

On Hypersurfaces in Hyperbolic Space

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Abstract

In this talk I will report our recent works on convex hypersurfaces in hyperbolic space. To study hypersurfaces in hyperbolic space analytically, one needs to find ways to parametrize it, preferably globally. We consider two parametrizations: vertical graph and Gauss map. They both have advantages and disadvantages. To establish a global parametrization, one key is to understand the interrelation of convexity and embeddedness. In this talk I will report some of our recent works on global and asymptotic properties of hypersurfaces with nonnegative sectional curvature or Ricci curvature in hyperbolic space.