

1116-32-2220 **Ilya Kossovskiy*** (ilya.kossovskiy@univie.ac.at). *Sphericity of a Real Hypersurface via Projective Geometry.*

Identifying the 3-sphere among real hypersurfaces in 2-dimensional complex space is a problem which attracted a lot of attention of experts in CR-geometry since the work of Cartan and Chern-Moser. It is well known that the sphericity of a real hypersurface amounts to vanishing of its special - CR - curvature. However, the latter is extremely hard to compute explicitly, and even more difficult to identify geometrically. In connection with that, we have recently discovered an amusing (unknown) fact on a very simple geometric identification of sphericity. It employs the Segre family of a real hypersurface, as introduced by Webster. We prove that a real-analytic hypersurface in 2-dimensional complex space is spherical if and only if its Segre family satisfies one of the configuration theorems of Projective Geometry: the Desargues theorem. Such a characterizations is important in that it does not presume any conditions on a real hypersurface (e.g. existence of additional symmetries), neither it requires any special choice of coordinates to characterize the sphericity. In this talk, we will show an elegant proof of the above described Segre-Desargues theorem. (Received September 22, 2015)