

Trends in Onedimensional Dynamics

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Title: Quasisymmetric rigidity of multicritical circle maps.

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Abstract: We discuss the rigidity problem for multicritical circle maps, that is, smooth homeomorphisms of the circle having a finite number of critical points, all of them being of the non-flat type.

It is known from Yoccoz, that any two multicritical circle maps with the same irrational rotation number are topologically conjugated. The question then arises of the smoothness of this conjugacy. It has been completely answered in the case of only one critical point. However, we cannot say much about it in the multicritical case.

In this work, we present a preliminary step in this direction proving that the conjugacy that sends critical points to critical points is quasi-symmetric. Moreover, its quasi-symmetric distortion is universally bounded.