



Department of
Mathematical Sciences

Graduate Student Colloquium

Mr. Daniel Noelck

University of Wisconsin-Milwaukee

Friday,
Feb. 11, 2022

EMS Building
Room E495
12:30 pm



Mr. Daniel
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The McKean-Vlasov SDE

Imagine a school of fish or a flock of birds moving together. Each individual fish or bird is moving on its own, but somehow also following the entire group as a whole. In this way, it is reasonable to consider the movement of the individual agent as a random variable that depends on both its individual position, and the average position of all other agents. A system of SDE's can be set up to model the position of each individual agent.

In this talk we will investigate the limit case where the number of agents approaches infinity and derive a new SDE known as the McKean-Vlasov SDE.



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