

An introduction to higher rank Teichmüller theory (1/4)

lundi 7 juillet 2025 14:30 (1 heure)

The minicourse will focus on discrete subgroups of semisimple Lie groups G isomorphic to fundamental groups Γ of surfaces. These typically admit a rich deformation theory and can be parametrized as subset of the character variety $X = \text{Hom}(\Gamma, G)/G$. I will first discuss the Anosov condition, describing open subsets of X and then discuss higher rank Teichmüller theories: connected components of X only consisting of discrete and faithful representations. We proved with Beyrer-Guichard-Labourie-Wienhard that for classical groups G these are explained by Θ -positivity, a Lie algebraic framework introduced by Guichard-Wienhard. After introducing this concept I will explain how closedness in the character variety is ultimately due to a collar lemma, generalizing a key geometric feature of hyperbolic surfaces.

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