

---

**MIGUEL RAGGI**, UBC

*Genetic Algorithms in Forbidden Configurations*

A  $(0,1)$ -matrix is simple if it has no repeated columns. Given  $(0,1)$ -matrix  $F$ , define  $F \not\leq A$  if there is no submatrix of  $A$  which is row and column permutation of  $F$ . Given  $m \in \mathbb{N}$ , define  $\text{forb}(m, F) = \max\{\# \text{ of columns of } A : A \text{ is } m\text{-rowed, simple, } F \not\leq A\}$

We'll discuss the use of Genetic Algorithms to find this combinatorial quantity and give some examples in which this technique proved useful in constructing proofs.