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**Algebraic  
and Geometric  
Methods of Analysis**

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## LIST OF TOPICS

- Topological methods in analysis
- Geometric problems of complex and mathematical analysis
- Algebraic methods in geometry
- Differential geometry in the whole
- Geometry and topology of differentiable manifolds
- General and algebraic topology
- Geometric and topological methods in natural sciences

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# Measuring the rate of convergence in the Birkhoff ergodic theorem

Alexander Kachurovskii

(Sobolev Institute of Mathematics, Novosibirsk, Russia)

*E-mail:* agk@math.nsc.ru

There are two different approaches to the measuring of the rate of convergence in Birkhoff's ergodic theorem; see the discussion in [1].

The first one, closely related with probabilities of large deviations, was studied in [2]. Now this approach is well developed. There were obtained estimates of the rate of convergence in the Birkhoff ergodic theorem for many classes of dynamical systems popular in applications, including some well-known billiards and Anosov systems [3].

The second approach (pointwise rate of convergence) was studied in [1] and [4], and many interesting questions still are open here.

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