Monday, May 18, 2026
from 4:45 p.m. to 6:20 p.m. (Moscow time)
room 16-10 and ZOOM translation

Vladimir E. Nazaikinskii, Anton Yu. Savin

On the Lefschetz Formula on Manifolds with Periodic Ends

The classical Atiyah-Bott formula (1967) expresses the Lefschetz number of a geometric endomorphism of an elliptic complex of (pseudo)differential operators on a closed smooth manifold as the sum of contributions of fixed points of the corresponding diffeomorphism, assuming that all fixed points are nondegenerate. These contributions explicitly depend only on the endomorphism itself but not on the operators forming the complex. In 1999, one of the authors, together with B.-W. Schulze, B.Yu. Sternin, and V.E. Shatalov, generalized this formula to the case of manifolds with conical singularities (or, equivalently, with cylindrical ends), where the contributions of interior fixed points are supplemented by those of fixed cylindrical ends (which already depend on the operators of the complex themselves). In recent decades, a number of papers have appeared in the literature devoted to elliptic theory on manifolds with periodic ends. This talk will present the Lefschetz formula on such manifolds; in the special case of manifolds with cylindrical ends, it strengthens previously obtained results.

SCIENTIFIC SEMINAR
"DIFFERENTIAL GEOMETRY AND APPLICATIONS"

headed by Academician of RAS Anatoly T. Fomenko

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