



## Seminar/Talk

# Joint evolution of direct and indirect reciprocity

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Direct and indirect reciprocity are considered major factors in the evolution of cooperation. Under direct reciprocity, we help those who have helped us in the past. In contrast, under indirect reciprocity, we help those who have helped someone else. Thus, whereas direct reciprocity is based on previous experiences with an individual, indirect reciprocity is based on somebody's reputation. Both forms of reciprocity on their own contribute to explaining the emergence of altruistic behavior in populations; however, there is little research on how these two mechanisms interact, and possibly interfere with each other. In our work, we introduce a novel framework that blends the two approaches. We consider a repeated Prisoner's Dilemma game played between the members of a population. Players have direct interactions with each other, but when they decide whether to cooperate, they can also be influenced by unrelated interactions they observe. We use this model to explore how individuals optimally make use of different sources of information, and how the efficient interaction of direct and indirect reciprocity facilitates the spread of cooperation throughout a network.

**Wednesday, November 15, 2017 12:30pm - 01:30pm**

I22 Lakeside View (I22.01)



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