Graph Decompositions and Algorithms

Fedor V. Fomin

University of Bergen, Norway
fomin@ii.uib.no

─── **Abstract** ───

We overview the recent progress in solving intractable optimization problems on planar graphs as well as other classes of sparse graphs. In particular, we discuss how tools from Graph Minors theory can be used to obtain

- subexponential parameterized algorithms
- approximation algorithms, and
- preprocessing and kernelization algorithms

on these classes of graphs.