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**Aleksandra Gruszka\*** (`olka@math.lsu.edu`), Department of Mathematics, Louisiana State University, Baton Rouge, LA 70803-4918, **Michael Malisoff** (`malisoff@lsu.edu`), Louisiana State University, and **Frederic Mazenc** (`Frederic.MAZENC@lss.supelec.fr`), Team INRIA DISCO, CNRS-Supelec. *Tracking and Robustness Analysis for UAVs with Bounded Feedbacks.*

We discuss tracking for unmanned air vehicles (UAVs) with input constraints. We design controllers that give global tracking control. Two key features are our controller bounds and our proof that the tracking is input-to-state stable with respect to additive actuator errors on the velocity controller, under a restriction on the perturbation that respects airspeed constraints. Our main assumption on the reference trajectory is a nondegeneracy condition on a weighted sum of the reference velocity and reference acceleration. We illustrate our work in simulations. (Received September 23, 2011)