

Book Club-"Cake Cutting: Be Fair if you Can" - Meeting 1

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Goals

1. Finite Cutting Methods
 1. Discuss notion of envy-freeness and fairness
 2. Describe Banach-Knaster last diminisher protocol
 1. Show time complexity
 3. Describe Sequential pairs protocol
 1. Show time complexity
 4. Describe Even-Paz protocol
 1. Show time complexity
 5. Describe Selfridge-Conway protocol
2. Describe moving knife protocols
 1. Dubins-Spanier protocol for n players
 2. Stromquist envy-free protocol for $n=3$ players
3. Describe "Single Cut Suffices"
 1. Improve sequential pairs protocol
4. Revise problem set

Finite Cutting Methods

What are envy-freeness and fairness?

Last Diminisher

Sequential pairs

Even-Paz

Selfridge-Conway

Moving Knife

Dubins-Spanier

Stromquist

Single-Cut Principle