



**Department of Engineering
Seminar Program
Wednesday, October 1, 2014
Shanahan Teaching and Learning Center
Lecture Hall 1430, 4:10pm**

“Transforming a Topology”

**Philip Vegdahl '04,
Software Engineer at Knewton**

Summary:

Knewton is an educational technology company. We provide a software platform for adaptive education, which our partners use to build cutting edge digital education products that adapt to the specific needs of each individual student.

Our platform is built as a service oriented architecture. One of our primary goals is a reliable platform with little or no downtime for our customers. To achieve that goal, it is necessary to make system updates while live. This is straightforward to do when we are just upgrading an individual service. Unfortunately, not all updates are that simple. Sometimes we need to add or remove services, split one service into multiple services, or even change the message pathway through our system. This changes the underlying topology of our platform. These changes can range from simple to very complex to implement.

This talk will give a brief overview of Knewton's work in education, and then discuss a recent topology change. Specifically, it will discuss the motivation, technologies involved, the challenges, and the eventual approach we used to change our topology without any system downtime.

Bio:

Philip Vegdahl graduated from Harvey Mudd College in 2004 with a degree in Engineering, but has spent the decade since then pretending that he majored in CS. He is a Software Engineer at Knewton, a world leader in adaptive education technology. He has a passion for leveraging technology to create opportunities and to improve lives worldwide. Philip lives in New York City -- the greatest city in the world, except when it is driving him crazy.

After the seminar there will be an informal dinner and conversation with the speaker in the Mitchell Room at Hoch-Shanahan Dining Hall. If you are not on the meal plan, we will have a signup sheet. If you are interested in attending, please RSVP with Sydney Torrey at storrey@hmc.edu.