

Conformal maps: Computability and Complexity

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I will give an overview of the recent research on the computational properties of univalent maps. I will discuss the computability and complexity of computing a conformal map onto a given domain, both for the interior and boundary points. I will also talk about computability of harmonic measure and possible generalizations to general, not necessarily simply connected planar domains.

Based on joint projects with M. Braverman, C. Rojas, and M. Yampolsky