1037-57-322 **Jose Ignacio Cogolludo** (jicogo@unizar.es), Universidad de Zaragoza, Departamento de Matematicas, Zaragoza, Spain, and **Daniel Matei*** (daniel.matei@imar.ro), Institute of Mathematics "Simion Stoilow", P.O. Box 1-764, RO-014700 Bucharest, Romania. *Cohomology algebras of arrangements of plane curves.*

Cohomology rings of complements to hyperplane arrangements are rather well understood. Classical results of Brieskorn, and Orlik and Solomon, provide explicit presentations by generators and relators, and realizations of those by logarithmic differential forms. As corollaries, it follows that the cohomology ring depends on the combinatorics of the arrangement and that the complement is a formal space. In our paper, we attempt to achieve similar goals for the cohomology of complements to arrangements of hypersurfaces. We succeed in that respect in the case of arrangements of plane curves. We find combinatorial presentations of the cohomology algebra of the complement which are realizable at the level differential forms. As a consequence, we deduce the formality of the complement to a plane curve. (Received February 05, 2008)