1067-49-1522   **Ryo Takei*** (`rrtakei@ucla.edu`), 520 Portola Plaza, Math Sciences Building 6363, Los Angeles, CA 90095. *Visibility based pursuit-evasion and related control problems.*

I present a novel algorithm to solve the visibility based pursuit-evasion problem, also known as the surveillance-evasion problem. The method uses the level-set function representation of the visibility from a vantage point in a domain containing arbitrary obstacles. I also discuss spin-off control problems, each of independent interest computational methods and robotics, that arises in generalizations of the aforementioned problem/algorithm. (Received September 21, 2010)