

# Rubinstein-Scharlemann graphic of 3-manifolds and Hempel distance

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**Abstract.** Graphic is introduced by Rubinstein-Scharlemann for studying strongly irreducible Heegaard splittings, and Kobayashi-Saeki showed that graphics can be regarded as the images of the discriminant sets of stable maps from the 3-manifolds into the plane. In this talk, we give an introductory talk for the graphic, and also give a talk on an application of it, that is, we give a method to estimate Hempel distances.