KIRSTI BIGGS, University of Bristol
Efficient congruencing in ellipsephic sets

An ellipsephic set is a subset of the natural numbers whose elements have digital restrictions in some fixed base. We bound the number of solutions to a Vinogradov system of equations in which our variables are drawn from certain sparse ellipsephic sets—a key example is those integers whose digits in a given base are squares—using a version of Wooley's efficient congruencing method. In this talk, I will outline the key ideas from the proof and discuss potential applications and generalisations.