

# Curriculum vitae: Dietmar Hömberg

## 1 Personal

Date of birth: 12.8.1961  
Nationality: German  
Phone +49 30 20372-491  
Fax +49 30 20372-303  
E-mail dietmar.hoemberg@wias-berlin.de  
Home page: www.wias-berlin.de/~hoemberg  
Address: Weierstrass Institute for Applied Analysis and Stochastics (WIAS)  
Mohrenstrasse 39, 10117 Berlin, Germany

## 2 Academic qualifications

1988 Diploma, University of Münster  
1993 Ph.D. University of Essen  
2002 Habilitation, Technische Universität Berlin

## 3 Employment

1988–1994 Research assistant, University of Essen  
1994–2003 Research associate, WIAS Berlin  
since 2003 Full professor, Technische Universität Berlin  
and head of research group “Nonlinear Optimization  
and Inverse Problems” of WIAS  
since 2014 adjunct professor, Norwegian University of Science and Technology, Trondheim

## 4 Fields of interest

- phase transitions
- optimal control of PDEs
- optimal shape design
- nonlinear optimization

## 5 Functions in scientific organizations, scientific service

- Past president and Board member of European Consortium for Mathematics in Industry (ECMI)

- Vice-chair of Technical Committee 7, International Federation for Information Processing
- Chair of Cost Action TD1409 (Mathematics for Industry Network)
- Scientist in Charge of Application Area 'Sustainable Energies' of Research Center MATHEON – Mathematics for key technologies

## 6 Selected publications

1. Hömberg, D., Meyer, Ch., Rehberg, J., Ring, W.: Optimal control for the thermistor problem, *SIAM J. Control Optim.*, 48 (2010), 3449–3481.
2. Chelminski, K., Hömberg, D., Rott, O.: On a thermomechanical milling model, *Nonlinear Anal. Real World Appl.*, 12 (2011), 615–632.
3. Hömberg, D., Liu, J., Togobytska, N.: Identification of the thermal growth characteristics of coagulated tumor tissue in laser-induced thermotherapy, *Math. Methods Appl. Sci.*, 35 (2012), 497–509.
4. Hömberg, D., Krumbiegel, K., Rehberg, J.: Boundary coefficient control — A maximal parabolic regularity approach, *Appl. Math. Optim.*, 67 (2013), 3–31.
5. Hömberg, D., Lu, S., Sakamoto, K., Yamamoto, M.: Parameter identification in nonisothermal nucleation and growth processes, *Inverse Problems*, 30 (2014), 035003/1–035003/24.
6. Hömberg, D., Petzold, T., Rocca, E.: Analysis and simulations of multifrequency induction hardening, *Nonlinear Anal. Real World Appl.*, 22 (2015), 84–97.
7. Sturm, K., Hintermüller, M., Hömberg, D.: Distortion compensation as a shape optimisation problem for a sharp interface model, *Comput. Optim. Appl.*, 64 (2016), pp. 557–588.
8. Ghezzi, L., Hömberg, D., eds., *Math for the Digital Factory*, 27 of *Mathematics in Industry/The European Consortium for Mathematics in Industry*, Springer International Publishing AG, Cham, 2017, x+348 pages.
9. Hömberg, D., Patacchini, F.S., Sakamoto, K., Zimmer, J.: A revisited Johnson–Mehl–Avrami–Kolmogorov model and the evolution of grain-size distributions in steel, *IMA J. Appl. Math.*, 82 (2017), pp. 763–780.
10. Farshbaf Shaker, M.H., Henrion, R., Hömberg, D.: Properties of chance constraints in infinite dimensions with an application to PDE constrained optimization, *Set-Valued Var. Anal. Theory and Applications*. Springer, Dordrecht (2017), published online on 11.10.2017, <http://doi.org/10.1007/s11228-017-0452-5>.