

Complex geodesics and complex Monge-Ampère equations with boundary singularity

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We will talk about the existence and uniqueness of complex geodesics with prescribed boundary value and direction in strongly linearly convex domains with \mathcal{C}^3 -boundary, and the associated boundary spherical representation of such domains. Some applications to the existence and regularity of solutions to a homogeneous complex Monge-Ampère equation with prescribed boundary singularity will also be discussed. This is based on a recent joint work with Professor Xiaojun Huang, and a preprint of my own.