

Charles University
Faculty of Mathematics and Physics

Cordially invites you to

1st Matoušek's Lecture

Tverberg theorem: results and problems

Given by

Prof. Gil Kalai

(Hebrew University of Jerusalem,
Yale University)

**On Wednesday, May 29, 2024
at 2 p.m.**

In Matoušek's Auditorium (N1),
MFF UK
V Holešovičkách 747/2, 180 00 Praha 8

The lecture will be also streamed at:
<https://cesnet.zoom.us/j/93319768515?pwd=WUIMZUZGMFFGZXptRkVqYjI0QzZMQT09>

Meeting ID: 933 1976 8515

Passcode: 967135

Abstract: One area on which Jiří Matoušek had great impact is the area of Helly-type theorems and its connection to geometry, combinatorics, and topology. One particular deep and mysterious theorem in this area is Tverberg's theorem that asserts that n points in d -dimensional Euclidean space with $n=(d+1)(r-1)+1$, can be divided into r parts whose convex hulls have non-empty intersection. The case $r=2$ is known as Radon's theorem. In the talk I will present some old and new problems and results around Tverberg's theorem in the larger context of discrete geometry and combinatorial convexity.

Gil Kalai was born in 1955 in Tel Aviv. He studied at the Hebrew University of Jerusalem where he was the Henry and Manya Noskwith Chair. He is also an Adjunct Professor at Yale University. He has held visiting positions at leading institutions worldwide.

Gil Kalai is author of several books as well as seminal results such as KKL paper who started the applications of Fourier analysis in Computer science. With various co-authors, he has since applied Fourier analysis to the study of thresholds, influences, symmetries, noise, percolation, and social choice. His recent interests include quantum computing. He is also the author of an influential blog entitled Combinatorics and More. He was a close friend of Jirka Matoušek. A part of his photo with Jirka is a symbol of his blog.

Gil Kalai gave plenary lecture at ECM (2016) and both invited and plenary lecture at ICM (1994, 2018). Among other awards, he is the recipient of the 1992 Pólya Prize and the 1994 Fulkerson Prize.