

## Distinguished Lectures

### Spring 2017



Colorado State University's Information Science and Technology Center (ISTeC) presents

#### Dr. Jacobo Bielak

Hamerschlag University Professor  
Department of Civil and Environmental Engineering  
Carnegie Mellon University

### ISTeC Distinguished Lecture

In conjunction with the Department of Electrical and Computer Engineering, Department of Civil and Environmental Engineering, and Department of Computer Science Seminar Series

#### ***"End-To-End Earthquake Simulation: An Example of Verification, Validation, Data Analysis and Multi Scale Modeling in Computational Science and Engineering"***

**Monday, April 17, 2017**

**Reception with refreshments: 10:30 a.m.**

**Lecture: 11:00 a.m.-12:00 noon**

**Morgan Library Event Hall**

#### Abstract

##### ***End-To-End Earthquake Simulation: An Example of Verification, Validation, Data Analysis and Multi Scale Modeling in Computational Science and Engineering***

This talk will illustrate the use of high performance computing for validation, verification, and data analysis in seismology and earthquake engineering applications. It will start with examples of verification and validation of large-scale computations of ground motion modeling based on both scenario and historical earthquakes. The resulting ground motion from these simulations will then be used as input to analyze the earthquake response of civil infrastructure in localized regions, using as examples models of an entire building inventory within an urban region.

#### Speaker Biography

Jacobo Bielak received his Civil Engineer's degree from the National University of Mexico (UNAM), MS from Rice University, and PhD from Caltech. He joined Carnegie Mellon University in 1978, where he is the Hamerschlag University Professor. His research is in the areas of earthquake engineering and engineering seismology and structural health monitoring. Recognition for his work includes the Gordon Bell Prize for Special Accomplishment Based on Innovation. He is a member of the National Academy of Engineering, a Distinguished Member of the American Society of Civil Engineers, and a Fellow of the U.S. National Association for Computational Mechanics. To arrange a meeting with the speaker, please contact Prof. Thomas Siller, 970-491-1472, Thomas.Siller@ColoState.EDU.

### Upcoming Distinguished Lectures

**April 24**

***"National Security and the Technology Tsunami: What is Swept Away?"***

**5:00-6:00 p.m.**



**Lory Student Center Theater**

**Dr. Richard Danzig**