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The Hitchin fibration in the Langlands program

Abstract:
In the mid 1980's, Nigel Hitchin introduced a beautiful geometric fibration in connection with his works on the autoduals Yang-Mills equations. It is associated to a Riemann surface (or an algebraic curve) and a reductive algebraic group G. If G=GL(n), it may be viewed as a global analog of the characteristic polynomial map.
The Hitchin fibration occurs in several ways in the Langlands program. In particular it is the main tool of the proof of the Fundamental Lemma by Ngô Bao Châu and it plays an important role in the geometric Langlands program initiated by Drinfeld and developed by Arinkin, Gaitgory, …
In the talk, I will introduce the Hitchin fibration and explain how it is relate to the Langlands program.