

# Properties of Minimal surfaces in symmetric space for Hitchin representations

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In this talk, we investigate the properties of immersed minimal surfaces inside symmetric space associated to a subloci of Hitchin representations. First, We showed that the pullback metric of minimal surface strictly dominates a constant multiple of the hyperbolic metric in the same conformal class. This implies the area rigidity theorem, generalizing the one proven by Labourie for Hitchin representations for rank 2 group. Secondly, we showed that the immersed minimal surface is never tangential to any flat inside the symmetric space. As a direct corollary, the pullback metric of minimal surface is always strictly negatively curved. This is joint work with Song Dai.