

Friday, May 7, 2021, 4:15pm-5:15pm

Zoom Meeting ID: 941 6389 5998

Password (if prompted): 371814

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## Self-Paced, Instructor Assisted Approach to Teaching Linear Algebra

**Abstract.** We present a self-paced, instructor-assisted approach to teaching Linear Algebra, as an alternative to traditional classroom instruction. In the self-paced model students learn by doing, at their own pace, instead of listening to an instructor and taking notes. The instructor is there to motivate them, and to provide guidance and help on an individual basis. The fact that every student can learn each concept at his/her own pace, and instantly validate his/her understanding before moving on to the next concept, makes a huge positive difference in their learning process. Also the fact that the instructor is available to work with students during class time makes a huge positive difference for them. This approach has been used at UNR for the last four semesters with consistently superior results. It seems that this is how students want to learn. In this talk I will describe how the self-paced course works, show the real-time student progress data which is available to the instructor, as well as anonymous student responses. Finally I will mention some lessons learned, and what improvements were implemented to improve the course over time.

**Biographical Sketch.** Dr. Pavel Solin is a full professor of Computational and Applied Mathematics at the University of Nevada, Reno (UNR). He completed his M.S. and Ph.D. in Mathematical and Computer Modeling at the Charles University in Prague, Czech Republic. Then he did multiple postdocs including the Johannes-Kepler University in Austria, UT Austin, and Rice University. His research interest is in higher-order numerical methods for multiphysics coupled problems, and more recently also in self-paced instructor-assisted learning methods. He is the author of six monographs and textbooks, and over a 100 papers in peer-reviewed international journals.