

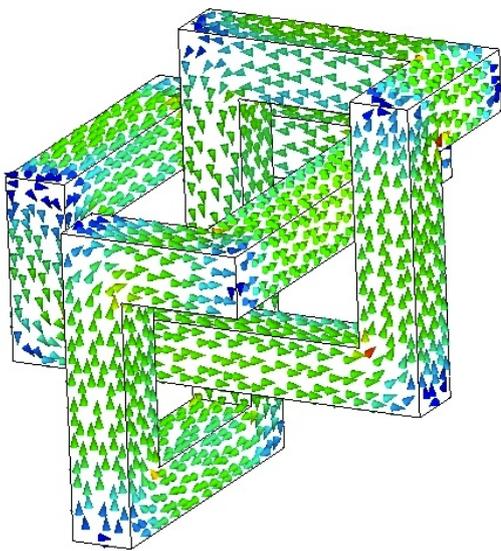
Kolloquium

Institut für Mathematik

Universität Innsbruck

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Finite elements in electromagnetism and application to eddy current equations



Re(J) [A/m²]
1.519e+003
1.139e+003
7.594e+002
3.797e+002
0.000e+000

One of the most successful methods used in numerical approximation of partial differential equations is without a doubt the finite element method.

In this talk we first present which type of finite elements are employed in electromagnetism, and in which way the associated degrees of freedom are chosen. Then we briefly describe how the numerical approximation of Maxwell equations stems from the variational formulation of the problem.

Finally, the eddy current approximation of Maxwell equations is introduced, and it is shown how topological concepts enter into play when looking for an efficient numerical solution of this problem.

Do · 26 · Juni

16:15 · HS · D