

Mathematical Colloquia

Monday, 25 September 2017

17:15 h, Lecture Room B 78

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Stably equivalent polynomials and the complement problem

Abstract:

The so-called complement problem is one of the eight "challenging problems on affine n -space" posed by Hanspeter Kraft in his Bourbaki seminar talk (1995). It asks the following: Suppose that two irreducible algebraic hypersurfaces of the complex affine n -space have isomorphic complements. Does this imply that they are isomorphic?

In this talk, we will present counterexamples in every ambient dimension n at least 3. Our construction uses polynomials that are stably equivalent but not equivalent.