Colloquium at the University of Tokyo

東京大学大学院数理科学研究科 談話会

DATE   April 24 (Fri), 2015, 16:50–17:50

PLACE   Room 123, Graduate School of Mathematical Sciences

SPEAKER **Bent Ørsted** (Åarhus University and the University of Tokyo)

TITLE   Rigidity of conformal functionals on spheres

ABSTRACT On a compact smooth manifold one may construct a Riemannian metric in many different ways. Each metric gives rise to natural elliptic operators such as the Laplace-Beltrami operator and corresponding spectral invariants, e.g. the eigenvalues, the trace of the heat semigroup, and the zeta function. In this lecture we shall consider such functionals on the space of metrics on the sphere, combining conformal differential geometry and representation theory of semisimple Lie groups to obtain results about local extremal properties of special functionals. This is based on joint work with Niels Martin Möller.