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## Dr. Christof Melcher

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## Personal Information

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- Diplom in Mathematics, [University of Heidelberg](#) (1999)
- Ph.D. at the [Max-Planck-Institute for Mathematics in the Sciences](#) (2002)
- Dunham Jackson Assistant Professor, [University of Minnesota](#) (2002-2004)
- Head of junior research group Applied Analysis, [Humboldt-University Berlin](#) and [DFG Research Center Matheon](#)

## Research Areas

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- Partial differential equations
- Calculus of variations
- Mathematical aspects of magnetism and materials science

## Research Projects within the DFG Research Center

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- [Pattern formation in magnetic thin films](#)

## Recent Papers

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- The logarithmic tail of Néel walls, [Arch. Rational Mech. Anal. 168 \(2\)](#) (2003)
- Logarithmic lower bounds for Néel walls, [Calc. Var. PDE 21 \(2\) 209-219](#) (2004)
- Domain wall motion in ferromagnetic layers, [Physica D 192, 249-264](#) (2004)
- Existence of partially regular solutions for Landau-Lifshitz equations in  $\mathbb{R}^3$ , [preprint](#) (2004), to appear in Comm. PDE

## Scientific Awards

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- Otto-Hahn-Medaille (2002), [Max-Planck-Society](#)



Christof Melcher Nov 19 2004