

Seminar of the Work Group  
Nonlinear Partial Differential Equations  
WS 23/24

**November 14th, 2023, 11:30 - 13:00**  
**Seminar room: SR 3.061**

On the Sobolev Stability Threshold for the 2D MHD Equations for vanishing  
resistivity limit

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**Abstract**

We consider the evolution of the magnetohydrodynamic (MHD) equations in a periodic channel near a combination of Couette flow and constant magnetic field. We study the regime where viscosity is way larger than resistivity. In particular, we show that this regime obtains algebraic growth for vanishing Resistivity. For small data we establish an upper bound on the Sobolev stability threshold.