

1086-N1-1378 **Spencer Bagley*** (sbagley@ucsd.edu) and **Jeff Rabin**. *Computational thinking in linear algebra*.

In this work, we examine students' ways of thinking when presented with a novel linear algebra problem. We have hypothesized that in order to succeed in linear algebra, students must employ and coordinate three ways of thinking, which we call computational, abstract, and geometric. This study examines the solution strategies students employed to solve the problem, the variety of productive and reflective ways in which the computational way of thinking is used by honors undergraduate linear algebra students, and the ways in which they coordinate the computational mode of thinking with other modes. (Received September 21, 2012)