

Horn maps of semi-parabolic Hénon maps

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We prove that horn maps associated to quadratic semi-parabolic fixed points of Hénon maps, first introduced by Bedford, Smillie, and Ueda, satisfy a weak form of the Ahlfors island property. As a consequence, two natural definitions of their Julia set (the non-normality locus of the family of iterates and the closure of the set of the repelling periodic points) coincide. As another consequence, we also prove that there exist small perturbations of semi-parabolic Hénon maps for which the Hausdorff dimension of the forward Julia set J_+ is arbitrarily close to 4. This is a joint work with M. Astorg.

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