Math 295 - Mathematics Colloquium

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Chain reactions

Abstract:

To every action, there is an equal and opposite reaction. However, there turn out to exist in nature situations where the reaction seems neither equal in magnitude nor opposite in direction to the action. We will see a variety of table-top demos and experimental movies, apparently in more and more violation of Newton’s 3rd law, and give a full analysis of what is happening, discovering in the end that these phenomena are in a sense generic. The keys are shock, singular material property, and supply of ‘critical geometry’.

Host: Melvin Leok

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