



Image caption: ROBOTIC TIMBER SLICING. Ashen Cabin, HANNAH at Cornell RCL, 2019. Photo by Andy Chen

# ***ROBOTIC ROUTINES***

## **RESEARCH IN TIMBER FABRICATION**

SPRING 2021 ELECTIVE SEMINAR | ARCH 4605/6605  
FRIDAYS 9:05 AM - 11:00 AM | RAND HALL SHOP | IN PERSON (IP)  
INSTRUCTOR: **SASA ZIVKOVIC**

Architectural design and fabrication routines are changing at an ever accelerating rate. The proliferation of mass customization, digital fabrication, and computation protocols challenges traditional notions of design, making, and fabrication. New methods of construction enable novel or unfamiliar design exploration and can help foster the creation of a more sustainable and a less wasteful built environment. This course will introduce students to the tools, theories, and design routines of robotic fabrication in architecture, with a special focus on advancing wood and timber construction. Timber will be embraced as a sustainable building material with a long and rich global history. In a research based format, students will develop their own timber fabrication routines and protocols, culminating in the creation of a short technical research paper. Students will learn to create computational protocols for manufacturing, custom end effectors, and full-scale design prototypes. Experience with robotic fabrication or coding is not a prerequisite. However, the course requires problem-solving readiness and determination to learn new skills. Tutorials and workshops will be given to provide a technical introduction to the course topic. The class will take place in Rand Hall Shop (by the new ABB robots, of course!).