

Special Issue

Nonlinear Patterns in Dissipative Media

Message from the Guest Editor

Nonlinearity and dissipation (realized as a combination of losses and compensating gain) are fundamental properties featured by a vast class of physical settings. Most diverse and, arguably, most important examples of such settings occur in photonics, in the form of laser cavities, propagation of powerful laser beams in various materials, semiconductor microcavities filled by exciton-polariton condensates, etc. Other important examples of nonlinear dissipative systems occur in plasma physics, hydrodynamics (in particular, in thermal convection), chemical waves, etc. The nonlinearity is a crucially important ingredient of these settings when amplitudes of propagating waves and/or stationary patterns are sufficiently large. The present Special Issue aims to collect original contributions, both theoretical and experimental ones, and reviews dealing with various topics belonging to the broad area of nonlinear dissipative systems. In particular, works addressing dissipative solitons (one- and multidimensional) and dissipative solitary vortices will be very appropriate for the publication in this Special Issue.

Guest Editor

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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