

COMBINATORICS
JOB TALK

Plank Problems: Discrete Geometry and Convexity

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Abstract: What is the smallest combined width of planks that cover a given convex region in the plane? What happens in higher dimensions? In the 50s, Thøger Bang answered this innocent question of Alfred Tarski and opened a box with many deceptively simple-looking problems. In my talk, I will overview progress in the area and its connection with other fields: theoretical computer science, number theory, and analysis. In particular, I will discuss a joint work with Zilin Jiang confirming Fejes Toth's long-standing zone conjecture and recent results with Alexey Glazyrin and Roman Karasev on a polynomial plank problem, a far-reaching generalization of Bang's theorem.

Friday, January 27, 2023, 10:00 am

<https://emory.zoom.us/j/7744657281?pwd=TTFuLzYrVVUybkY4UjNlY0NlNkNkdz0>

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