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**Spaces of algebraic and continuous maps between real algebraic varieties.** (English)

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From authors' abstract: "We consider the inclusion of the space of algebraic (regular) maps between real algebraic varieties in the space of all continuous maps. For a certain class of real algebraic varieties, which include real projective spaces, it is well known that the space of real algebraic maps is a dense subset of the space of all continuous maps. Our first result shows that, for this class of varieties, the inclusion is also a homotopy equivalence. After proving this, we restrict the class of varieties to real projective spaces. In this case, the space of algebraic maps has a 'minimum degree' filtration by finite-dimensional subspaces and it is natural to expect that the homotopy types of the terms of the filtration approximate closer and closer the homotopy type of the space of continuous mappings as the degree increases. We prove this and compute the lower bounds of this approximation of these spaces."

Reviewer: [Gregory Arone \(Charlottesville\)](#)

**MSC:**

[14P05](#) Real algebraic sets

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