

第11回

- 講演者 : **Salvatori Niccolo** 氏 (King's college, London)
 - 題目 : On manifold invariants: torsions and derived Euler characteristic
 - 日時 : 平成29年7月14日 (金) 16:30 – 17:30

Torsion invariants were first introduced by Reidemeister and Franz in the 1930s to distinguish between Lens spaces, i.e. quotients of (S^3) by a cyclic group, which have trivial cohomology. For this reason, Reidemeister torsion is defined at the cochain level and is called a secondary invariant. In our talk, we will start from Reidemeister torsion in order to illustrate an equivalent torsion, introduced by Ray and Singer in the early 1970s, called analytic torsion and an exotic (and inequivalent) torsion, called residue torsion and introduced by S.Scott in 2013. For the residue torsion, we were able to prove a classification theorem which shows that analytic and residue torsion have complementary behaviour according to the dimension of the underlying manifold. Moreover, we will explain the relationship with other two manifold invariants, the well-known Euler characteristic and the (less famous) derived Euler characteristic. If time allows, we will mention some open problems that follow from our result.



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8 images

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