



# Ypatia 2022 - June 8-10, 2022

## jeudi 9 juin 2022

Abstract: Thanks to a realization of the Higson-Roe surgery sequence through the K-theory pseudodifferential operators algebras, we will see how to define fine numeric secondary invariants associated to Dirac operators and give explicit formulas for them. They will be obtained through delocalized Chern characters of K-theory classes into suitable non-commutative homology groups and by pairing them with delocalized cyclic cocycles. As a geometric applications, we will give lower bounds for the rank of the moduli space of Riemannian metrics of positive scalar curvature of a closed spin manifold. (10:55 - 11:15)