Rigidity of hyperbolic polyhedral 3-manifolds

葛化彬 中国人民大学

We show the rigidity of hyperbolic polyhedral metrics on 3-manifolds. By definition, such manifolds are isometric gluing of decorated hyperbolic tetrahedra. Here a decorated hyperbolic tetrahedron is a hyperbolic tetrahedron with only ideal or hyper-ideal vertices, and furthermore, with a horosphere called decoration centered at each ideal vertex. We show that the above hyperbolic polyhedral metric is determined up to isometry and change of decorations by its curvature. This work generalized Luo-Yang's rigidity results [2018, J. Topol.] to the most general situation. This is joint work with Ke Feng and Chunlei Liu.

报告人简介：北京大学数学科学学院博士、北京国际数学研究中心博士后，现为中国人民大学数学学院教授，博士生导师。主要研究方向为几何拓扑，推广了柯西刚性定理和 Thurston 圆堆积理论，部分解决 Thurston 的“几何理想剖分”猜想、完全解决 Cheeger-Tian、林芳华的正则性猜想，相关论文分别发表在 Geom. Topol., Geom. Funct. Anal., Amer. J. Math., Adv. Math.等著名数学期刊。