

# Noise, Population Dynamics and Excluded Volume in Active Matter

Ronald Dickman<sup>1</sup>, Tiago Venzel Rosembach<sup>1,2</sup>, Ana Luiza Novaes Dias<sup>1</sup>, Leonardo Santos Lopes<sup>1</sup>

<sup>1</sup>Departamento de Física and National Institute of Science and Technology for Complex Systems, ICEx, Universidade Federal de Minas Gerais, C.P. 702, 30123-970 Belo Horizonte, Minas Gerais, Brazil

<sup>2</sup>Departamento de Formação Geral de Leopoldina, Centro Federal de Ensino Tecnológico de Minas Gerais, Rua José Peres 558, Cento, Leopoldina, Minas Gerais 36700-001, Brazil ,

I shall review some recent results on Vicseklike models of active matter including population dynamics as well as a minimal lattice model for polar active matter with excluded volume [1]. These studies have also led to insights into the nature of the noise commonly employed in such models.

## References

- [1] T. V. Rosembach *et al.*, Phys. Rev **E 110**, 014109 (2024).

## Type

ORAL