## **Games on Graphs**

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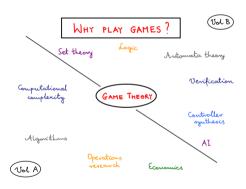
Reasoning Agents

Sapienza University of Rome



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## No playing around: game theory is serious business!



- It's fun!
- Model reactive systems
- Solve synthesis problems
- Evaluate logic formulas

Image credit: Martin Zimmerman

G Paralli

## In this seminar



Winning Reachability and Safety games (conditional to time constraint: Büchi games)

## Course work

- Read seminar notes
- Implement algorithms to solve discussed problems
- Extensions to:
  - Concurrent games
  - Other winning conditions
  - Nonzero-sum games
- > Optimizations

Solving

games