

## Session 5 *(In preparation for Class 5, students are asked to view Lecture 5.)*

### Topics for Class 5

**Artistic origami design:** Jason Ku designs, other materials (dollars, cardboard, hydro, metal, polypropylene), tessellations, Tess, connected cranes, modular origami, business card cubes.

### Detailed Description of Class 5

This class covers even more examples of artistic origami design:

- Origami designs by Jason Ku (Lecture 5's guest lecturer)
- Different materials: dollar bills, cardboard, Hydro-Folding, sheet metal, and polypropylene (a type of plastic)
- Tessellations: folding in a repeated pattern
- Tess, software for designing certain tessellations
- Connected cranes, an old Japanese tradition of folding multiple cranes from a slit sheet of paper
- Modular origami: geometric forms from multiple repeated units
- Business card cube folding (hands on!)

### Topics for Lecture 5 *(Guest Lecture by Jason Ku)*

**Artistic origami design:** sampling of representational origami art; tree method and its use.

### Detailed Description of Lecture 5

This is a guest lecture by Jason Ku, president of OrigaMIT (the MIT origami club), PhD student in mechanical engineering, and prominent origami designer.

His lecture will be about his perspectives on artistic origami design. Lecture 4 outlined the tree method algorithm of origami design. Now we'll see how this method applies in real-world examples.

The first half of the lecture will introduce the artistic side of representational origami. In origami, as in many disciplines, familiarity with the canon of work that already exists can be quite useful in understanding avenues for future creative development. Thus we'll cover the works and styles of a sampling of the world's most renowned paper folders.

The second half of the lecture will focus on the actual design of representational origami art. We will briefly review tree theory, weigh the pros and cons of this design method, and emphasize the relationships between a tree, a circle/river packing, and the locus of possible hinge crease in a uniaxial base. Finally, we'll go through the process of designing an origami model with, then without, the help of TreeMaker.

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6.849 Geometric Folding Algorithms: Linkages, Origami, Polyhedra  
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