Purely topological construction of the Caratheodory's prime end theory

Hugo Bello Gutiérrez

Universidad Complutense de Madrid

The theory of prime ends develops a way to compactify an open simply connected set in order to transform it into a closed disk. It is a beautiful theory and so useful to study dynamic problems. It arises in the complex analysis, specifically in the Riemann's conformal representation theorem, but it can be completely described with the use of topological techniques.