

# PPE Research Seminar Series

The Philosophy, Politics, and Economics (PPE) Research Seminar Series provides a forum for eminent scholars across these disciplines to present their work in a flexible format with faculty and students.



**John Duffy, Ph.D.**  
UC Irvine

## Facing the Grim Truth: Repeated Prisoner's Dilemma Against Robot Opponents

We report on an experiment where subjects play an indefinitely repeated prisoner's dilemma game against robot opponents known to play the Grim trigger strategy. The game's continuation probability is varied affecting whether cooperation can be rationalized. We find that overall first round cooperation is higher than predicted and increases in the continuation probability. However, some subjects defect after cooperating, perhaps anticipating the end of a supergame and others cooperate after defecting, which is harder to rationalize. The latter type of error decreases in a measure of cognition, suggesting that cognition is important for the successful implementation of strategies.

I am a professor of economics at the University of California, Irvine. I do research on the micro-foundations of macro-economic activity. My aim is to understand how groups of individuals (societies) make economic forecasts and decisions and how they resolve coordination problems. I have attempted to address such questions using theoretical models, computational methods and controlled laboratory experiments with human subjects.

<https://www.socsci.uci.edu/~duffy/biocontact.html>

**Fri. February 25th | 3:00–4:30 p.m. PST**  
**Online, Advanced Registration**

**SJSU** | DEPARTMENT OF  
ECONOMICS

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