

Preface

This publication contains proceedings of the XIII International scientific conference “Differential equations and their applications in mathematical modelling” (DEAMM2017), which took place from 12th to 16th of July, 2017 in the city of Saransk (Mordovia Republic, Russia). The conference was organized by National Research Ogarev Mordovia State University, Keldysh Institute of Applied Mathematics (Russian Academy of Sciences) and Middle-Volga Mathematical Society. DEAMM2017 is granted by Russian Foundation of Basic Research.

The conference has rather long history. Professor E.V. Voskresensky, talented scientist and organizer, began conducting these scientific events in 1994.

Conference’ reports cover investigation of mathematic models arising in physics, chemistry, biology, economics and other areas of human knowledge. The scope of methods used for investigation is rather broad and includes qualitative and numerical methods. As a rule while implementing numerical methods authors use modern computational techniques, e.g. based on parallel computing. The topics of the papers correspond to the conference’ sections:

1. Numerical methods for differential equations’ solving and computational physics.
2. Qualitative and asymptotic methods for differential equations and their applications in mathematical modeling.
3. Differential equations and their applications in physical, chemical, biological, economical and other processes.
4. Partial differential equations and their applications in mathematical modeling.

All the papers submitted for the conference were peer-reviewed by the Program Committee. Due to decision of the Committee, 69 articles were recommended to publishing; they are presented in this volume. Also 8 articles were rejected.

The organizers are thankful to all the participants of the conference for their interesting reports and fruitful discussion.

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