

Geometry, Groups and Dynamics/GEAR Seminar (held at the Illinois hub of GEAR)

Daniele Alessandrini (Heidelberg University)

will present three lectures entitled **Introduction to Spectral Networks**

Abstract: I will give an introduction to the theory of Spectral Networks, developed by Gaiotto, Moore and Neitzke during their research about supersymmetry. These objects have an independent interest for mathematicians, mostly in the theory of surfaces. They can be described as combinatorial objects on the surface, or, equivalently as some orbits associated to a conformal structure on the surface and a collection of holomorphic differentials. The main focus will be on how to use these objects to give coordinates on the moduli spaces of representations of surface groups. These coordinates generalise Fenchel-Nielsen coordinates and Fock-Goncharov coordinates in an especially intriguing way.

- **Lecture I, 11:00 am, Monday, December 8, 2014, 441 Altgeld Hall ([Video](#))**
- **Lecture II, 11:00 am, Wednesday, December 10, 2014, 441 Altgeld Hall ([Video](#))**
- **Lecture III, 1:00 pm, Thursday, December 11, 2014, 243 Altgeld Hall ([Video](#))**