RAINWATER SEMINAR

Conformal laminations and trees

Steffen Rohde, UW

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C-401

1:30-3:30

Conformal maps f of the unit disc $\mathbb{D}$ have a continuous extension to the circle if (and only if) the boundary of the image $f(\mathbb{D})$ is locally connected. This extension induces an equivalence relation on the circle by declaring that $x \sim y$ if $f(x) = f(y)$. Which equivalence relations on the circle arise in this way?

In the first part of my talk, I will discuss the background and history of this problem and give motivation from complex dynamics, computational algebra and probability theory. In the second part, I will present a characterization under the additional assumption that $f(\mathbb{D})$ is a John domain whose complement has empty interior.