

## Schriftenverzeichnis/List of Publications

### Qualifizierungsarbeiten/Theses

- [1] L. Angermann. Die Regularisierung einer Klasse singulärer Integralgleichungen. Diplomarbeit (in Russisch), Universität Charkow, 1982.
- [2] L. Angermann. Die Grundgleichungen der inneren Elektronik als Evolutionsproblem im Banach-Raum – Modellanalyse und Semidiskretisierung. Dissertation, TU Dresden, 1987.
- [3] L. Angermann. A posteriori Fehlerabschätzungen für Lösungen gestörter Operatorgleichungen. Habilitationsschrift, Universität Erlangen-Nürnberg, 1994.

### Preprints (nicht anderweitig publiziert/not published elsewhere)

- [1] L. Angermann. Lokale Existenz, Eindeutigkeit und Vorzeicheninvarianz der Lösung einer quasilinearen Anfangs-Randwertaufgabe. Informationen der TU Dresden 07-19-84, TU Dresden, 1984.
- [2] L. Angermann. The application of mass-lumping techniques to the basic equations of inner electronics. Informationen der TU Dresden 07-04-87, TU Dresden, 1987.
- [3] L. Angermann.  $L_\infty$ -stability of some mass-lumping semidiscretizations of the transient semiconductor device equations. Informationen der TU Dresden 07-12-88, TU Dresden, 1988.
- [4] L. Angermann. A refinement indicator for the mesh-control in solving plane elliptic problems. Informationen der TU Dresden 07-19-89, TU Dresden, 1989.
- [5] L. Angermann. Zur Simulation der Migration von Radionukliden im Untergrund. Bericht SAAS-366, Staatliches Amt für Atomsicherheit und Strahlenschutz der DDR, 1989.
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- [7] L. Angermann. Computable estimation of error indicators associated with local boundary value problems. Informationen der TU Dresden 07-04-91, TU Dresden, 1991.
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- [9] L. Angermann. On  $\varepsilon$ -uniform  $L_\infty$ -stability of a FVM-discretization of a singularly perturbed elliptic problem. Bericht 155, Institut für Angewandte Mathematik, Universität Erlangen-Nürnberg, 1992.

- [10] L. Angermann. An introduction to finite volume methods for linear elliptic equations of second order. Bericht 164, Institut für Angewandte Mathematik, Universität Erlangen-Nürnberg, 1995.
- [11] L. Angermann. An upwind scheme of finite volume type with reduced crosswind diffusion. Bericht 165, Institut für Angewandte Mathematik, Universität Erlangen-Nürnberg, 1995.
- [12] L. Angermann. A finite element method for the numerical solution of convection-dominated anisotropic diffusion equations. Bericht 201, Institut für Angewandte Mathematik, Universität Erlangen-Nürnberg, 1996.
- [13] L. Angermann. Finite volume schemes as non-conforming Petrov-Galerkin approximations of primal-dual mixed formulations. Bericht 181, Institut für Angewandte Mathematik, Universität Erlangen-Nürnberg, 1996.
- [14] L. Angermann. Error analysis of upwind-discretizations for the steady-state incompressible Navier-Stokes equations. Preprint Nr. 33, Fakultät für Mathematik, Otto-von-Guericke-Universität Magdeburg, 1998. (Part 1 was published in *Advances in Computational Mathematics*, 13:167–198, 2000, Part 2 (Applications) is still unpublished).
- [15] L. Angermann. Residual type *a posteriori* error estimates for upwinding finite volume approximations of elliptic boundary value problems. Mathematik-Bericht 2010/1, Institut für Mathematik, Technische Universität Clausthal, 2010.
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- [17] L. Angermann. Semi-discrete finite element approximation applied to Maxwell's equations in nonlinear media. e-print [arxiv.org/abs/1901.03605](https://arxiv.org/abs/1901.03605), 2019.
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- [22] J. Rang and L. Angermann. Remarks on the differentiation index and on the perturbation index of non-linear differential algebraic equations. *Mathematik-Bericht 2005/3*, Institut für Mathematik, Technische Universität Clausthal, 2005.

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- [1] A. Anees and L. Angermann. Time domain finite element method for Maxwell's equations. *IEEE Access*, 7:63852–63867, 2019.
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### Buchbeiträge/Book Chapters

- [1] L. Angermann and H.-G. Roos. A posteriori error estimates for elliptic boundary value problems. Chapter 8 of *Computational methods for boundary and interior layers in several dimensions*, J.J.H. Miller (ed.), pages 154-174. Boole Press, Dublin, 1991.
- [2] L. Angermann and V.V. Yatsyk. Generation and resonance scattering of waves on cubically polarisable layered structures. In L. Angermann, editor, *Numerical Simulations – Applications, Examples and Theory*, pages 175–212. InTech, Rijeka/Vienna, Croatia/Austria, 2011.
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- [1] A. Al Nabulsi, O. Abdalla, L. Angermann, and A. Bolz. New modification of Lamberts-Beer’s law using simulation of light propagation in tissue for accurate non-invasive Hemoglobin measurements. In *International Conference on Applied Mathematics and Pharmaceutical Sciences (ICAMPS 2012), 7–8 January 2012, Dubai*, pages 601–608, Pattaya, Thailand, 2012. Planetary Scientific Research Center (PSRC).
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