

## **A total variation flow scheme for mean field games in ecology**

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Motivated by recent developments in mean field games (MFGs) in ecology, this talk introduces a novel connection between best response dynamics in evolutionary game theory and minimising movement schemes. The primary focus is to develop and showcase a variational approach to compute solutions for some first-order ergodic MFGs that do not inherently possess a variational structure. We will outline the theoretical framework and discuss the successful numerical implementation of the algorithms, providing examples both in one and two dimensions. This is a joint work with Dante Kalise and Domènec Ruiz-Balet.