

On the stability of the Möbius group of the n-sphere

vendredi 5 avril 2024 11:00 (45 minutes)

A classical theorem of Liouville asserts that if a map from the sphere to itself is conformal, then it must be a Möbius map: a composition of dilations, rotations, inversions and translations (identifying sphere and euclidean space via stereographic projection). There is a long history of studying stability of this rigidity statement: if a map is nearly conformal, must it be close to a Möbius transform? One can also ask what happens if the image of the map is only nearly spherical. I will present sharp stability estimates obtained recently with André Guerra and Kostantinos Zemas.

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