Abstract

This is a joint work with Takeshi Sasaki. In this talk I shall present a fundamental theory of curves in the affine plane and the affine space equipped with the general-affine groups $GA(2) = GL(2, \mathbf{R}) \ltimes \mathbf{R}^2$ and $GA(3) = GL(3, \mathbf{R}) \ltimes \mathbf{R}^3$, respectively. In particular I present the extremal problem of the general-affine length functional and derive a variational formula.