A robust preconditioner for the incompressible MHD models

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Time: 9:00 - 10:00 AM

Location: 358 Willard Blg.

Coffee and donuts will be provided

Abstract: The incompressible MHD system models the interaction between electromagnetic fields and conducting fluids. This coupled nonlinear system is difficult to solve. In my talk, I will present a robust preconditioner for the linearized system and its convergence analysis. I also use preliminary numerical tests to support the theoretical conclusions and demonstrate the robustness of the proposed preconditioner.

Bio: Yicong Ma is a graduate student from the department of mathematics in Penn State University. She received the bachelor degree in scientific & engineering computing from Peking University in 2011. Her research interest includes computational electro-magnetics and preconditioning for nonlinear systems.