

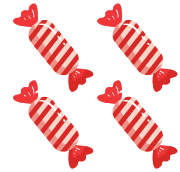
Best of Both Worlds:

Ex-Ante and Ex-Post Fairness in Resource Allocation

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Joint work with Rupert Freeman (MSR NYC, now at UVA) & Rohit Vaish (RPI)

Implementing Fractional Allocations



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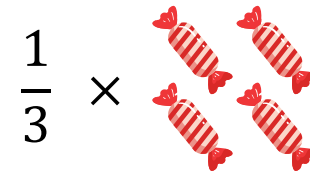
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Ex-ante Fair

Ex-post Unfair

Ex-post Unfair

Ex-post Unfair

Implementing Fractional Allocations



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Ex-ante Fair


Ex-post Fair


Ex-post Fair


Ex-post Fair

Selected Results



Can we always achieve ex-ante fairness by randomizing over ex-post fair allocations?



(Efficiently) possible: **ex-ante EF + ex-post EF1**



(Efficiently) possible: **ex-ante GF + ex-post Prop1 + ex-post EF_1^1**



Impossible: **ex-ante Prop + ex-post EF1 + ex-post fPO**



Extensions to division of **chores**