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Algebraic geometry

Corrigendum to: "A density result for real hyperelliptic curves" [C. R. Acad. Sci. Paris, Ser. I 354 (12) (2016) 1219–1224]

Corrigendum à : « Un résultat de densité pour des courbes réelles hyperelliptiques » [C. R. Acad. Sci. Paris, Ser. I 354 (12) (2016) 1219–1224]

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Since publishing [2], I have learned that the main result (Theorem 2.1) of that paper has appeared multiple times in the literature, with different proofs.

The result is Theorem 5 of [1]; additionally, Bogatyrev's paper gives a very explicit geometric description of the moduli space of real hyperelliptic curves and the solutions to Abel's equations.

The result is also proved as Theorem 2.1 of [4], with an application to bounding derivatives of polynomials.

Bogatyrev and Totik give independent proofs that the Jacobian of Lemma 4.1 of [2] is surjective at every point of the moduli space. This is stronger than the result of [2], where it is merely shown that the Jacobian is generically surjective.

Additionally, the result appears as the main result of [3], in the following form: any finite union E of real disjoint intervals can be approximated by a set of the form $E' = \mathcal{T}^{-1}([-1, 1])$, with $\mathcal{T}$ a polynomial. The set E' is obtained constructively by continuous deformation of a minimal polynomial.

I would like to thank Andrey Bogatyrev for bringing these results to my attention.

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