

# 19TH ANNUAL MINNTS



## MINNESOTA TECHNICAL SYMPOSIUM WWW.MINNTS.ORG

**AMY SISSALA** SENIOR PRINT QUALITY  
ENGINEER, STRATASYS



### *Introduction to 3D Printing*

What is 3D printing? What is the technology inside the printer? What do people make? Amy Sissala's presentation will include an overview of 3D printing, focusing on fused deposition model (FDM) type printers and Stratasys technology. This presentation will outline the different technologies and show how current Stratasys customers are using 3D printing day to day.

**PROF. MICHAEL  
MCALPINE** ASSOCIATE PROFESSOR OF  
MECHANICAL ENGINEERING,  
UNIVERSITY OF MINNESOTA



### *3D Printing Functional Materials & Devices*

The ability to three-dimensionally interweave biological and functional materials could enable the creation of devices possessing unique and compelling geometries, properties, and functionalities. Indeed, interfacing active devices with biology in 3D could impact a variety of fields, including regenerative bioelectronics, smart prosthetics, biomedical devices, and human-machine interfaces. Biology, from the molecular scale of DNA and proteins, to the macroscopic scale of tissues and organs, is three-dimensional, often soft and stretchable, and temperature sensitive. This renders most biological platforms incompatible with the fabrication and materials processing methods that have been developed and optimized for functional electronics, which are typically planar, rigid and brittle. A number of strategies have been developed to overcome these dichotomies. Prof. McAlpine will explore the approach his lab is using and the potential next-generation 3D devices their platform will enable.

*Join us for a tour,  
networking, dinner and  
two outstanding talks!*

### **WHEN**

March 7, 2019  
4:30 – 9:00pm

### **WHERE**

Ecolab Schuman  
Campus ~ EcoCafe  
655 Lone Oak Drive  
Eagan, MN 55121  
Enter through  
Bldg. E.

### **COST**

\$30

### **RESERVATIONS**

Open through Sun.,  
March 3, 11:59pm.  
Visit [www.minnts.org](http://www.minnts.org)  
(No refunds for  
cancellations after  
March 3.)

### **TOURS**

Tours begin at  
4:30pm, last one  
departs at 5:15pm.

