

**The Weizmann Institute of Science
Faculty of Mathematics and Computer Science**

Foundations of Computer Science Seminar

Room 1, Ziskind Building
on Monday, Feb 03, 2025
at 11:15

Shay Solomon
TAU

will speak on

Vizing's Theorem in Near-Linear Time

Abstract:

Vizing's Theorem from 1964 states that any n -vertex m -edge graph of maximum degree Δ can be edge colored using at most $\Delta+1$ different colors.

Vizing's original proof is algorithmic and implies that such an edge coloring can be found in $O(mn)$ time.

In this talk, I'll present a randomized algorithm that computes a $(\Delta+1)$ -edge coloring in near-linear time -- in fact, only $O(m \log \Delta)$ time -- with high probability.