Abstract: Advancements in computational geometry have had wide influence in practical design fields. However, existing 3D modeling software often serves as a low-level implementer of instructions from users, which requires both expertise in modeling and experience in design. In my work, I have developed computational design tools to expand the possibilities for digital design of physically realizable products. I will describe my primary contributions in fabrication-oriented design and its applications to a variety of tasks. I’ll conclude by discussing how computational design tools can assist users in making design decisions.

Bio: Xiaoting Zhang is a postdoctoral researcher in Computer Science at Boston University. She received her Ph.D. degree in Mechanical Engineering and Automation from The Chinese University of Hong Kong. Her history also includes a stint as a researcher at Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences. The goal of her research is to develop computational design tools for customization. Her current research revolves around shape modeling and optimization for digital manufacturing.