

# Dimensional Crossover in Anisotropic Percolation on $\mathbb{Z}^{d+s}$

Student: Pablo Almeida Gomes<sup>1</sup>,  
Advisor: Rémy de Paiva Sanchis<sup>2</sup>,

<sup>1</sup> Federal University of Minas Gerais

<sup>2</sup> Federal University of Minas Gerais

In this poster we consider bond percolation on  $\mathbb{Z}^d \times \mathbb{Z}^s$  where edges of  $\mathbb{Z}^d$  are open with probability  $p < p_c(\mathbb{Z}^d)$  and edges of  $\mathbb{Z}^s$  are open with probability  $q$ , independently of all others. We obtain bounds for the critical curve in  $(p, q)$ , with  $p$  close to the critical threshold  $p_c(\mathbb{Z}^d)$ . The results are related to the so-called dimensional crossover from  $\mathbb{Z}^d$  to  $\mathbb{Z}^{d+s}$ . This poster is based on [1].

## References

- [1] SANCHIS, R., SILVA, R.W.C, *Dimensional Crossover in Anisotropic Percolation on  $\mathbb{Z}^{d+s}$* , J. Stat. Phys. (2017) 169: 981.