From Kuramoto to Vicsek and Back: Synchronisation in Active Matter

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Professor Yoshiki Kuramoto, who received the Boltzmann Medal in 2025, is one of my few heroes. His influence on my work started early, and never left. Recently, some of Kuramoto's landmark results surged in the field of active matter, which is now my main area of research.

My talk will illustrate this, starting in the early days when collective oscillations were not called "time crystals", tracing the history of the now famous Vicsek model, and concluding with recent results on rotating polar flocks.

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