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**Alessandra Pantano\*** (apantano@uci.edu), Department of Mathematics, University of California, Irvine, Irvine, CA 92697, and **Daniel R Bergman** (drbergma@uci.edu). *Increasing students' conceptual understanding of linear algebra through active discussion sessions*. Preliminary report.

After their first linear algebra course, many students master algorithms but lack conceptual understanding of the subject. As a result, they enter advanced classes knowing how to compute Gaussian elimination, determinants, eigenvalues and inverses of matrices, but with little understanding of the notions of basis vectors, linear independence and subspaces. This is not surprising, as these concepts require students to transition from computational algorithms to more sophisticated ways of reasoning. Inquiry-oriented teaching can ease this transition.

While active learning is positively associated with student achievement, most of the teaching at large R1 institutions remains in traditional lecture style. Providing TAs with (pre-tested) quality worksheets is an effective and low-stake approach to broaden the use of active learning in math classes.

In this talk, we present curricula for discussion sessions that give students a chance to practice the basic algorithms required in lower division linear algebra, but also to reflect upon the process and discuss what they did and why they did it. By asking students to reflect upon and communicate the relevant concepts in their solutions, we seek to strengthen their ability to understand and communicate mathematical concepts. (Received September 16, 2019)