1053-14-349 **Anthony Varilly-Alvarado*** (`varilly@rice.edu`), Math Department – MS 136, Rice University, 6100 S. Main St., Houston, TX 77005. *Progress on the arithmetic of rational surfaces.*

I will report on some results concerning the arithmetic of del Pezzo surfaces of degree 1 over number fields. In particular, I will discuss Zariski density of rational points and the failure of weak approximation. I will also convey how my results help our overall understanding of basic qualitative arithmetic phenomena on rational surfaces. (Received September 08, 2009)