

# BERNOULLIS TAFELRUNDE

GRADUATE STUDENT SEMINAR

**12 December 12:15-13:00**  
Seminarraum 05.002, Spiegelgasse 5

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## **Zero-one laws for first order properties of random graphs**

### ABSTRACT

The Ehrenfeucht-Fraïssé game is a turn based combinatorical game that is played by two players on two given structures. In model theory, such games are a common tool for proving the inexpressibility of certain properties in first-order logic. During this talk, I will introduce Ehrenfeucht-Fraïssé games and the first-order logic for graphs, together with an example of their usage. On top of that, I will show how such games can also be used in a probabilistic setting. More precisely, how they can be used in order to obtain certain zero-one laws for first order properties on random graphs.