Higgs moduli spaces and character varieties

The celebrated Hausel-Letellier-Rodriguez Villegas conjectures provide unexpected links between different areas of algebraic and arithmetic geometry, such as the theory of Hilbert schemes of points, the Pandharipande-Thomas invariants for local curves, the cohomological Hall algebras à la Kontsevich-Soibelman and à la Schiffmann-Vasserot, gauge and string theories, etc.

The aim of this school is to provide an advanced introduction to this theory and to its most recent developments. The lectures will be completed by 4 talks by young brilliant mathematicians who are working at the forefront of this theory. Moreover, there will be space for some contributed talks by the younger participants.