Title: Conformal Welding

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Abstract: Given a region in the plane surrounded by a simple curve, using Riemann's mapping theorem from complex variables, there is an associated homeomorphism of the circle with a factorization similar to the LDU factorization for matrices. There are many catchy names for these things. The factorization is referred to as a conformal welding. In an application to vision, the homeomorphism is referred to as the fingerprint of the shape, and so on. Most questions in this venerable area tend to be analytic or probabilistic. After presenting the basics, I will mention some recent progress which is more algebraic.