# Dietmar Hömberg

List of Publications by Year
in descending order

| 29 papers | 381 citations | 933447 10 h-index | 794594 19 g-index |
|-----------|---------------|------------------|------------------|
| 31 all docs | 31 docs citations | 31 times ranked | 268 citing authors |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 1 | A mathematical model for induction hardening including mechanical effects. Nonlinear Analysis: Real World Applications, 2004, 5, 55-90. | 1.7 | 54 |
| 2 | Simulation of multi-frequency-induction-hardening including phase transitions and mechanical effects. Finite Elements in Analysis and Design, 2016, 121, 86-100. | 3.2 | 54 |
| 3 | On a mathematical model for laser-induced thermotherapy. Applied Mathematical Modelling, 2010, 34, 3831-3840. | 4.2 | 49 |
| 4 | Graded-material design based on phase-field and topology optimization. Computational Mechanics, 2019, 64, 1589-1600. | 4.0 | 36 |
| 5 | Numerical simulation of the surface hardening of steel. International Journal of Numerical Methods for Heat and Fluid Flow, 1999, 9, 705-724. | 2.8 | 30 |
| 6 | A phase-field-based graded-material topology optimization with stress constraint. Mathematical Models and Methods in Applied Sciences, 2020, 30, 1461-1483. | 3.3 | 25 |
| 7 | Analysis and simulations of multifrequency induction hardening. Nonlinear Analysis: Real World Applications, 2015, 22, 84-97. | 1.7 | 24 |
| 8 | Optimal Shape Design of Inductor Coils for Surface Hardening. SIAM Journal on Control and Optimization, 2003, 42, 1087-1117. | 2.1 | 16 |
| 9 | Assessment and design of an engineering structure with polymorphic uncertainty quantification. GAMM Mitteilungen, 2019, 42, e201900009. | 5.5 | 11 |
| 10 | Optimal Control of a Cooling Line for Production of Hot Rolled Dual Phase Steel. Steel Research International, 2014, 85, 1328-1333. | 1.8 | 10 |
| 11 | A MATHEMATICAL MODEL FOR CASE HARDENING OF STEEL. Mathematical Models and Methods in Applied Sciences, 2009, 19, 2101-2126. | 3.3 | 8 |
| 12 | Modelling and simulation of flame cutting for steel plates with solid phases and melting. Journal of Mathematics in Industry, 2020, 10, . | 1.2 | 8 |
| 13 | A revisited Johnson–Mehl–Avrami–Kolmogorov model and the evolution of grain-size distributions in steel. IMA Journal of Applied Mathematics, 2017, 82, 763-780. | 1.6 | 7 |
| 14 | Comparison of various uncertainty models with experimental investigations regarding the failure of plates with holes. Reliability Engineering and System Safety, 2020, 203, 107106. | 8.9 | 7 |
| 15 | Identification of the thermal growth characteristics of coagulated tumor tissue in laser–induced thermotherapy. Mathematical Methods in the Applied Sciences, 2012, 35, 497-509. | 2.3 | 6 |
| 16 | A thermoelastic contact problem with a phase transition. IMA Journal of Applied Mathematics, 2006, 71, 479-495. | 1.6 | 5 |
| 17 | On the evaluation of dilatometer experiments. Applicable Analysis, 2009, 88, 669-681. | 1.3 | 5 |
| 18 | Parameter identification in non-isothermal nucleation and growth processes. Inverse Problems, 2014, 30, 035003. | 2.0 | 5 |

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|---|---------|----|-----------|
| 19 | Uniqueness for an inverse problem for a nonlinear parabolic system with an integral term by one-point Dirichlet data. Journal of Differential Equations, 2019, 266, 7525-7544. | 2.2 | 5 |
| 20 | On an inverse problem related to laser material treatments. Inverse Problems, 2006, 22, 1855-1867. | 2.0 | 4 |
| 21 | Phase Transformation Modelling and Parameter Identification from Dilatometric Investigations. Steel Research International, 2008, 79, 793-799. | 1.8 | 4 |
| 22 | A model for resistance welding including phase transitions and Joule heating. Mathematical Methods in the Applied Sciences, 2011, 34, 2077-2088. | 2.3 | 4 |
| 23 | Three-dimensional numerical study of heat-affected zone in induction welding of tubes. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2020, 39, 213-219. | 0.9 | 3 |
| 24 | Weak entropy solutions to a model in induction hardening, existence and weak-strong uniqueness. Mathematical Models and Methods in Applied Sciences, 2021, 31, 1867-1918. | 3.3 | 1 |
| 25 | Modeling, analysis and simulation of case hardening of steel. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1150809-1150810. | 0.2 | 0 |
| 26 | A time optimal control problem for the collision-free robot motion planning. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 725-726. | 0.2 | 0 |
| 27 | Mathematical analysis of a thermomechanical milling process. GAMM Mitteilungen, 2011, 34, 59-63. | 5.5 | 0 |
| 28 | Optimal control of multiphase steel production. Journal of Mathematics in Industry, 2019, 9, . | 1.2 | 0 |
| 29 | Nucleation Rate Identification in Binary Phase Transition. Mathematics for Industry, 2014, , 227-243. | 0.4 | 0 |