

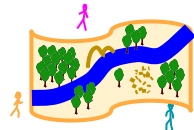
Bo Waggoner

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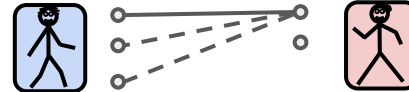
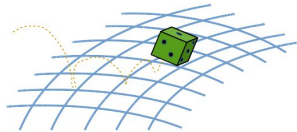
Advisor: Yiling Chen

# Main area: “algorithmic game theory”

Specialty: *foundations of information and incentives*



**Other interests:** online and randomized algorithms, distribution learning/testing, .... (always looking to expand!)



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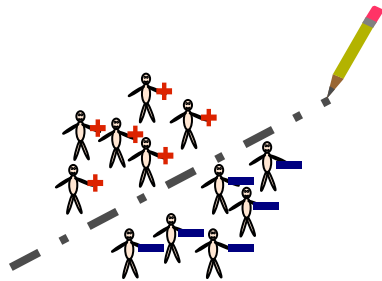


**Style:** I like....

- understanding simple things deeply
- formulating new models and definitions
- probability/randomness

Example Question:

How to *learn* when **data is held by strategic agents** and we have a **budget constraint**?



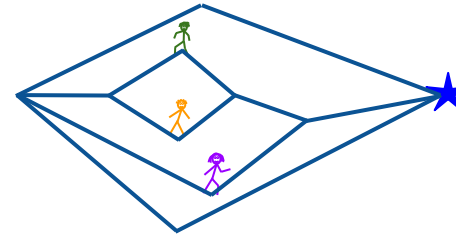
Example theorems:

$$\text{avg. regret} \leq O(1/\sqrt{B})$$

“no data & no regret” algorithms

Example Question:

When are pieces of information **substitutes or complements** for a strategic agent?



Applications:

- efficient market hypothesis
- optimal information acquisition (c.f. submodular optimization)

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EC  
ITCS  
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SODA  
AAAI  
HCOMP  
WINE  
...

auction theory  
scoring rules  
online learning/  
convex optimization  
distribution testing  
prediction markets  
...

online algorithms  
fair division  
crowdsourcing/  
peer-prediction  
differential privacy  
social choice  
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