

In this Special Issue of *Symmetry*, we are interested in such systems, and ask for your help to explore their spectral singularities, underlying symmetries, propagation dynamics, and applications in all fields of optics.

Prof. Dr. Blas Manuel Rodríguez-Lara
Guest Editor



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Special Issue



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Editor-in-Chief

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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