

**The Mathematics Research Center
Distinguished Lecture Series
Presents:**



Professor Fanny Kassel, Institut des Hautes Études Scientifiques

Thursday, February 21st, 2019, 4:30 – 5:30 pm – Room 380W

Discrete subgroups of Lie groups and geometric structures

Discrete subgroups of Lie groups play a fundamental role in several areas of mathematics. Discrete subgroups of $SL(2, \mathbb{R})$ are well understood, and classified by the geometry of the corresponding hyperbolic surfaces. On the other hand, discrete subgroups of $SL(n, \mathbb{R})$ for $n > 2$, beyond lattices, remain quite mysterious. While lattices in this setting are rigid, there also exist more flexible "thinner" discrete subgroups, which may have large and interesting deformation spaces (some of them with topological and geometric analogies to the Teichmüller space of a surface, giving rise to so-called "higher Teichmüller theory"). We will survey recent progress in constructing and understanding such discrete subgroups from a geometric and dynamical viewpoint.

The talk will feature joint work with J. Danciger and F. Guéritaud.

Please note there will be a Special Tea: 3:30 – 4:30, 4th Floor Lounge