

## UIMF SEMINAR

### *“Nanofabrication and Nano-characterization Tool: Advanced FIB-SEM ”*

**Soeren Eyhusen, PhD**

Carl Zeiss Microscopy, LLC

**Wednesday, February 8, 2017 1:00 p.m.  
Iowa Advanced Technology Center (IATL)  
Conference Room, 104**

**Abstract:**

Soeren Eyhusen has a background in materials science and ion beam physics. After receiving a PhD from Goettingen University, Germany, he joined Carl Zeiss NTS and started working as a developer for transmission and scanning electron microscopes, focusing on electron optics and system integration. In 2012, he moved to the United States where he has been working as a product marketing and business development manager for electron and ion beam microscopes for Carl Zeiss in Thornwood, New York.



Advanced FIB-SEM applications  
ZEISS Crossbeam 540



**Focused Ion beam (FIB) technology** has become indispensable in fundamental scientific studies and technological applications. One major driving force behind its popularity is that it offers both high-resolution imaging and flexible micromachining and nanofabrication in a single platform. Based on the proven and highly flexible GEMINI electron beam column, ZEISS Crossbeam 540 combines a high performance field emission SEM with a state of the art gallium ion beam column. This unique instrument enables new research in multidisciplinary areas of research, including life sciences, physical sciences, and materials engineering. In this presentation we will give an overview of the technology behind ZEISS Crossbeam as well as report on some of the exciting correlative applications that are now possible with a gallium ion beam, including nanofabrication and the acquisition of 3D datasets with voxel resolutions of down to 3nm.

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