

# Topology, Arithmetic, & Dynamics Seminar

Higgs bundles at the Fuchsian locus

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I will present results on the first order behavior of certain geometric quantities at the Fuchsian locus of the Hitchin component. These may be regarded as "higher" analogs of classical formulas in Teichmueller theory. The plan of the talk is the following: in the first part, I will give a precise description in terms of holomorphic differentials of the tangent spaces at the Fuchsian locus to the moduli of Higgs bundles, Opers, and the Hitchin component. This will lead to a generalization of Ahlfors' result on the vanishing of the first order variation of the harmonic metric for certain good variations. In the second part, I will explain the relationship between Poincare series and the Hamiltonian vector fields associated to holonomy of Hitchin representations about simple closed curves.

Date: **Friday, December 18, 2015**

Time: **2:30-3:30pm**

Place: **4106 Exploratory Hall**

For special accommodations, please contact Sean Lawton via email at [slawton3@gmu.edu](mailto:slawton3@gmu.edu).