

## **Density of binary disc packings**

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Hexagonal close-packings are the densest way to pack unit disks in the plane. What if, in addition to unit disks, disks of radius  $r < 1$  can also be used? In particular, for which values of  $r$  can the density be increased? More generally, what do we know about the maximum density, seen as a function of  $r$ ? And what if we add more disc sizes? We shall survey known results, in particular those recently obtained with computer-assisted proofs.