

Reconstruction

Bela Bollobas¹,

¹ University of Cambridge & University of Memphis

The reconstruction problem for a family F of finite structures asks whether it is possible to reconstruct every structure $f \in F$ from the ‘deck’ of all its substructures of a certain kind. The best known problem of this type is the sixty-year-old Kelly–Ulam graph reconstruction conjecture stating that every graph of order $n \geq 3$ can be reconstructed from the deck consisting of its n subgraphs of order $n - 1$. In my talk I shall review some of the results concerning various reconstruction problems, and sketch some new results obtained jointly with Paul Balister and Bhargav Narayanan about assembling random jigsaw puzzles.