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«Algebraic and geometric methods  
of analysis»

Book of abstracts



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## LIST OF TOPICS

- Algebraic methods in geometry
- Differential geometry in the large
- Geometry and topology of differentiable manifolds
- General and algebraic topology
- Dynamical systems and their applications
- Geometric problems in mathematical analysis
- Geometric and topological methods in natural sciences
- History and methodology of teaching in mathematics

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НТБ ОНАФТ

## On geometry of spatial kinematics in Lorentzian space

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In this work, we give geometric properties of mappings of spatial kinematics in Lorentzian space with the aid of dual number and split quaternion. Moreover, we get orthogonal rotation matrix  $A$  with respect to the Lorentzian Rodrigues parameters and the Lorentzian Euler parameters in such a space. Also, the mapping of spatial kinematics into points of a dual Lorentzian projective space are defined.

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