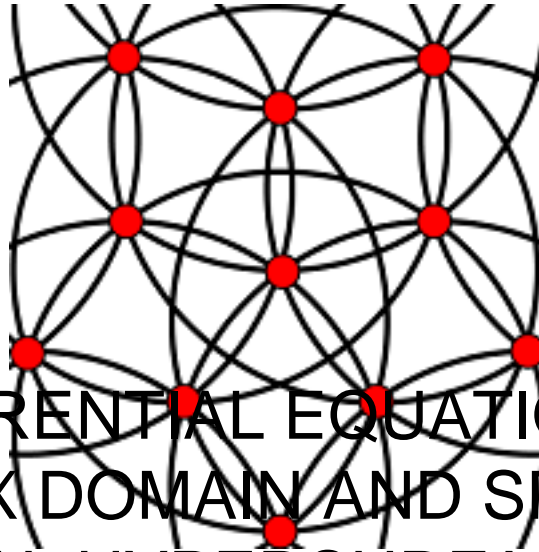


CSASC 2013



Contribution ID : 23

DIFFERENTIAL EQUATIONS IN COMPLEX DOMAIN AND SPHERICAL REAL HYPERSURFACES

Content :

We use a remarkable connection between real hypersurfaces in complex space and second-order differential equations in complex domains for the study of nonminimal real hypersurfaces in complex affine 2-space. We find necessary and sufficient conditions for a local CR-mapping at a Levi nondegenerate point into a sphere (if the latter exists) to extend holomorphically to the complex locus. As an application, we prove the bound $\dim \text{aut}(M,0) \leq 5$ for the infinitesimal automorphism algebra of an arbitrary nonminimal at the origin Levi-nonflat hypersurface in \mathbb{C}^2 . This work is joint with R.Shafikov.

Primary authors : Dr. KOSSOVSKIY, Ilya (University of Vienna)

Co-authors :

Presenter : Dr. KOSSOVSKIY, Ilya (University of Vienna)

Session classification : --not yet classified--

Track classification : General Session

Type : Oral presentation