

Название публикации:

Amoeba-Shaped Polyhedral Complex of an Algebraic Hypersurface

Авторы:

Nisse, M.a, Sadykov, T.b

- a. School of Mathematics, Korea Institute for Advanced Study, 87 Hoegiro Dongdaemun-gu, Seoul, South Korea
- b. Department of Mathematics and Computer Science, Plekhanov Russian University, Moscow, Russian Federation

Сведения об издании:

Journal of Geometric Analysis

4 June 2018, Pages 1-13

Amoeba-Shaped

Аннотация:

Given a complex algebraic hypersurface H , we introduce a subset of the Newton polytope of the defining polynomial for H which is a polyhedral complex and enjoys the key topological and combinatorial properties of the amoeba of H for a large class of hypersurfaces. We provide an explicit formula for this polyhedral complex in the case when the spine of the amoeba is dual to a triangulation of the Newton polytope of the defining polynomial. In particular, this yields a description of the polyhedral complex when the hypersurface is optimal (Forsberg et al. in Adv Math 151:45–70, 2000). We conjecture that a polyhedral complex with these properties exists in general.

Ключевые слова:

Amoebas, Newton polytope, Polyhedral complex, Tropical geometry