

# 談話会

2014年7月11日(金)

講演 : 16:30 - 17:30 (123号室)

茶菓 : 16:00 - 16:30 (2階コモンルーム)

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“Global Geometry and Analysis on Locally Symmetric Spaces with Indefinite-metric”

## Abstract:

The local to global study of geometries was a major trend of 20th century geometry, with remarkable developments achieved particularly in Riemannian geometry. In contrast, in areas such as pseudo-Riemannian geometry, familiar to us as the space-time of relativity theory, and more generally in pseudo-Riemannian geometry of general signature, surprising little is known about global properties of the geometry even if we impose a locally homogeneous structure.

I plan to explain two programs:

1. (global shape) Existence problem of compact locally homogeneous spaces, and deformation theory.
2. (spectral analysis) Construction of the spectrum of the Laplacian, and its stability under the deformation of the geometric structure.

by taking anti-de Sitter manifolds as a typical example.