

Berlin Mathematics Research Center

MATH+

Berlin Mathematical School

BMS

MATH+ Friday Colloquium

Friday 17 January 2020 at 14:15

Tea & Cookies starting at 13:00

Urania, 2nd floor, An der Urania 17, 10787 Berlin

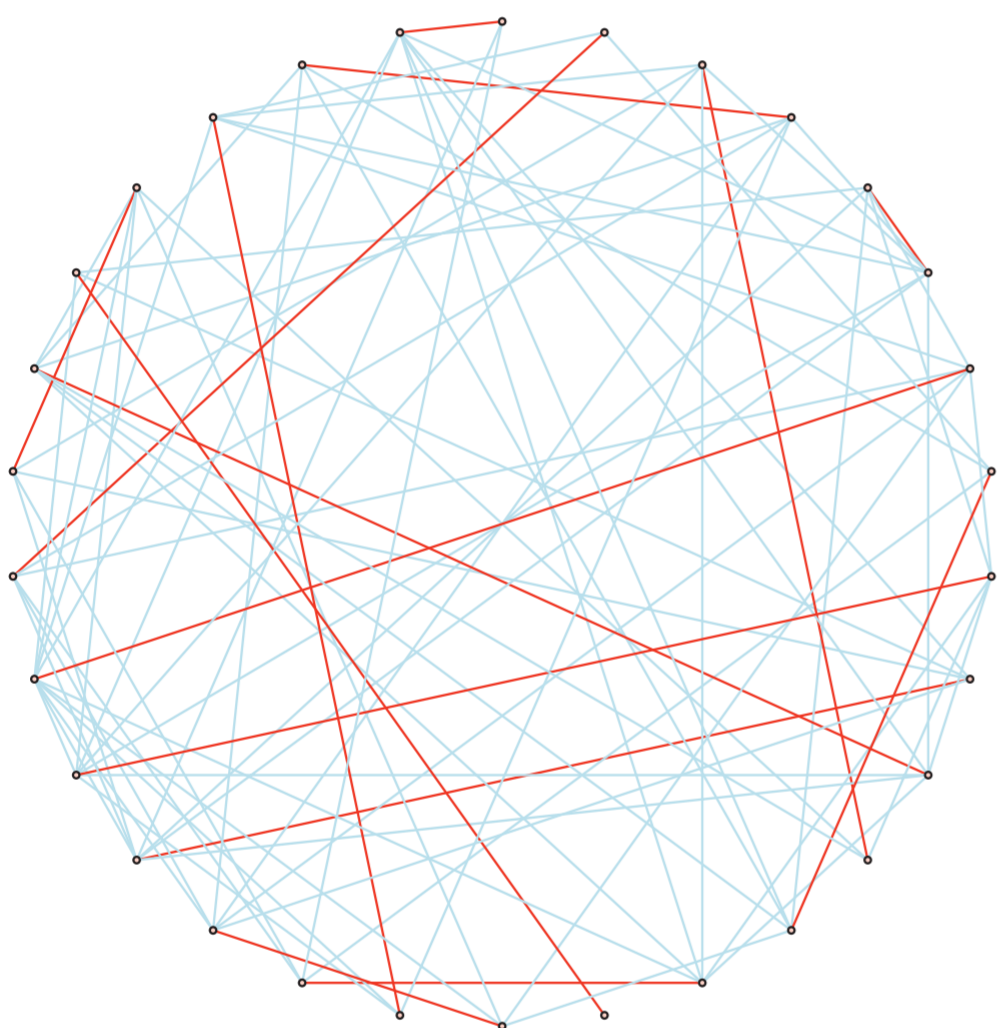
Bhargav Narayanan

(Rutgers U)

Thresholds

When does a random graph contain a perfect matching? Or a Hamilton cycle? The answers to such problems, referred to as "thresholds", have been the central concern of the study of random discrete structures. A general guess for the location of the threshold for any such problem, based on a very simple computation of what is called the "expectation-threshold", is furnished by some old conjectures of Kahn–Kalai and Talagrand. In this talk, Narayanan will explain what these basic objects (thresholds, expectation-thresholds, etc) are, discuss the main conjectures about them with some motivating examples, and say something about a recent resolution of the aforementioned conjecture of Talagrand.

Bhargav Narayanan received his PhD from Cambridge in 2015, and following two years as a research fellow at St John's College, Cambridge, he has been a member of the mathematics faculty at Rutgers University since 2017. He is known for his work in extremal and probabilistic combinatorics, and in particular for his contributions to the theory and applications of threshold behaviour; his work is supported by the National Science Foundation.



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