1081-93-28 **Aleksandra Gruszka**, Louisiana State University, Department of Mathematics, Baton Rouge, LA 70803-4918, **Michael Malisoff*** (malisoff@lsu.edu), Louisiana State University, Department of Mathematics, Baton Rouge, LA 70803-4918, and **Frederic Mazenc**, Projet INRIA DISCO, CNRS-Supelec, 3 rue Joliot Curie, 91192 Gif-sur-Yvette, France. *Tracking Controllers and Robustness Analysis for UAVs.*

We study a kinematic model that is suitable for control design for high level formation flight of unmanned aerial vehicles. We design controllers that give robust global tracking for a wide class of reference trajectories, in the sense of input-to-state stability with respect to additive uncertainty on the controllers, while satisfying amplitude and rate constraints. We illustrate our work in simulations. (Received December 24, 2011)