Berlin Mathematical School

BMS Days 2017

Monday 20 February 2017

BMS Loft, Urania, An der Urania 17, 10787 Berlin

11:00 Tibor Szabó (FU Berlin)

15:30 Hendrik W. Lenstra (U Leiden)

inspired by: https://www.cs.umd.edu/~gasarch/reupapers/vdwgames.pdf

Tibor Szabó: Biased Van der Waerden games

Some of the central problems in the intersection of combinatorics and number theory are concerned with integer solutions of linear equation systems. Two eminent examples, involving arithmetic progressions, are the theorems of Van der Waerden and Szemerédi. In his lecture, Szabó will discuss the classical two-player game variant of these results and point out their connection to recent breakthroughs about the problem in a random setting.

Tibor Szabó is a professor of mathematics at FU Berlin and specializes in extremal and probabilistic combinatorics. He previously held positions at McGill University and ETH Zürich.

Hendrik W. Lenstra: Escher and Droste effect

In 1956, the Dutch graphic artist M. C. Escher made an unusual lithograph with the title "Print Gallery". It shows a young man viewing a print in an exhibition gallery. Amongst the buildings depicted on the print, he sees paradoxically the very same gallery that he is standing in. A mathematical analysis of the studies used by Escher leads to a series of hallucinating computer animations, which show, among other things, what happens inside the mysterious spot in the middle of the lithograph that Escher left blank.

Hendrik W. Lenstra is professor emeritus of mathematics at Leiden University. His research focus is algorithmic number theory and he is well known as the discoverer of the elliptic curve factorization method.
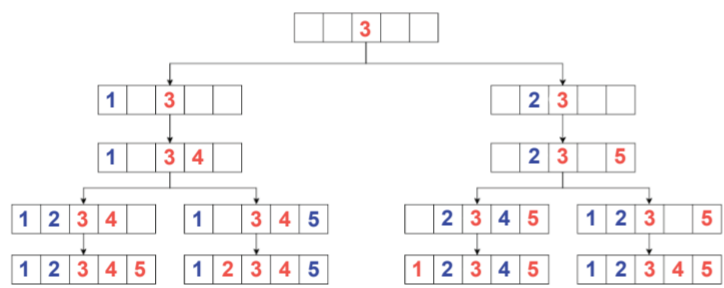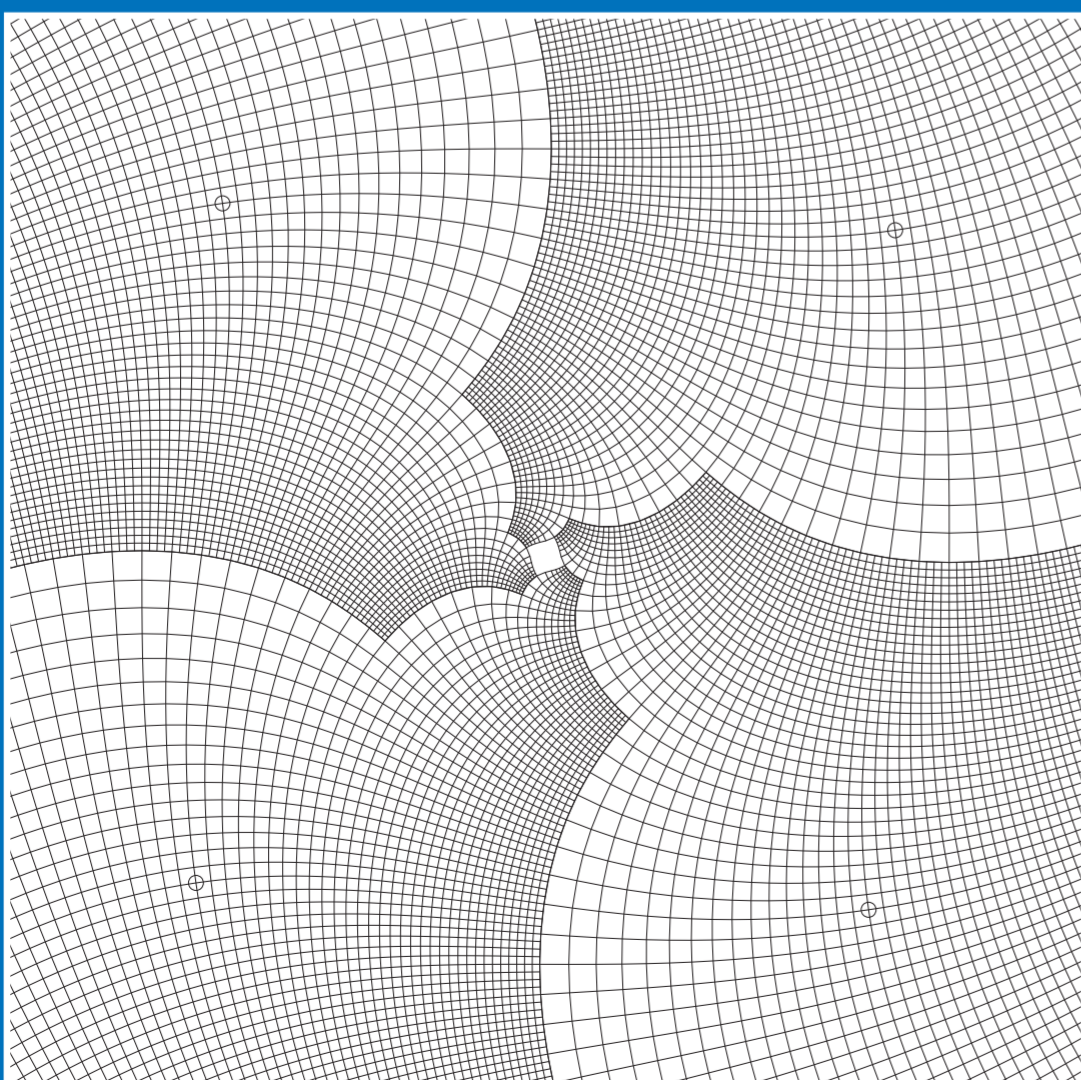
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