

# Spine Biomechanics and Perspectives on Surgeon-Driven Medical Research

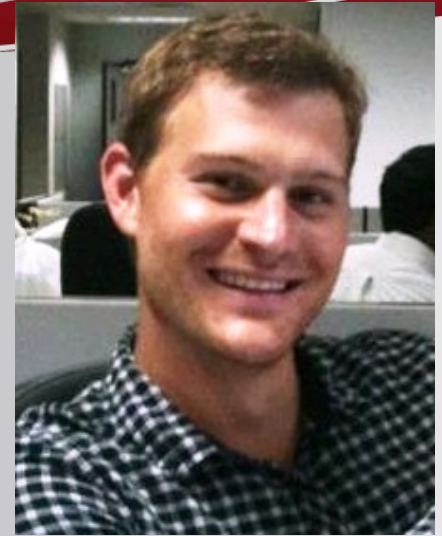
By Brandon Bucklen  
Globus Medical Inc.

## ABSTRACT

Research within the medical device industry differs from academically-driven research in several ways. This presentation will focus on some of these key differences, as well as touch on some basic concepts within spine biomechanics. The goal of this talk will be to provide a basic synopsis of the author's experience within the spine industry, as well as specific examples of research projects that have been conducted. A typical spine industry product portfolio will be introduced and discussed with relevance toward biomechanical issues. Additional discussion will involve future translational research and non-academic factors affecting project scope including the effect of regulatory control and current state of the spine market.

## BIOGRAPHY

Dr. Bucklen is the Group Manager of Biomechanics at Globus Medical, Inc., located in Valley Forge, PA. He received his doctoral degree from Rice University, where he studied tissue engineering of bone and worked on topological optimization of bone scaffolds according to stress-based surface criteria. Previous to that, he received his Bachelor's degree in mechanical engineering from the Georgia Institute of Technology. Dr. Bucklen joined Globus Medical in 2008 as biomechanical research engineer, and has since been promoted to a senior research engineer and group manager. In his current role, he manages a group of six full time research engineers, who work on a variety of research projects that come directly from surgeons and are of practical concern for them. His research focuses are spine biomechanics, the advancement of test methodologies, computer modeling, and novel device and diagnostic technologies.



## EVENT DETAILS

**DATE:**

Wednesday,  
September 26, 2012

**TIME:**

1:30 PM

**LOCATION:**

Carnegie, Room 315  
Stevens Institute of Technology

**ATTENDANCE:**

This event is open to Stevens' Faculty, Students, Staff, and Invited Guests