

List of Publications

Dietmar Wilhelm Weiss, 2018-07-31

Thesis

- Weiß, D. : Ermittlung des Temperaturfeldes und der effektiven Wärmeleitfähigkeit mit Hilfe der Methode der finiten Elemente bei Stoffen mit poröser Struktur. M.Sc. thesis, Technical University of Magdeburg, Germany, 1989
- Weiß, D. : Finite element simulation of temperature distribution and weld pool deformation in gas metal arc welding (German: Finite-Elemente-Simulation von Temperaturfeld und Schmelzbaddeformation beim Lichtbogenschweißen). Ph.D. thesis, Otto-von-Guericke University, Magdeburg, Germany, 1994

Patents

- Lindholt, P.; Weiss, D. : A variable displacement piston machine with sensor. Sauer-Danfoss ApS, Denmark, US Patent Application, 2009
- Tychsen, T.; Weiss, D. : Fluid-Rotationsmaschine mit einer Sensoranordnung, Sauer-Danfoss ApS, Denmark, German Patent Application, 2010
- Weiss, D. : Dehumidification Method and Arrangement, Danfoss Power Electronics A/S, Denmark, EU Patent Application, 2012

Articles

- Felgenhauer, A.; Weiß, D. : Eine nichtkonforme FEM mit Standardnetzgenerierung für die Poissongleichung im Raum. Wissenschaftliche Zeitschrift der TU Magdeburg 33 (1989) 6, 31-34
- Lube, G.; Weiß, D. : Numerische Simulation des stationären 2D-und 3D Wärme-und Stofftransports mittels Stromliniendiffusion-FEM. Technische Mechanik 11 (1990) 4, 229-237
- Lube, G.; Weiß, D. : Streamline Diffusion Finite Element Method for Quasilinear Elliptic Problems. Zeitschrift für angewandte Mathematik und Mechanik 71 (1991) 6, 671-674
- Lube, G.; Weiß, D. : Finite element method of Galerkin/Least-Squares type for singularly perturbed parabolic equations. Preprint Math 11/91, TU Magdeburg, 1991

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- Weiß, D.; Lube, G. : Anwendung der Finite-Elemente-Methode zur Simulation von Temperaturverteilung und Nahtausbildung beim Lichtbogenschweißen. Zeitschrift für angewandte Mathematik und Mechanik, 74 (1994) 6, T551-T553
- Lube, G.; Weiß, D. : Stabilized Finite Element Methods for Singularly Perturbed Parabolic Problems. Applied Numerical Mathematics 17 (1995) 431-459
- Mahrle, A.; Schmidt, J.; Weiss, D. : Simulation of Temperature Fields in Arc and Beam Welding. Heat and Mass Transfer 36 (2000), 117-126
- Pittner, A.; Weiss, D.; Schwenk, C.; Rethmeier, M. : Methodology to Improve Applicability of Welding Simulation, Science & Technology of Welding and Joining 13 (2008) 6, 496-508

Proceedings

- Lube, G.; Weiß, D. : Simulation von Diffusion-Konvektion-Reaktion-Gleichungen mittels Stromlinien-Diffusion-FEM. WBZ Computational Mathematics, TU Dresden, 7/1990, 54-61
- Lube, G.; Weiß, D. : Galerkin/least-Squares methods for singularly perturbed parabolic equations. Proceedings of ISAM 1991 (eds. H.G.Roos et. al), TU Dresden 1991, 83-90
- Weiß, D.; Schmidt, J.; Franz, U.; Cronacher, F. : Simulation von Temperaturverteilung und Nahtausbildung beim Schweißen von Platten in unterschiedlicher Position. Tagungsband der 1. Fachtagung "Schweißtechnische Software" im Rahmen der Fachmesse "Schweißen und Schneiden", Essen, September 1993, DVS-Verlag Düsseldorf, 140-143
- Auge, A.; Lube, G.; Weiß, D. : Galerkin/Least-Squares-FEM and Anisotropic Mesh Refinement. Proceedings of the 9th GAMM-Seminar 1993, Note on Numerical Fluid Mechanics, Volume 46, Vieweg-Verlag, Braunschweig, Wiesbaden 1994, 1-16
- Weiß, D.; Franz, U.; Lube, G.; Schmidt, J. : Numerical Simulation of Temperature Distribution and Seam Forming in Narrow Gap Welding. Proceedings of the 3rd International Conference: Advanced Computational Methods in Heat Transfer, Southampton, UK 1994 (eds. L. C. Wrobel, C. A. Brebbia, A. J. Nowack), Computational Mechanics Publications, Southampton 1994, UK, 255-262
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- Weiss, D.; Franz, U.; Mahrle, A.; Schmidt, J. : Modelling of Capacitor Discharge Stud Welding, Proceedings of the 10th TWI Conference: Computer Technology in Welding and Manufacturing, Copenhagen, Denmark, June 2000
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- Pittner, A.; Weiß, D.; Jianchun Ji, J.; Seyffarth, P. : Vorhersage der Nahtgeometrie beim Laser-MSG- Hybridschweißen durch verknüpfte mathematische und empirische Modelle. Innovationsforum: Hybridtechnologie-Fügetechnik für die Fertigung der Zukunft, Halle, Germany, November 2004
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- Pittner, A., Weiss, D., Schwenk, C., Rethmeier M. : Fast Generation and Prediction of Welding Temperature Fields for Multiple Experiments, 4th International Conference Mathematical Modelling and Information Technologies in Welding and Related Processes, E. O. Paton Electric Welding Institute, Katsiveli, Ukrain, May 2008
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- Weiß, D.; Lube, G. : Finite Element Code GLSFEM. Report, University of Magdeburg, Germany, March 1995
- Weiss, D. : pmlib - Model Library for Process Modeling. Report, Technical University of Denmark, Lyngby, February 2004
- Weiss, D. : Public Framework for Decomposition of Process Models. Report, Technical University of Denmark, Lyngby, Denmark, July 2004

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- Weiß, D. : Ermittlung der effektiven Wärmeleitfähigkeit strukturierter Stoffe unter Anwendung der Finite-Elemente-Methode. National Student Conference on Physics, Martin Luther University, Halle, Germany, February 1989
- Weiß, D. : Anwendung der Finite-Elemente-Methode zur Berechnung des Temperaturfeldes und thermischer Stoffwerte poröser Materialien. Konferenz Apparate-und Anlagenbau, TU Magdeburg, Germany, February 1989
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- Weiß, D. : Simulation of Arc Welding with Deep Depressed Weld Pool Surfaces. The Pennsylvania State University, State College, PA, February 1994
- Weiß, D.; Lube, G. : Modellierung und numerische Simulation des Engspaltschweißens bei senkrechter Plattenposition. Weierstraß Institute, Berlin, Germany, August 1995
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- Weiss, D. W.: Error compensation in flow meters, DANSIS Seminar on Flow Metering, Skanderborg, Denmark 2017

Open Source Projects

- Weiß, D. W. : grayboxes - Creation and evaluation of white box, gray box and black box models of physical and chemical transport phenomena, 2016-, github.com/dwweiss/grayboxes