

CUBIC AND QUARTIC CYCLIC HOMOGENEOUS INEQUALITIES OF THREE VARIABLES

TETSUYA ANDO

Abstract. We determine the geometric structures of the families of three variables cubic and quartic cyclic homogeneous inequalities of certain classes. These structures are determined by studying some real algebraic surfaces.

Mathematics subject classification (2010): Primary 26D05.

Keywords and phrases: Homogeneous inequality.

REFERENCES

- [1] T. ANDO, *Some homogeneous cyclic inequalities of three variables of degree three and four*, Aust. J. Math. Anal. Appl. **7**, 2 (2010), Art. 12.
- [2] V. CÎRTOAJE, *Algebraic Inequalities — Old and New Methods*, GIL Publishing House (Romania), 2006.
- [3] V. CIRTOAJE, *On the Cyclic Homogeneous Polynomial Inequalities of Degree Four*, J. Inequal. Pure and Appl. Math. **10**, 3 (2009), Art. 67.
- [4] V. CIRTOAJE, *Necessary and sufficient conditions for symmetric homogeneous polynomial inequalities*, Preprint.
- [5] R. MUIRHEAD, *Some methods applicable to identities and inequalities of symmetric algebraic functions of n letters*, Proc. Edinb. Math. Soc. **21** (1902), 144–157.