

A NEW LOOK AT THE STRUCTURE OF GRAPHS EXCLUDING A FIXED MINOR

PAUL WOLLAN (UNIVERSITY OF ROME)

The graph minor structure theorem of Robertson and Seymour gives an approximate characterization of graphs excluding a fixed minor. It has had a profound impact on the field with numerous applications, both in graph theory and in theoretical computer science, but the result is notorious for its difficult proof and the astronomical constants in the statement.

In this talk, we discuss a new proof of the theorem which is significantly shorter. One advantage of the new proof is that it now allows the calculation of explicit bounds on the parameters involved.

This is joint work with Ken Kawarabayashi and Robin Thomas.