Universität Stuttgart

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Vortragsankündigung

Der Vortag findet im Rahmen des Institutsseminars des IANS,

am **Mittwoch, den 12.07.2023,**
um 14:30 Uhr,

im **Pfaffenwaldring 57, Raum 7.122** (IANS-Seminarraum) statt.

Es spricht **Herr Prof. Dr. Patrick Henning (Ruhr-Universität Bochum)**

zum Thema:

„The numerical approximation of superconductors in the high-kappa regime"

Abstract:

In this talk we study discrete minimizers of the Ginzburg-Landau energy functional in finite element spaces. Special focus is given to the influence of the Ginzburg-Landau parameter "kappa". This parameter is of physical interest as large values can trigger the appearance of vortex lattices. Since the vortices have to be resolved on sufficiently fine computational meshes, it is important to translate the size of kappa into a mesh resolution condition which can be done through error estimates that are explicit with respect to kappa and the mesh size h. We discuss the analytical issues faced in deriving such estimates, present corresponding results and illustrate our findings in numerical experiments. At the end of the talk we give an outlook on approximations in generalized finite element spaces.

Alle Interessenten sind herzlich eingeladen!

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