Magnetic reconnection in Magnetohydrodynamics

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The goal of this talk is to provide examples of periodic solutions of the Magnetohydrodynamics equations (MHD) such that the topology of the magnetic lines changes during the evolution. This phenomenon, known as magnetic reconnection, is of particular relevance for physicists, in particular in the study of highly conducting plasmas. Although numerical and experimental evidences exist, analytical examples of magnetic reconnection were not known.

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