Title:	Dynamics Of XY Model And Analogy With Non-Newtonian Fluid
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Abstract:	Classical one-dimensional XY model has been proven to imitate some character- istics of non-Newtonian fluids. In this work we study the dynamics of rotors present in an XY system when administered between counter rotating boundaries. As shown in a research paper [Evans 15], we applied Langevin dynamics to 1D XY system to replicate the results which proposed its analogous nature with non-Newtonian fluid. Different distinct types of flow regimes were observed under different combination of system parameters. Then the one chain system was modified to two chain system with the chains aligned parallel and perpendicular to each other. They were also evolved under different combinations of system parameters. We attempted to understand how such a change would affect and alter the dynamics of the system.
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