The large-scale geometry of the Hitchin moduli space

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Smith 120

The moduli space of solutions to the Hitchin equations is a rather fundamental object which appears in a number of guises in several different fields. I will introduce this space and give a summary of some important features. One of these is that it carries a natural Weil-Petersson type metric. Conjectures from physics give some indication of the structure of this metric near infinity. I will describe a set of inter-related projects which are now very close to fully vindicating these conjectures.

Rafe Mazzeo is a professor at Stanford University, and is the director of the Park City Mathematics Institute. His research interests include Linear and Nonlinear PDE. He was a Sloan Fellow and an NSF Young Investigator awardee.

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