

Life After NILM

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Outline

- Early history of NILM (NALM, NIALM, ...)
- Continuity throughout my life
- Current Work
 - Sculpture
 - Educational Workshops
- Lessons Learned

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Early History of NILM

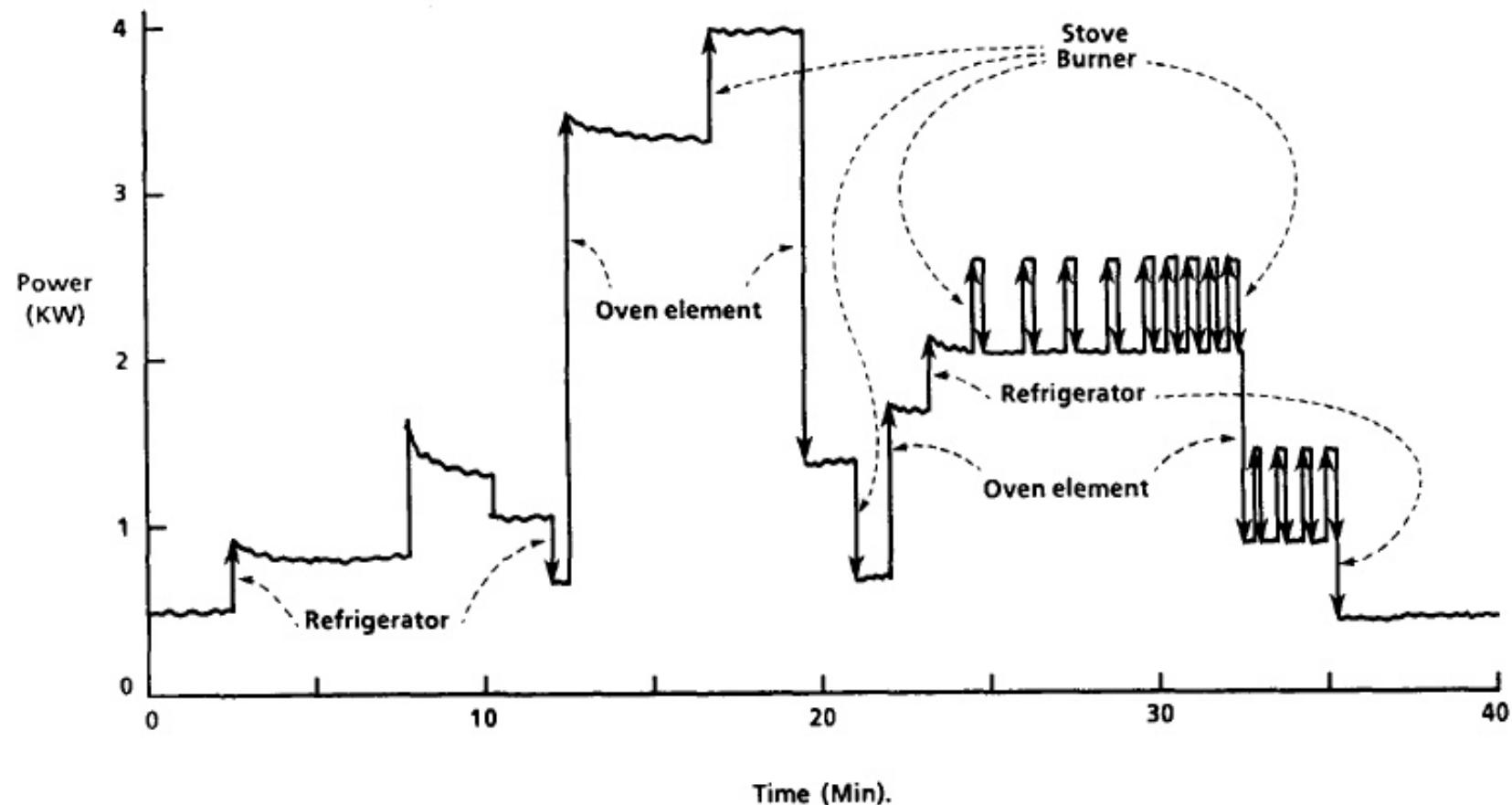


Fig. 2. Power versus time (total load) shows step changes due to individual appliance events.

Early History of NILM

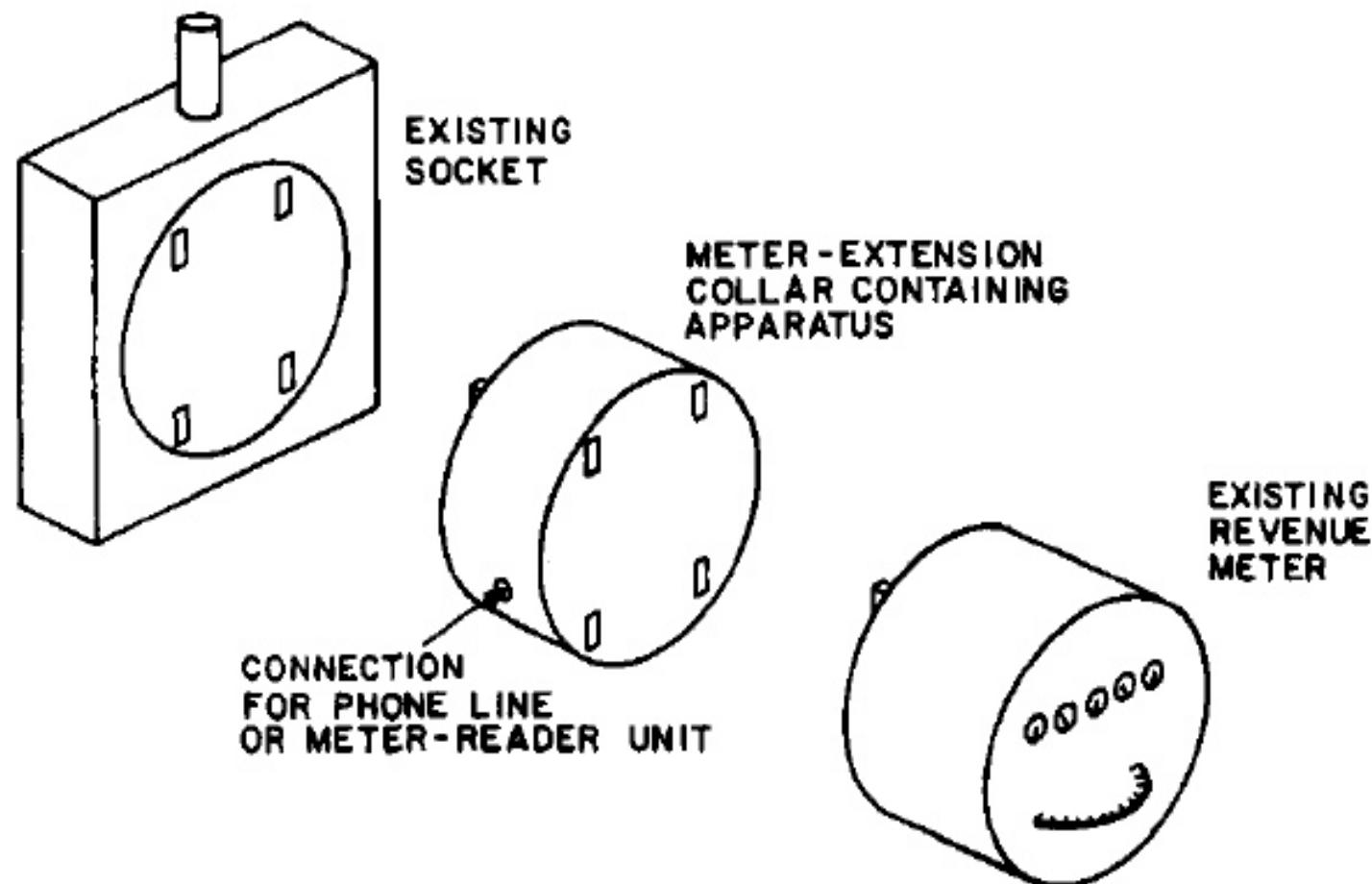
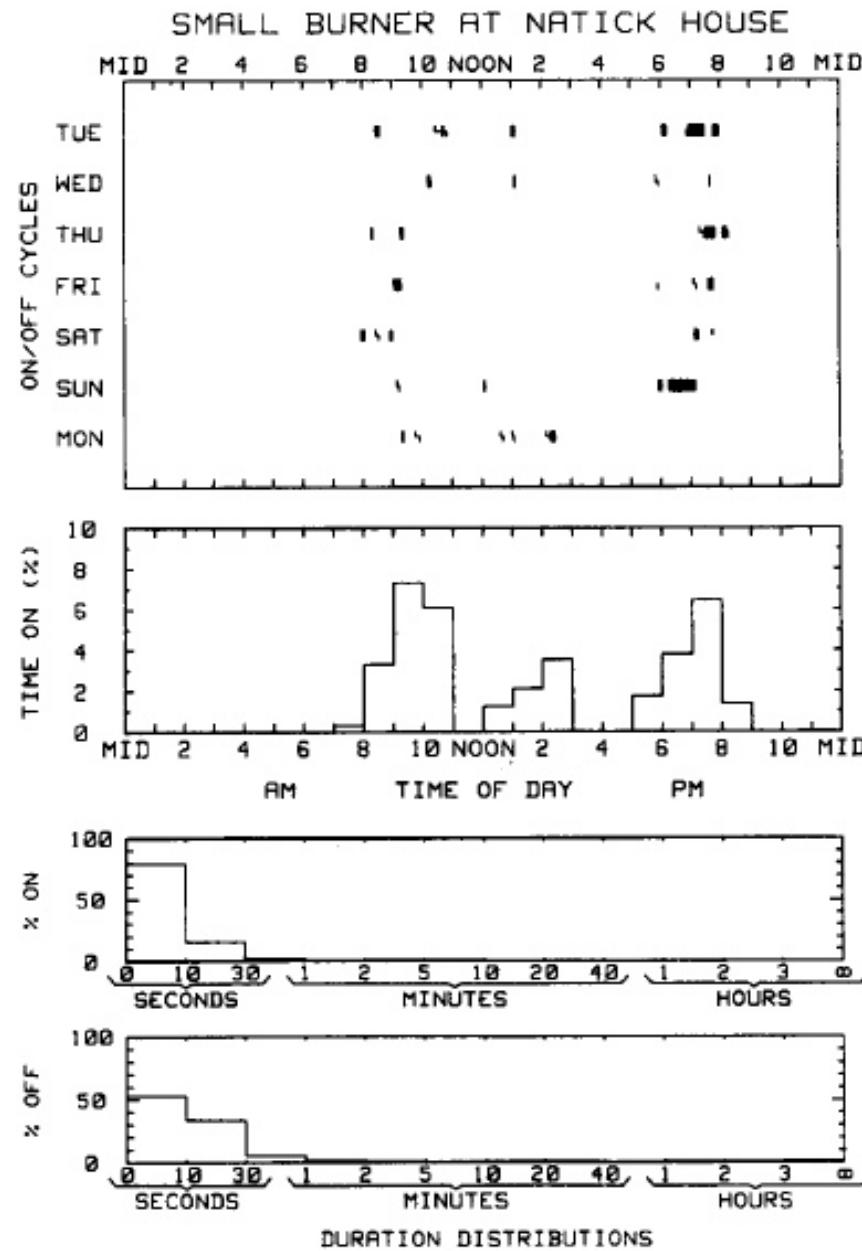
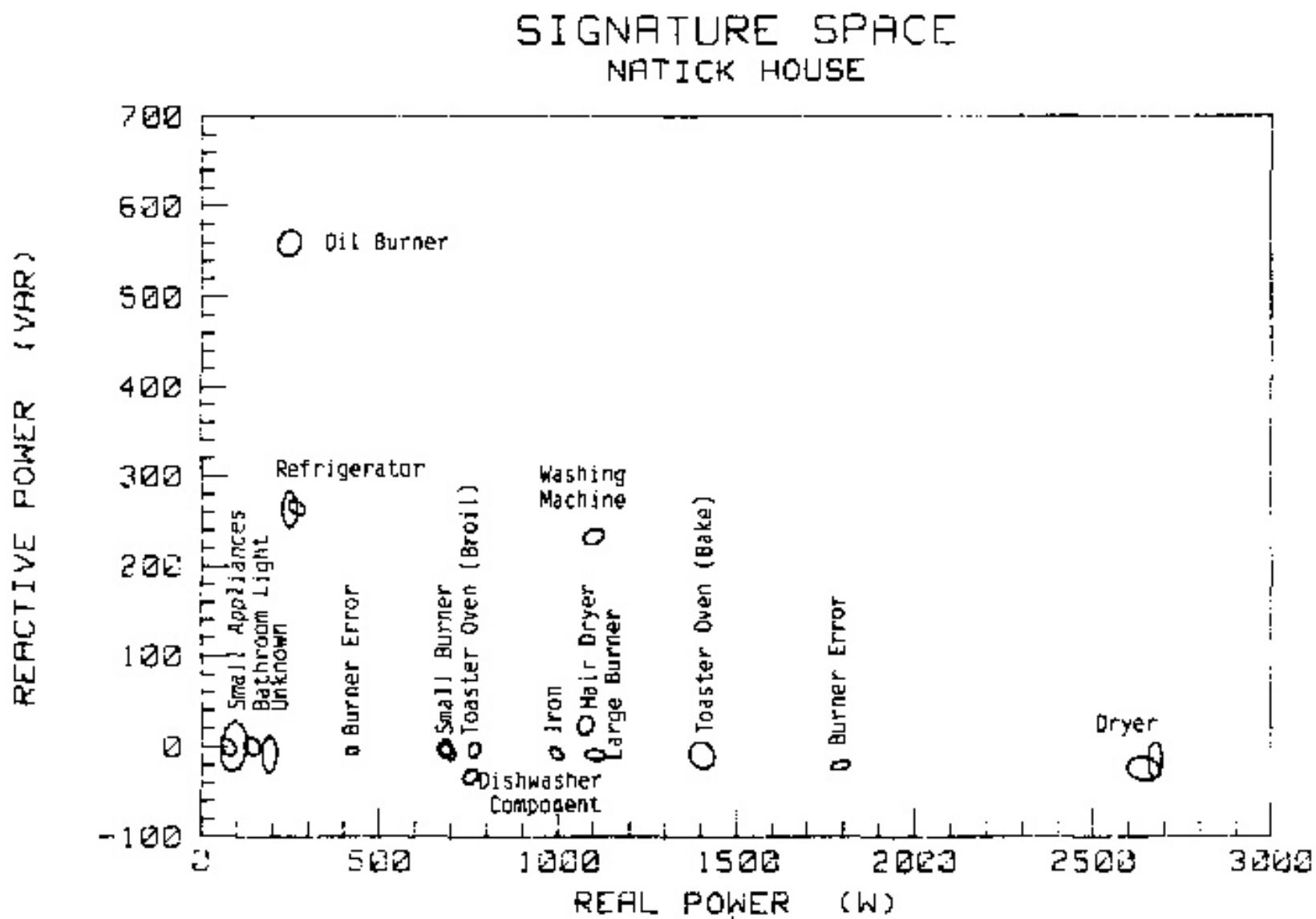


Fig. 1. Collar mounted nonintrusive appliance load monitor.

Early History of NILM



Early History of NILM



Early History of NILM

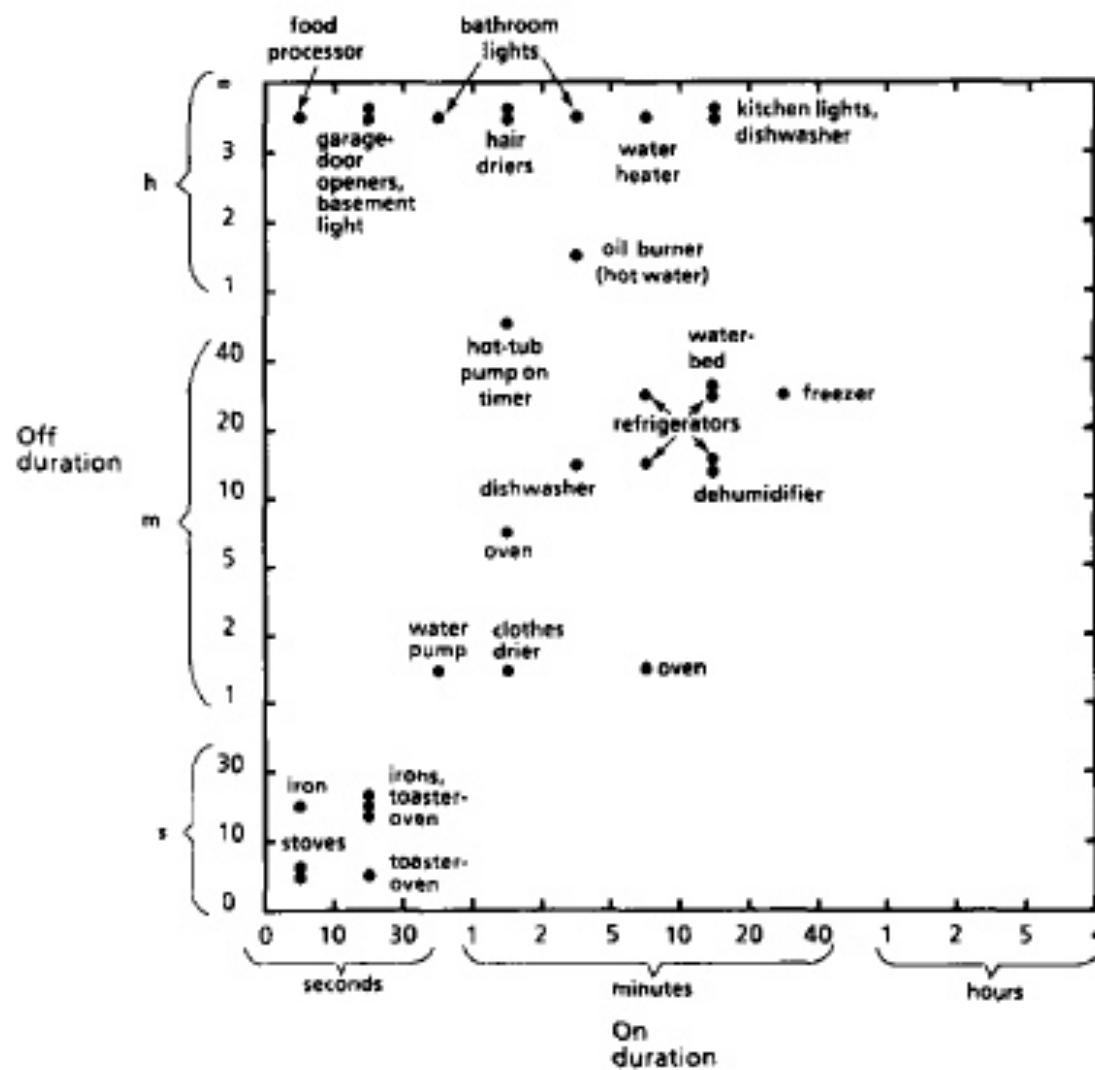
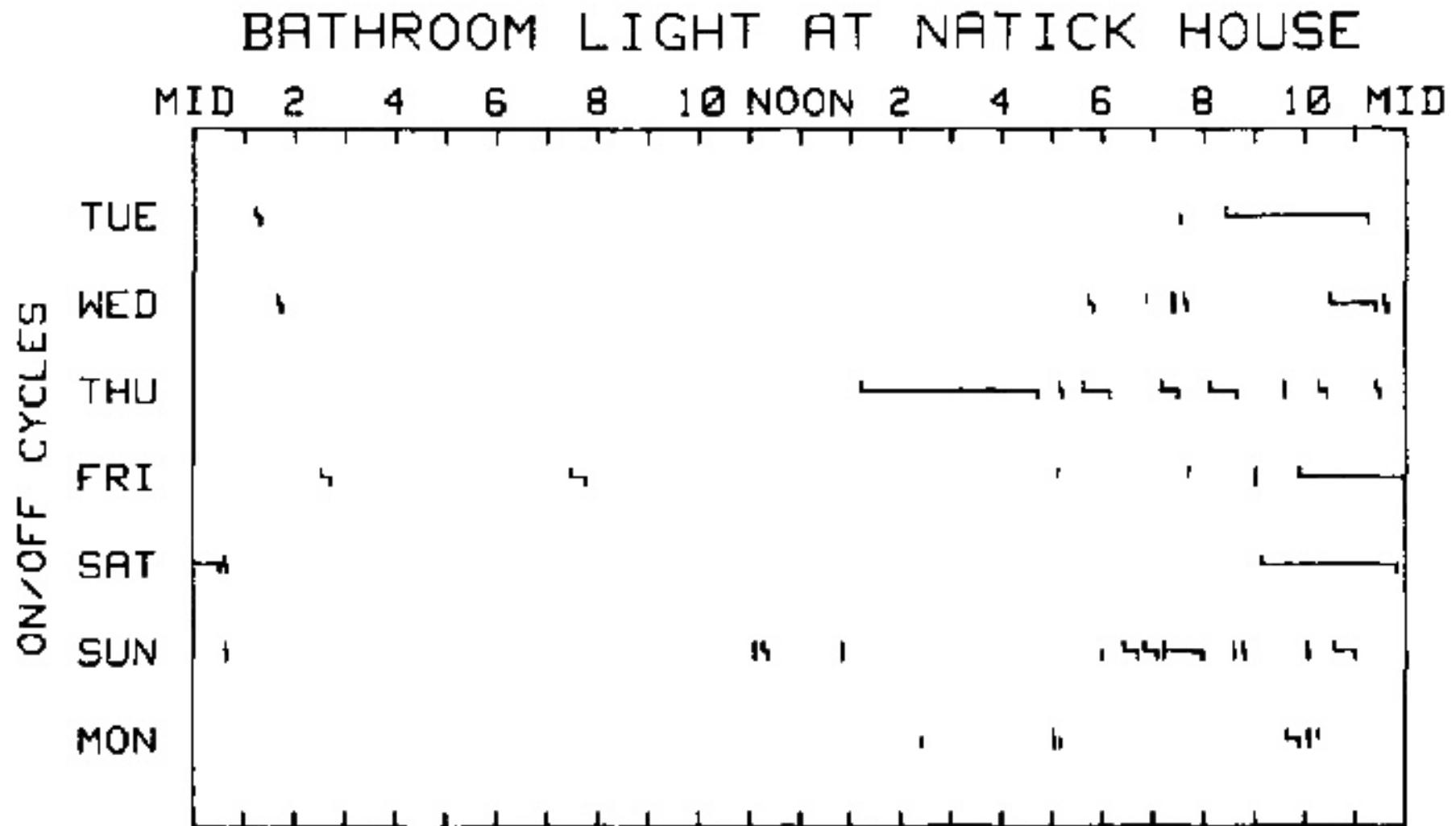


Fig. 10. Typical ON and OFF periods for monitored appliances.

Early History of NILM



Early History of NILM

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- M. C. Er (1)
- R. Maines (1)

[Socially camouflaged technologies: the case of the electromechanical vibrator](#) 

R. Maines

Publication Year: 1989, Page(s):3 - 11

Cited by: [Papers \(5\)](#)

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[Residential energy monitoring and computerized surveillance via utility power flows](#) 

G. W. Hart

Publication Year: 1989, Page(s):12 - 16

Cited by: [Papers \(34\)](#) | [Patents \(6\)](#)

 |  Abstract |  PDF (617 KB)

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Early History of NILM

Nonintrusive Appliance Load Monitor Published References

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- Hart, G.W., and E. Kern, *Digital AC Monitor*, U.S. Patent #4,672,555.

Early History of NILM

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Prototype nonintrusive appliance load monitor : progress report 2

Author: George W Hart; Massachusetts Institute of Technology. Energy Laboratory.; Electric Power Research Institute.

Publisher: Concord, Mass. : MIT Energy Laboratory, 1985.

Edition/Format: Print book : English

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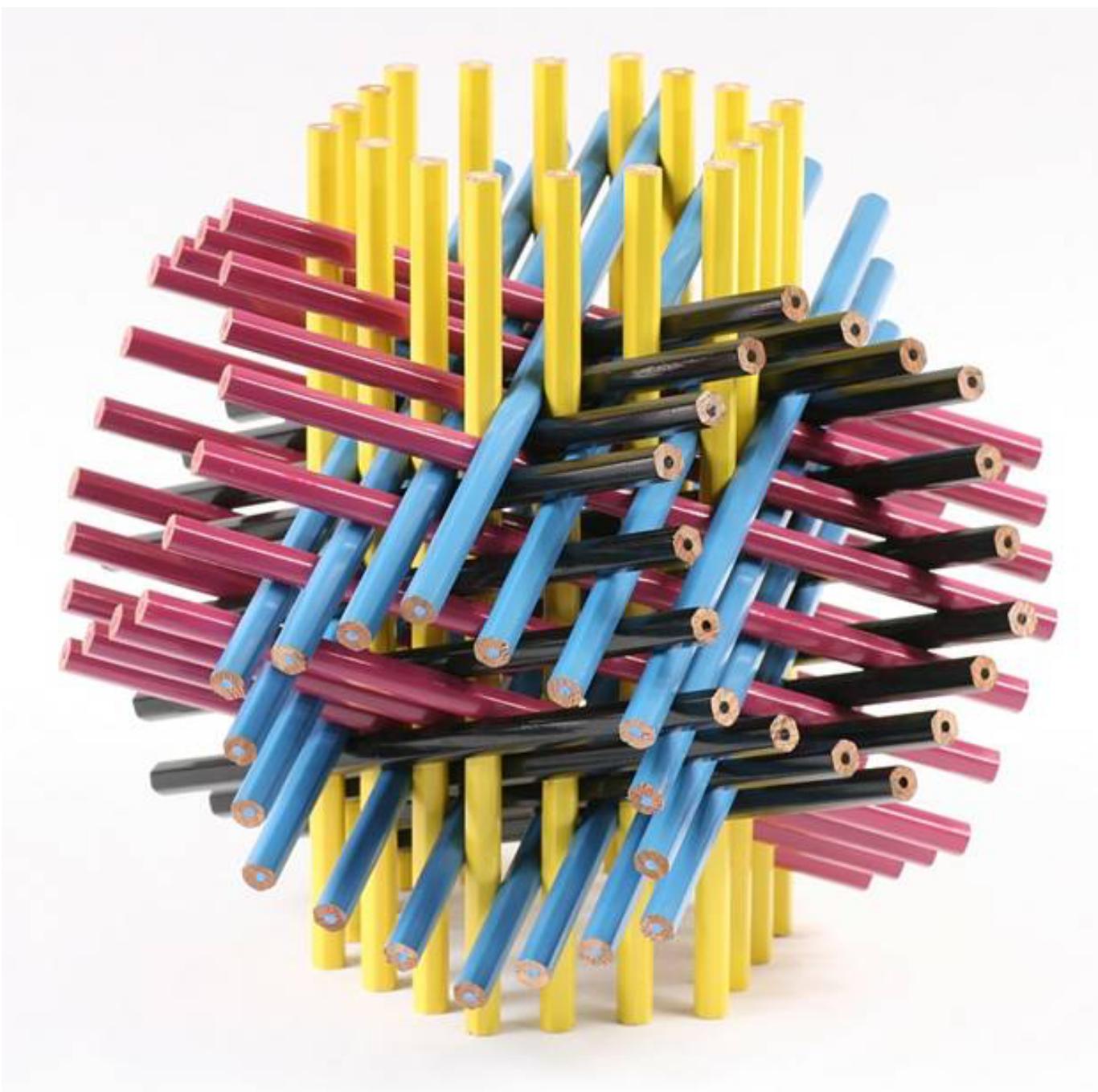
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72 Pencils – CMYK



Roads Untaken



Loopy



Frabjous



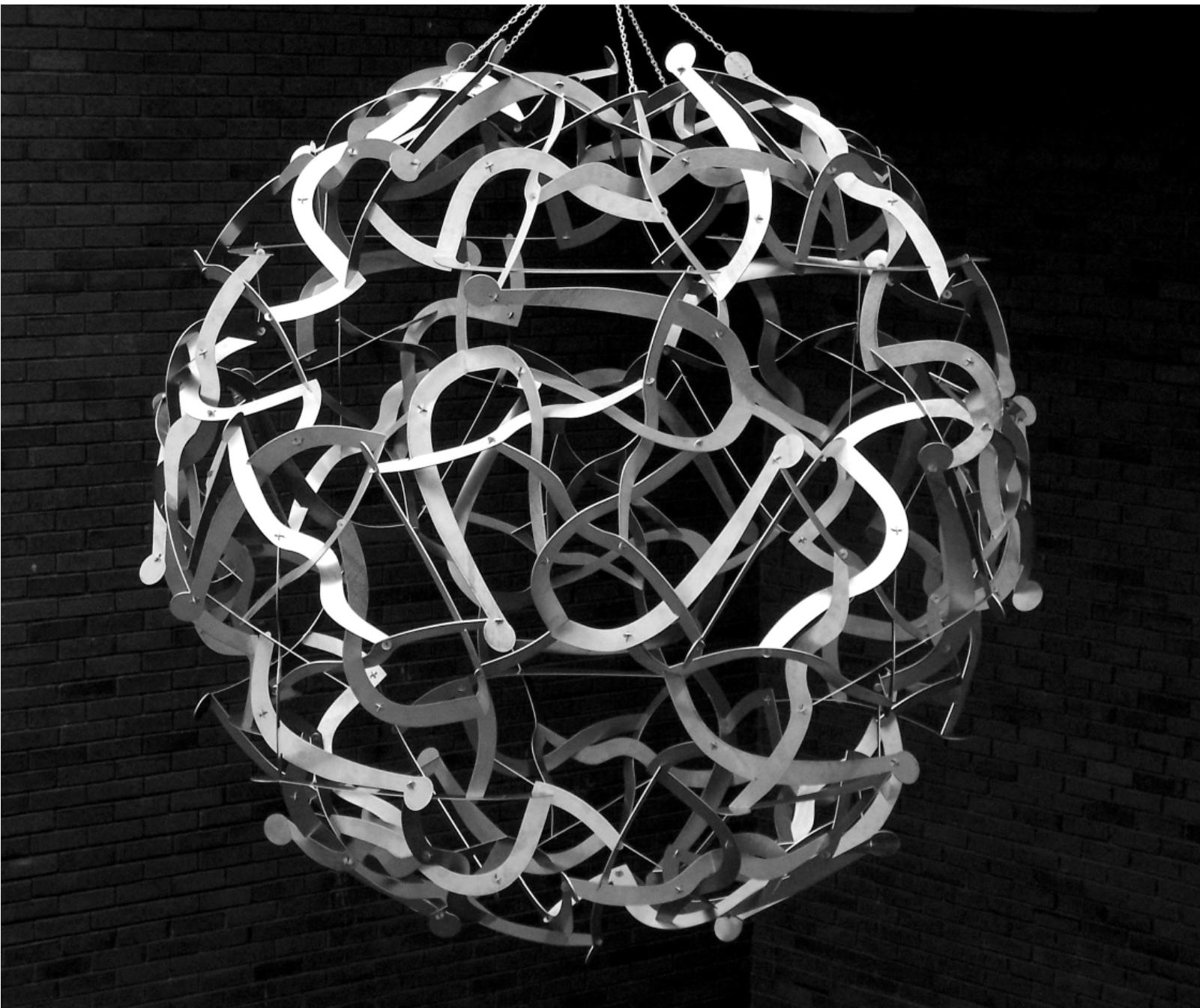
Solar Flair



Millennium Bookball



Spaghetti Code



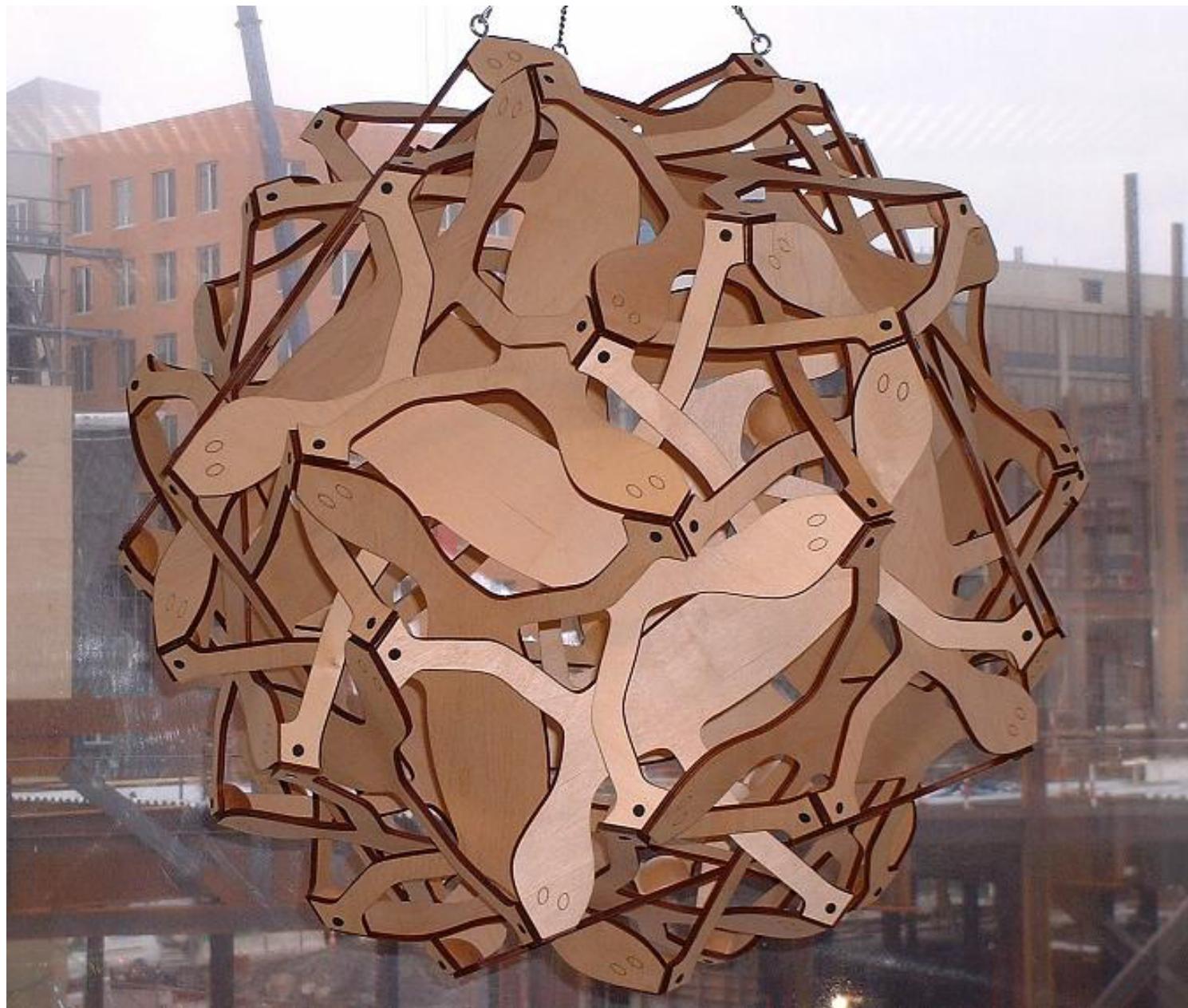
Macalester College



Rainbow Bits



Salamanders



Geometry Ascending a Staircase



Celebration of Mind – Princeton



Aalto



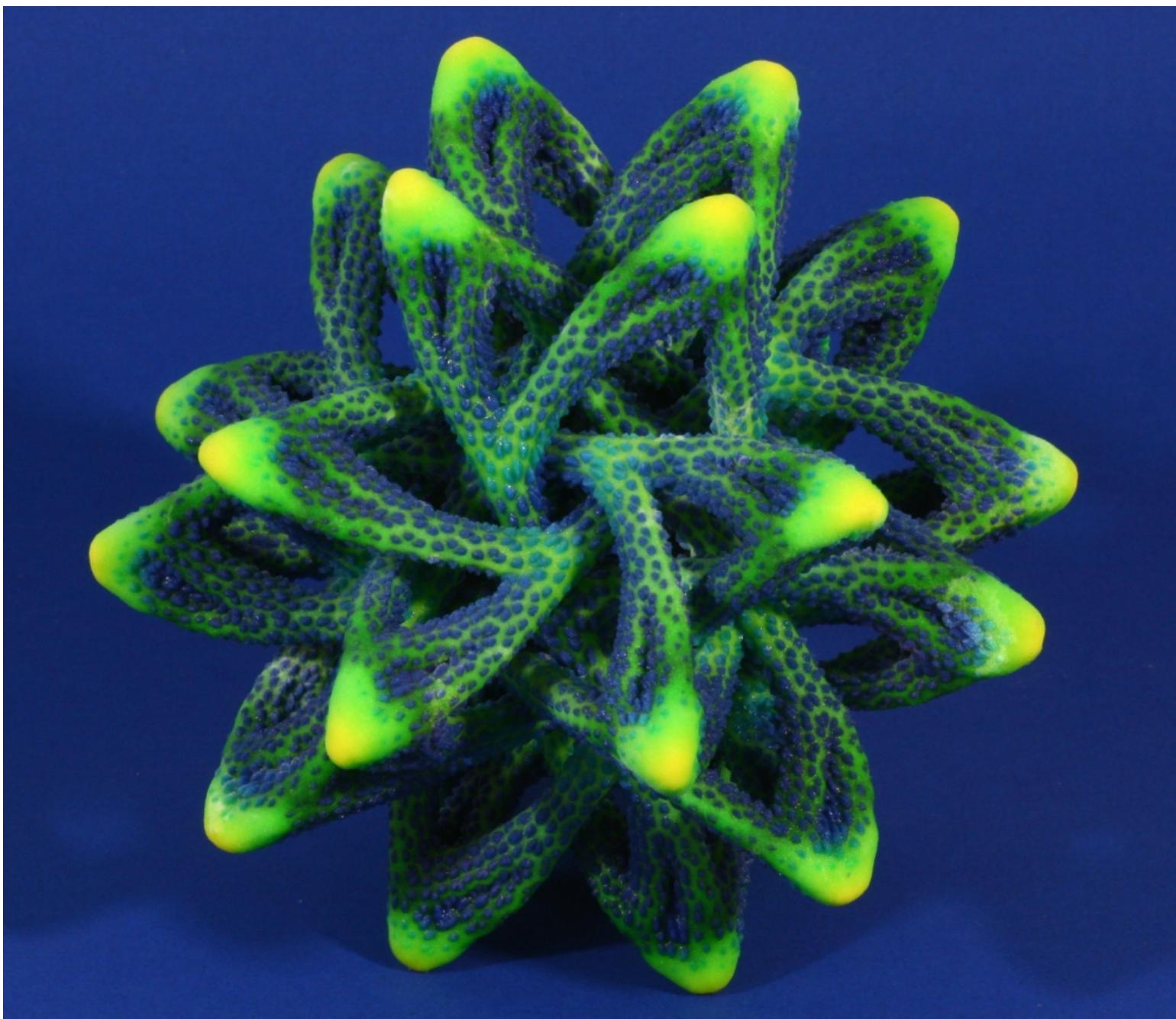
3D Printed Designs



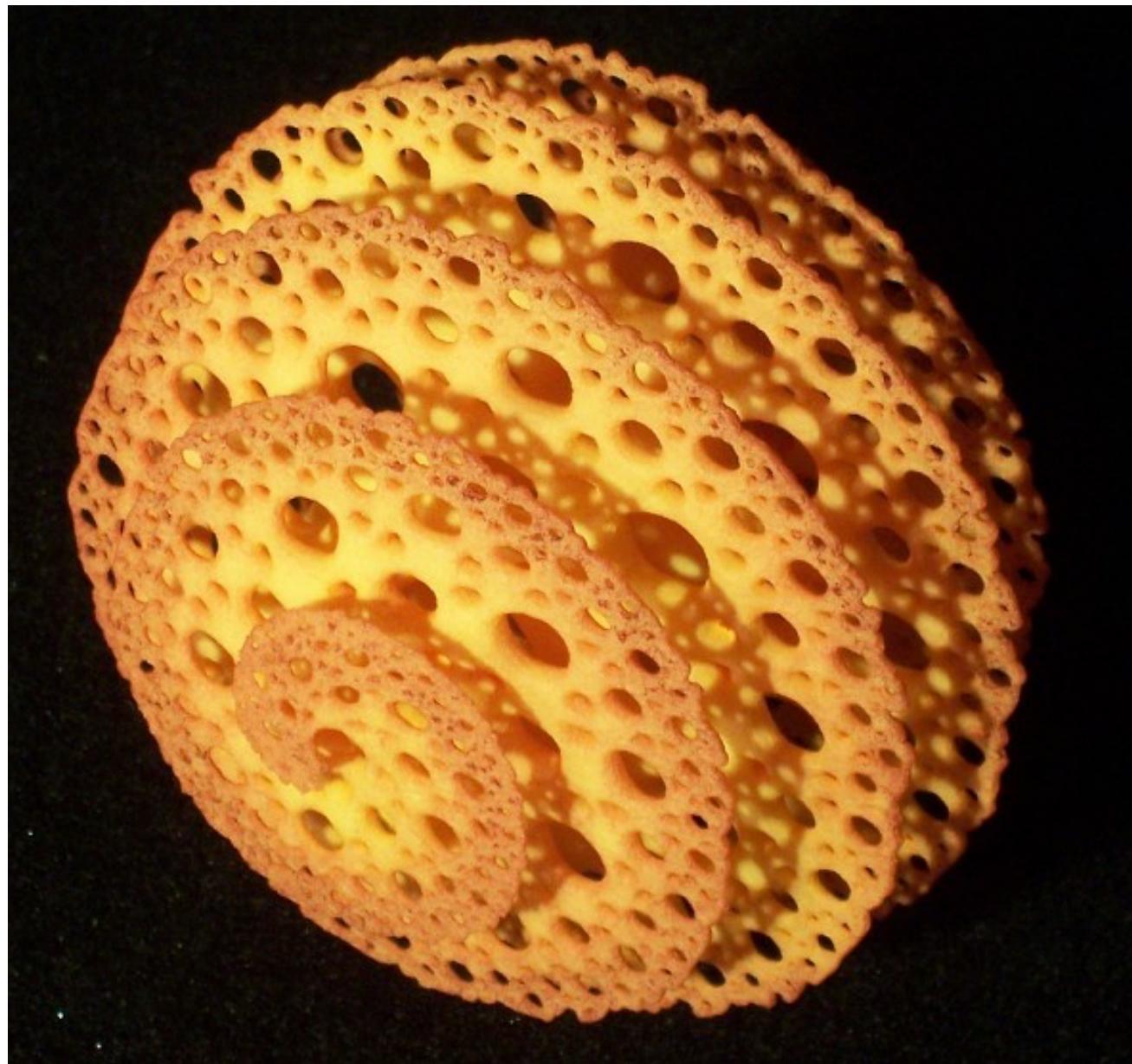
3D Printed Designs



Thorny Dragonflies



Echinodermania



Blorb

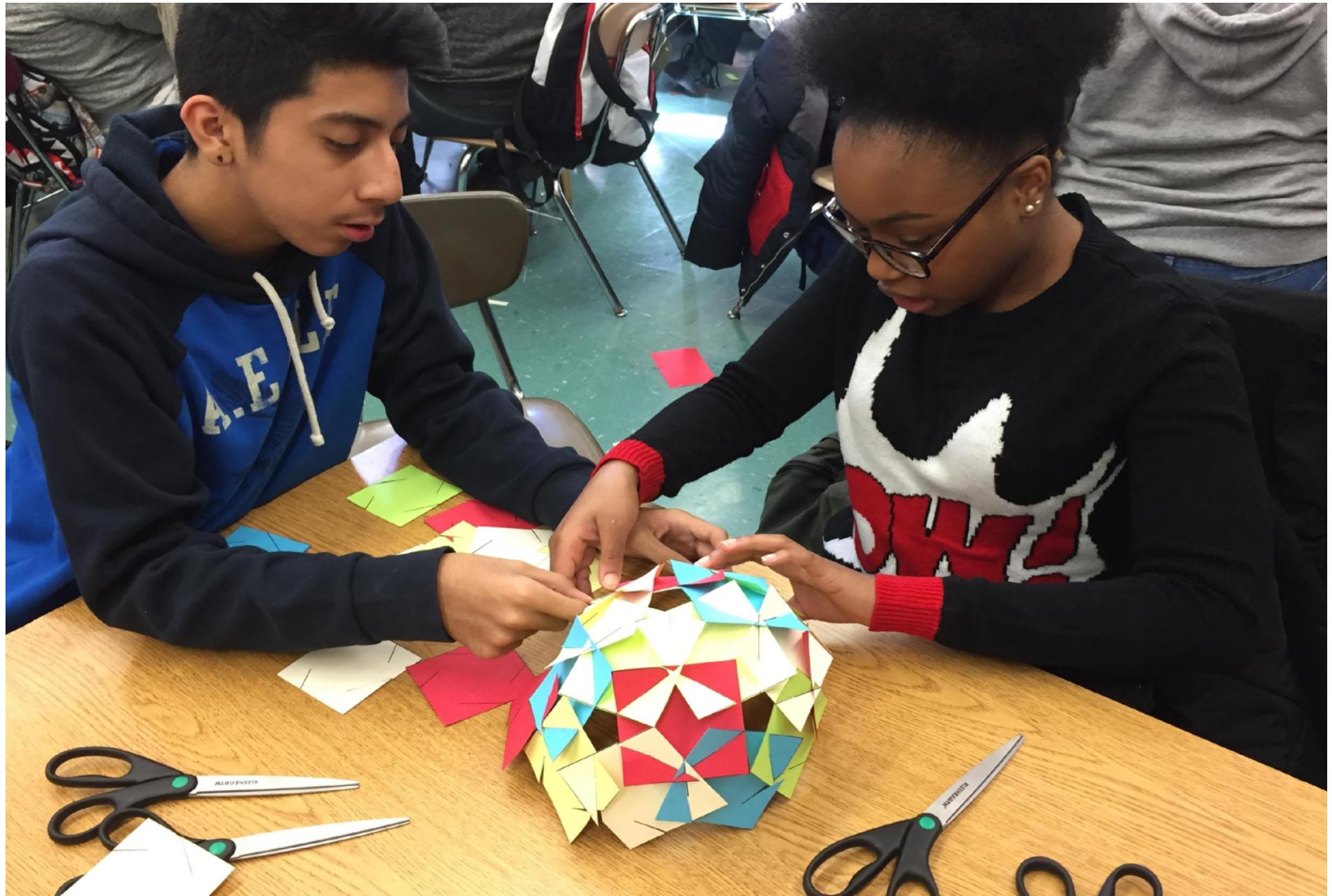


Workshop Activities

MakingMathVisible.com

with Elisabeth Heathfield

Paper Puzzle Constructions



Pencil Construction



CDs



Skewer Hyperboloid



Chop-Sticks Hyperboloid



Domes



Domes



Paper Catenary Arch



Cardboard Catenary Arch



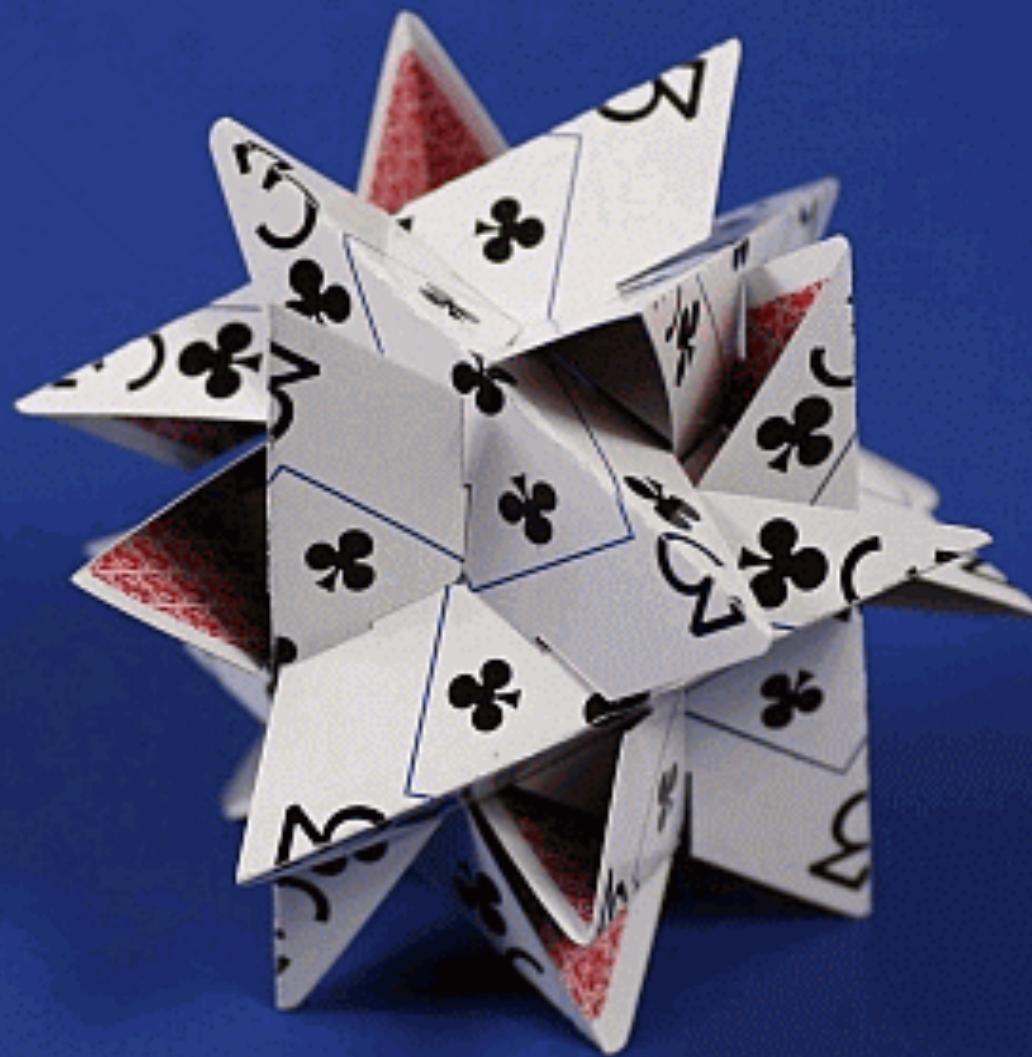
Playing Card Constructions



Card Construction



12-Card Star Puzzle/Sculpture



Cardboard Constructions



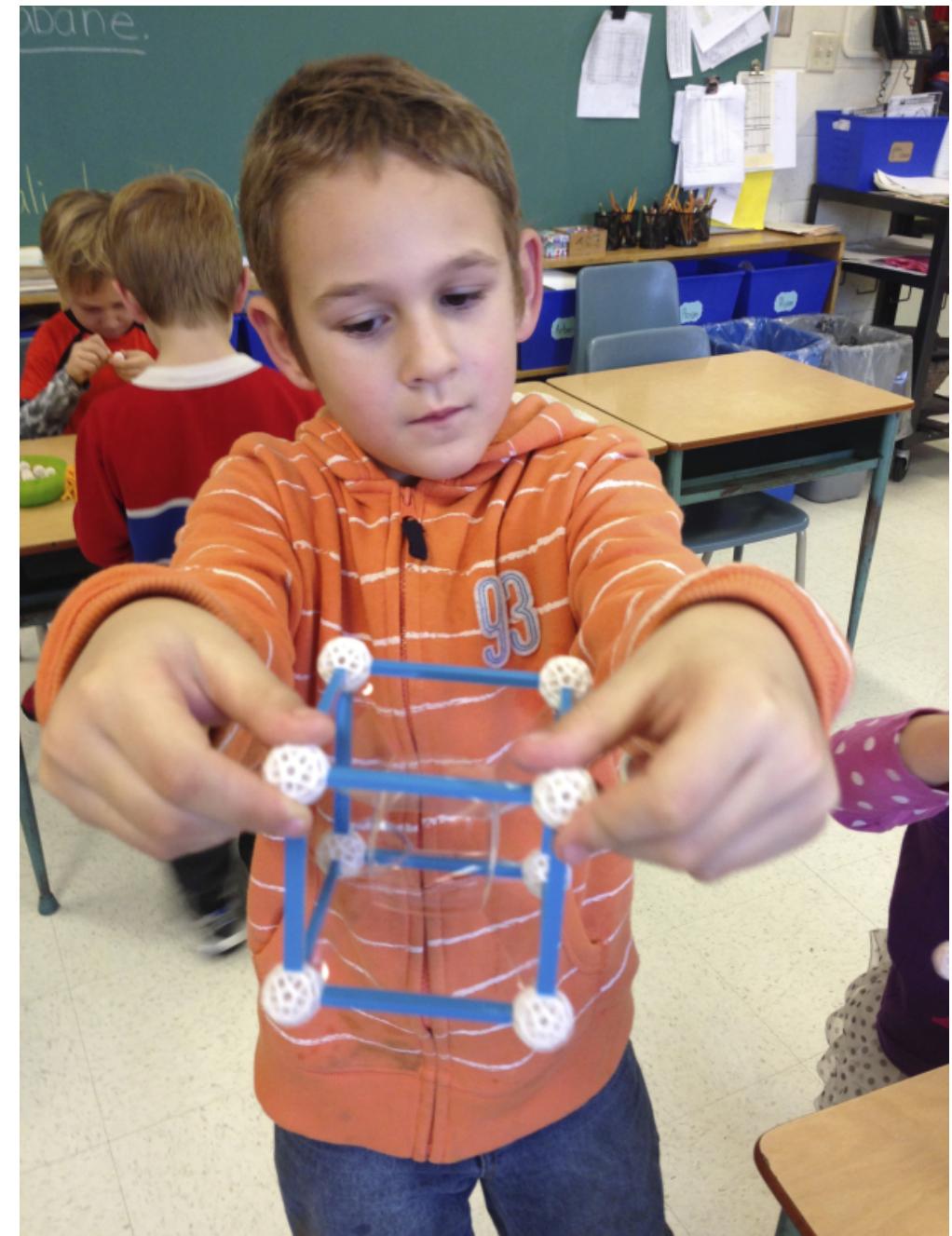
Giant SOMA Puzzle



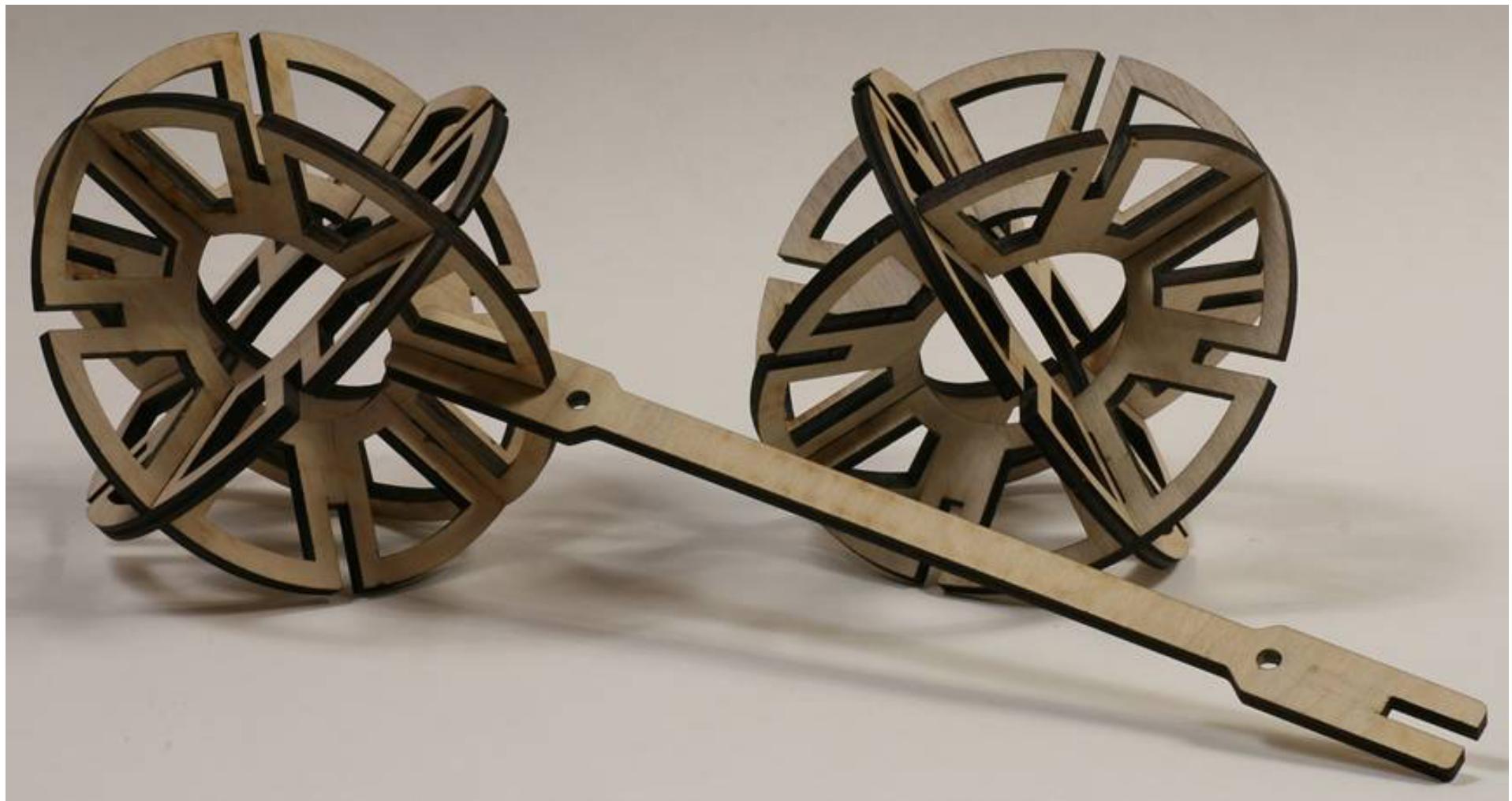
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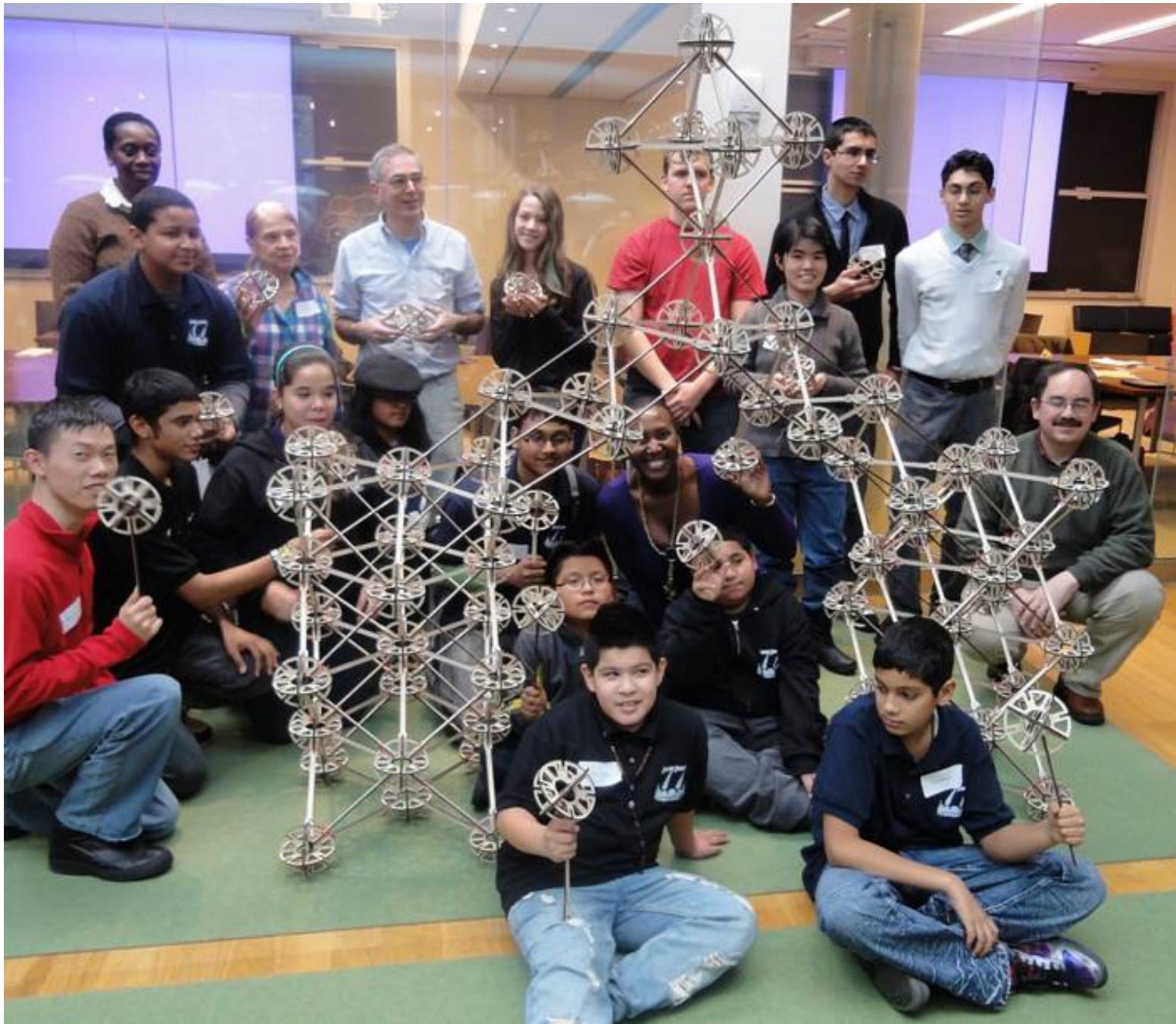
Cubical Soap Bubbles



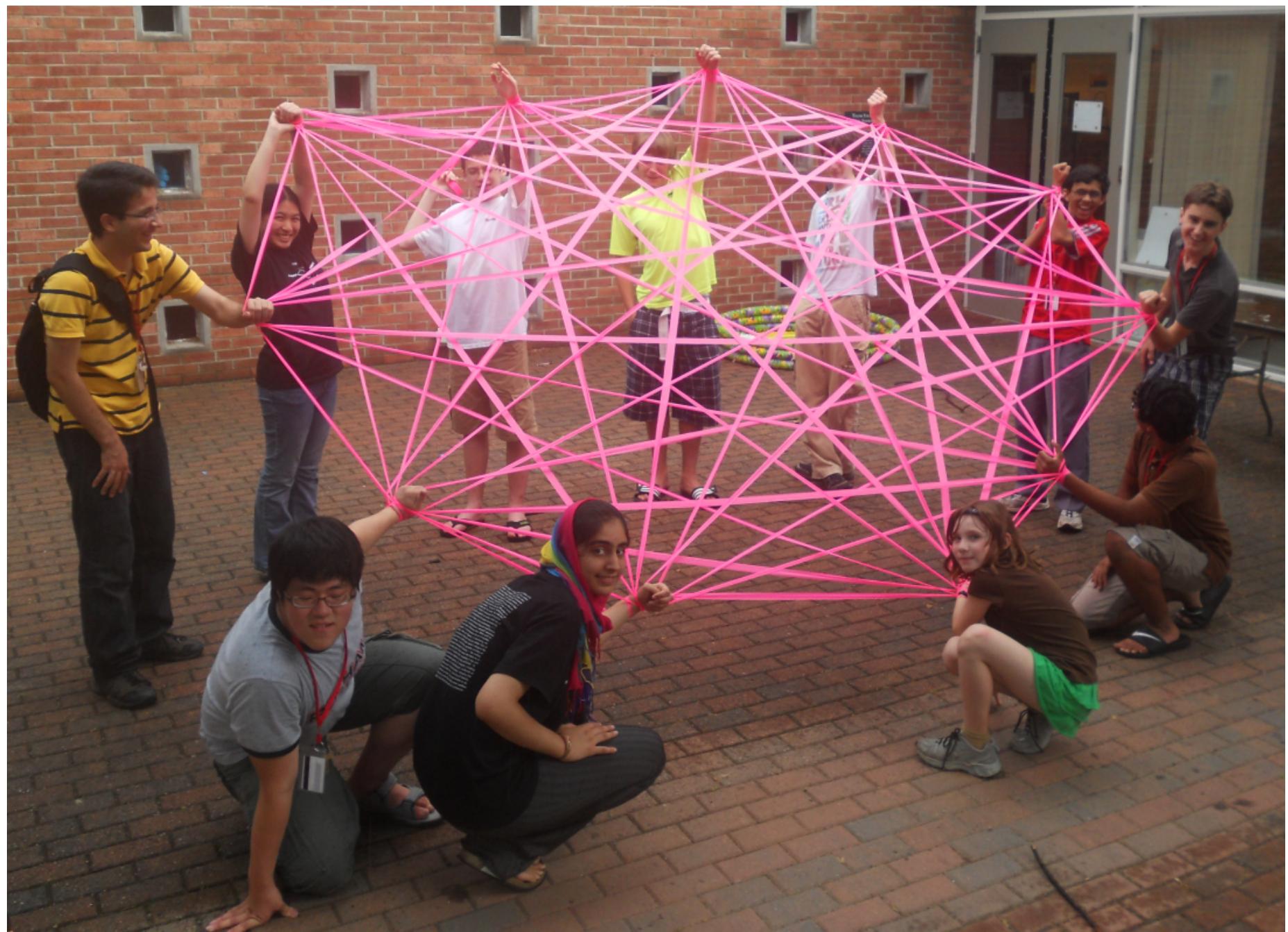
Laser-Cut Plywood Kit



FCC Construction Kit



Complete Graph



Cardboard Sculpture



Light Sticks



Paper Constructions



Paper Constructions



Polytope Construction – Central Park

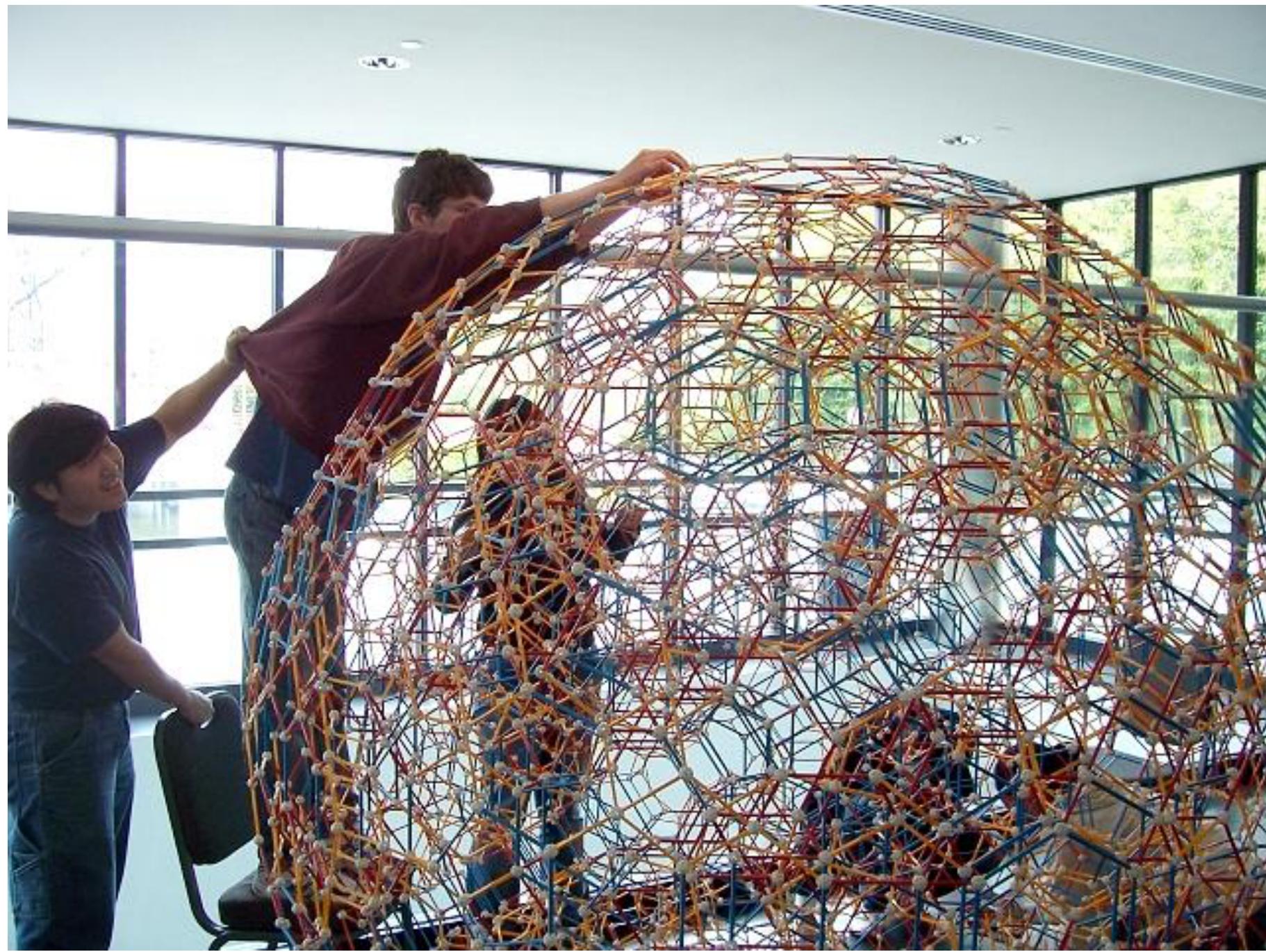


MfA

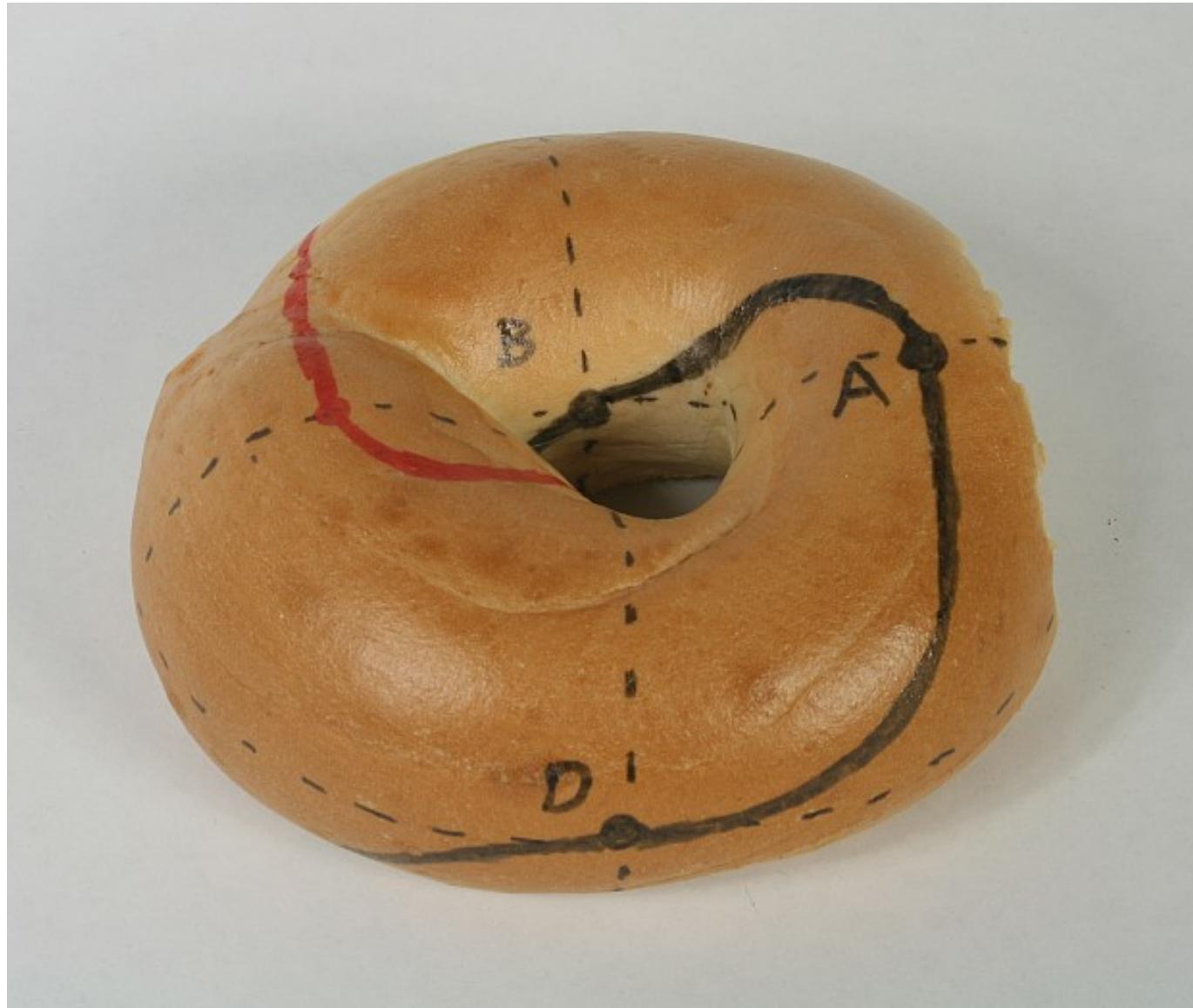


Venice
March, 2006

Giant ZomeTool Polytopes



Linked Bagel Halves



Linked Bagel Halves



Linked Bagel Halves



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Focus on your passion !



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