VIRTUAL EAST-WEST SCV SEMINAR

March 22, 2022

Martin KLIMES
University of Zagreb

Analytic classification of reversible parabolic diffeomorphisms of $(\mathbb{C}^2, 0)$ and of holomorphically flat exceptional hyperbolic CR-singularities

---

A germ of analytic diffeomorphism of $(\mathbb{C}^2, 0)$ is reversible if it is conjugated to its inverse by an analytic involution. It is parabolic if some of its iteration is tangent to the identity. The talk is about analytic classification of such diffeomorphisms with respect to conjugation under an additional condition on existence of an analytic first integral of Morse type. The obtained description is a generalization to a higher dimension of the Birkhoff, Ecalle and Voronin modulus of parabolic diffeomorphisms of $(\mathbb{C}, 0)$. A particular motivation comes from a problem of Moser and Webster of normal forms of certain CR-singularities of real-analytic surfaces in $\mathbb{C}^2$. We address this problem for holomorphically flat surfaces (those contained in a real hyperplane) in the, so called, exceptional hyperbolic case. The talk is based on a joint work with Laurent Stolovitch.
