

SIMION STOILOW INSTITUTE OF MATHEMATICS OF THE ROMANIAN ACADEMY

Monthly conference

Cohomology jump loci of 3-dimensional manifolds

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IMAR, “Miron Nicolescu” room – ground floor

Abstract: The cohomology jump loci of a space are of several types: the characteristic varieties, defined in terms of homology with coefficients in rank one local systems; the resonance varieties, constructed from information encoded in the cohomology ring; and the complements to the Bieri-Neumann-Strebel-Renz invariants, which are defined in terms of Novikov-Sikorav homology. In this talk, I will explore the geometry of these sets and the delicate interplay between them, especially in the context of compact, orientable 3-manifolds.