



TRINITY UNIVERSITY

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Surface Subgroups of Right-angled Artin Groups

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Abstract: An intriguing question of Gromov asks whether every one-ended hyperbolic group contains the fundamental group of a closed hyperbolic surface. We study embedding of (closed hyperbolic) surface groups into finitely presented groups. In particular, any map from a surface group to a right-angled Artin group can be realized geometrically by considering suitable cell structures for natural Eilenberg-Maclane spaces. Moreover, these cell structures will carry metrics of non-positive curvature in the sense of Gromov. By investigating these cell structures, we describe certain necessary conditions for a right-angled Artin group to contain surface groups, as well as some sufficient conditions.

MMS 130

2:10–3:00pm

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