



## Seminar/Talk

# Value of information in evolutionary games with environmental feedbacks

**Maria Kleshnina**

IST Austria

Host:

By their very nature socioeconomic systems are complex and hard to navigate, especially if environmental conditions depend on decisions made. Even in simplest systems the optimal course of actions might not be obvious. As a result, it is expected that information should be valuable when trying to navigate in such systems. However, information is scarce and might be difficult or costly to obtain. We explore systematically when information is beneficial and when it could become detrimental. We study the value of information on the evolution of cooperative behavior in a repeated prisoner's dilemma where the state of the environment depends on the actions taken by individuals. By introducing a simple measure of the value of information, we capture if information is beneficial under given conditions. Our results suggest that for most environmental feedbacks information is valuable and positively affects the resulting evolutionary outcome. However, we also determine conditions for which more information can be harmful leading to reduced overall cooperation and positive benefit of ignorance.

**Monday, April 19, 2021 02:00pm - 03:00pm**

Online Event ()



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station. Please find a schedule of the ISTA Shuttle on our webpage: <https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.