Minisymposium: Differential Equation Models of Propagation Processes

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Description

The aim of this mini symposium was to present results about modeling different propagation processes by using ODEs and PDEs. Epidemic propagation on networks was considered with focusing on the relation between the structure of the network and the qualitative behavior of the solutions of the corresponding differential equations. Old and new product formulas for evolution equations were surveyed. Applications to numerical analysis and operator theoretic properties of the evolution equation were given.

The talks included in the minisymposium were the following:

- Diana Knipf, Department of Mathematics, University College London (UK). *Rich dynamics in simple disease spread models on travel networks.*
- Gergely Röst, Institute of Mathematics, University of Szeged (Hungary). *Impact of non-Markovian recovery on network epidemics.*
- Joan Saldaña, Universitat de Girona (Spain). *Density-dependent diffusion rates and the initial phase of epidemics on heterogeneous metapopulations.*
- András Bátkai, Bergische Universität Wuppertal (Germany). *Product formulas for non-autonomous evolution equations.*
- Peter L. Simon, Institute of Mathematics, Eötvös Loránd University, Budapest Hungary. *Approximating epidemic propagation on networks by low-dimensional ODEs.*

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