ICM 1998, Berlin, Aug. 18–27

Abstracts of Short Communications and Posters

Section:

8. Analysis

1991 MS Classification: 30C85, 31A15
Duren, Peter, University of Michigan
Hyperbolic Capacity and its Distortion under Conformal Mapping
In 1947, M. Tsuji gave a transfinite-diameter definition of hyperbolic capacity and showed its equivalence with a least-energy formulation. We give an equivalent definition in terms of extremal length. We also define hyperbolic Robin capacity by extremal length, and give a least-energy description. Using a variational method, we show that hyperbolic Robin capacity is the minimum of the hyperbolic capacity of the image of a given subset of the boundary under admissible conformal mappings. (Joint work with John Pfaltzgraff.)