

Institut für Diskrete Mathematik

Seminar für Kombinatorik und Optimierung

Friday 4th December 13:30

Online meeting (Webex)

Edit distances to graphs with no induced cycles of a set length

RICHARD MYCROFT

(University of Birmingham)

Given an instance of the random graph $G_{n,p}$, how many edges must be edited (i.e. added or removed) to obtain a graph with no induced C_h (cycle of length h)? This seems a natural question by itself, but additional interest is added by a theorem of Balogh and Martin, which implies that $G_{n,p}$ asymptotically maximises the number of edge alterations needed over all graphs on n vertices with density close to p .

Martin and Peck answered the above question for not-too-small p , in particular finding the asymptotic maximum number of edits required over all graphs on n vertices. In this talk I will explain some of the methods that can be used to address this problem and show how these can be used to extend the range of p for which the answer is known.

This is joint work with Amarja Kathapurkar.

Please note the unusual start time.

Meeting link:

<https://tugraz.webex.com/tugraz/j.php?MTID=m1cd0904285a119237aa9a7ce985ad803>

Meeting number: 137 149 1265

Password: JYc3B3dunG2

Joshua Erde, Mihyun Kang