Scientific Program

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MS Me-0-3 2

Nonlinear waves, singularities, and turbulence in physical and biological systems - Part 2 of 5

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16/07/2019 | 11:00 - 13:00

Room: ME-0-3

Organizer: Pavel Lushnikov
Organizer: Alexander Korotkevich

Summary:
Appearance of waves and formation of singularities are important problems in many physical, hydrodynamical and biological systems as well as for the applied mathematics in general. Waves of finite amplitude require solutions beyond linear approximation by taking into account nonlinear effects. Solutions of nonlinear equations usually result in the formation of singularities, coherent structures or solitary waves. Examples of the corresponding phenomena can be observed in filamentation of laser beams in nonlinear media, wave breaking in hydrodynamics and aggregation of bacterial colonies. The minisymposium is devoted to new advances in the theory of nonlinear waves.

11:00 16/07/2019

Hydrodynamic models and boundary confinement effects

Authors:
Roberto Camassa. *University Of North Carolina At Chapel Hill*

11:30 16/07/2019

Extreme event quantification for systems with randomness: Rogue waves in the deep sea

Authors:

Tobias Grafke. *University Of Warwick*

12:00 16/07/2019

Family of Potentials with Power-Law Kink Tails

Authors:

Avadh Saxena. *Los Alamos National Laboratory*

Avinash Khare. *Savitribai Phule Pune University, India*

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The Computation of differential equations with singularities in the complex plane

Authors:

Marco Fasondini. *University Of Kent*
