

Holomorphic maps between configuration spaces of Riemann surfaces

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There is an abundance of smooth maps between configuration spaces of points on surfaces, e.g. the “add a point at infinity” map, or a vast family of “cabling constructions” which convert individual points into groups. When the underlying surface is endowed with a holomorphic structure, this induces such a structure on the configuration space, and one can ask which homotopy classes of smooth maps admit holomorphic representatives. We will survey our work on this problem, touching on the connections it has to Teichmüller theory and some classical problems in algebraic geometry. Joint work with Lei Chen.

(joint work with Lei Chen)