

Publikationsbericht 2007

Fakultät für Mathematik



Otto-von-Guericke-Universität Magdeburg

Fakultät für Mathematik

Universitätsplatz 2, Gebäude 02, 39106 Magdeburg
Tel. +49 (0)391 67 18663, Fax +49 (0)391 67 12758
fma@uni-magdeburg.de

1. Leitung

Prof. Dr. rer. nat. habil. Wolfgang Willems (Dekan ab 10/2006, Prodekan bis 09/2006)

Prof. Dr. rer. nat. habil. Gerald Warnecke (Prodekan ab 10/2006, Dekan bis 09/2006)

Prof. Dr. rer. nat. habil. Hans-Christoph Grunau (Studiendekan)

2. Institute

Institut für Algebra und Geometrie

Institut für Analysis und Numerik

Institut für Mathematische Optimierung

Institut für Mathematische Stochastik

3. Veröffentlichungen

Dissertationen

Schmelter, Thomas

Experimental design for mixed models with application to population pharmacokinetic studies. - Magdeburg, Univ., Fak. für Mathematik, Diss., 2007; [Link unter URL](#); VIII, 94 S.: graph. Darst.; 30 cm

Sohr, Mandy

Analysis of functional magnetic resonance imaging time series by independent component analysis. - Magdeburg, Univ., Fak. für Mathematik, Diss., 2007; [Link unter URL](#); X, 125 S., S. I - VII: Ill., graph. Darst.; 30 cm

Institut für Algebra und Geometrie

Universitätsplatz 2, 39106 Magdeburg
Tel. +49 (0)391 67 18713 / 18321, Fax +49 (0)391 67 11213
kerstin.held@mathematik.uni-magdeburg.de oder
jeannette.polte@mathematik.uni-magdeburg.de

1. Leitung

Prof. Dr. Alexander Pott (geschäftsführender Leiter)
Prof. Dr. Wolfgang Willems
Jun.-Prof. Dr. Christian Bey
Dr. Achill Schürmann

2. Hochschullehrer

Juniorprofessor Dr. Christian Bey
Prof. Dr. Heidemarie Bräsel
Prof. Dr. Martin Henk
Prof. Dr. Herbert Henning
PD Dr. Thorsten Holm
Prof. Dr. Alexander Pott
Prof. Dr. Wolfgang Willems

3. Veröffentlichungen

Originalartikel in begutachteten internationalen Zeitschriften

Bessenrodt, Christine; Holm, Thorsten

Weighted locally gentle quivers and Cartan matrices

In: Journal of pure and applied algebra. - Amsterdam: North-Holland Publ., Bd. 212.2008, 1, S. 204-221;

[Link unter URL](#)

[Imp.fact.: 0.470]

Bessenrodt, Christine; Holm, Thorsten; Zimmermann, Alexander

Generalized Reynolds ideals for non-symmetric algebras

In: Journal of algebra. - San Diego, Calif. : Acad. Press, Bd. 312.2007, 2, S. 985-994; [Link unter URL](#)

[Imp.fact.: 0.459]

Bey, Christian; Henk, Martin; Wills, Jörg M.

Notes on the roots of Ehrhart polynomials

In: Discrete & computational geometry. - New York, NY: Springer, Bd. 38.2007, 1, S. 81-98; [Link unter URL](#)

[Imp.fact.: 0.477]

Bocian, Rafal; Skowroski, Andrzej; Holm, Thorsten

Derived equivalence classification of nonstandard selfinjective algebras of domestic type

In: Communications in algebra. - Philadelphia, Pa. : Taylor & Francis, Bd. 35.2007, 2, S. 515-526; [Link unter URL](#)

[Imp.fact.: 0.303]

Eid, Wolfram

Geometrical analogies in mathematics lessons

In: Teaching mathematics and its applications. - Oxford: Oxford Univ. Press, insges. 11 S.; [Abstract unter URL](#), 2007

Henk, Martin; Tsintsifas, Georg A.

Lattice point coverings

In: Shuxue-jinzhan. - Beijing, Bd. 36.2007, 4, S. 441-446

Holm, Thorsten; Bessenrodt, Christine

q-Cartan matrices and combinatorial invariants of derived categories for skewed-gentle algebras

In: Pacific journal of mathematics. - Berkeley, Calif. [u.a.], Bd. 229.2007, 1, S. 25-48; [Link unter URL](#)

[Imp.fact.: 0.406]

Holm, Thorsten; Kessar, Radha; Linckelmann, Markus

Blocks with a quaternion defect group over a 2-ADIC ring - the case A 4

In: Glasgow mathematical journal. - Cambridge: Cambridge Univ. Press, Bd. 49.2007, 1, S. 29-43; [Link unter URL](#)

[Imp.fact.: 0.241]

Kyureghyan, Gohar

Crooked maps in F_2

In: Finite fields and their applications. - San Diego, Calif. [u.a.]: Academic Press, Bd. 13.2007, 3, S. 713-726;

[Link unter URL](#)

[Imp.fact.: 0.338]

Kyureghyan, Gohar

The only crooked power functions are x^{2k+2l}

In: European journal of combinatorics. - London [u.a.]: Academ. Pr., Bd. 28.2007, 4, S. 1345-1350; [Link unter URL](#)

[Imp.fact.: 0.320]

Martínez-Pérez, Conchita; Willems, Wolfgang

Self-dual doubly even 2-quasi-cyclic transitive codes are asymptotically good

In: Institute of Electrical and Electronics Engineers: IEEE transactions on information theory. - Piscataway, NJ: IEEE, Bd. 53.2007, 11, S. 4302-4308; [Link unter URL](#)

[Imp.fact.: 1.938]

Santos, Francisco; Schürmann, Achill; Vallentin, Frank

Lattice delone simplices with super-exponential volume

In: European journal of combinatorics. - London: Academic Press, Bd. 28.2007, 3, S. 801-806; [Abstract unter URL](#)

[Imp.fact.: 0.320]

Sikirić, Mathieu Dutour; Schürmann, Achill; Vallentin, Frank

Classification of eight-dimensional perfect forms

In: American Mathematical Society: Electronic research announcements of the American Mathematical Society.

- Providence, RI, Bd. 13.2007, S. 21-32; [Abstract unter URL](#)

[Imp.fact.: 0.667]

Originalartikel in begutachteten nationalen Zeitschriften

Henk, Martin

Polynomdarstellungen von Polyedern

In: Deutsche Mathematiker-Vereinigung: Jahresbericht der Deutschen Mathematiker-Vereinigung. - Stuttgart:

Teubner, Bd. 109.2007, 2, S. 51-69

Willems, Wolfgang

Mathematische Aspekte der Codierungstheorie

In: Deutsche Mathematiker-Vereinigung: Jahresbericht der Deutschen Mathematiker-Vereinigung. - Stuttgart:

Teubner, Bd. 109.2007, 2, S. 71-79

Originalartikel in begutachteten zeitschriftenartigen Reihen

Parker, Matthew G. ; Pott, Alexander

On boolean functions which are bent and negabent

In: Sequences, subsequences, and consequences. - Berlin [u.a.]: Springer, S. 9-23; Lecture notes in computer science; 4893, 2007

[SSC; (Los Angeles, Calif.): 2007.05.31-06.02]

Wissenschaftliche Monografien

Bock, Volker; Eid, Wolfram

Schriftliche Abiturprüfung im Fach Mathematik - Kompetenzentwicklung und Aufgabenkultur. - Hildesheim [u.a.]: Verl. Franzbecker KG; 136 S.: graph. Darst., 2007

Bock, Volker; Eid, Wolfram

Schriftliche Abiturprüfung im Fach Mathematik - Kompetenzentwicklung und Aufgabenkultur. - Dialog; 18; Halle (Saale); 136 S: graph. Darst., 2007

Buchbeiträge

Bey, Christian; Kyureghyan, Gohar

An association scheme of a family of cubic bent functions

In: Codage et Cryptographie, Versailles, France, April 16-20, 2007. - Le Chesnay Cedex: INRIA Rocquencourt, S. 13-19

Kongress: WCC 2007; (Versailles, France): 2007.04.16-20

International Workshop on Coding and Cryptography; (Versailles, France): 2007.04.16-20

[WCC 2007]

Jungnickel, Dieter; Pott, Alexander; Smith, Ken W.

Difference sets

In: Handbook of combinatorial designs. - Boca Raton, Fla. [u.a.]: Chapman & Hall/CRC, S. 419-437, 2007

Martínez-Pérez, Conchita; Willems, Wolfgang

Asymptotically good codes

In: Codage et Cryptographie, Versailles, France, April 16-20, 2007. - Le Chesnay Cedex: INRIA Rocquencourt, S. 233-236

Kongress: International Workshop on Coding and Cryptography; (Versailles, France): 2007.04.16-20

[WCC 2007]

Institut für Analysis und Numerik

Universitätsplatz 2, 39106 Magdeburg

Tel. +49 (0)391 67 18649 / 18586 / 18700, Fax +49 (0)391 67 18073

ian@uni-magdeburg.de

1. Leitung

Prof. Dr. Hans-Christoph Grunau

Prof. Dr. Lutz Tobiska (Geschäftsführender Leiter)

Prof. Dr. Gerald Warnecke

Priv.-Doz. Dr. Bernd Rummler

2. Hochschullehrer

Prof. Dr. Klaus Deckelnick

Prof. em. Dr. Herbert Goering

Prof. Dr. Hans-Christoph Grunau

Priv.-Doz. Dr. Matthias Kunik

Priv.-Doz. Dr. Bernd Rummler

Priv.-Doz. Dr. Friedhelm Schieweck

Prof. Dr. Lutz Tobiska

Prof. Dr. Guofang Wang

Prof. Dr. Gerald Warnecke

3. Veröffentlichungen

Originalartikel in begutachteten internationalen Zeitschriften

Barrett, John W. ; Deckelnick, Klaus

Existence, uniqueness and approximation of a doubly-degenerate nonlinear parabolic system modelling bacterial evolution

In: Mathematical models & methods in applied sciences. - Singapore [u.a.]: World Scientific, Bd. 17.2007, 7, S. 1095-1127; [Link unter URL](#)

[Imp.fact.: 1.805]

Berchio, Elvise; Grunau, Hans-Christoph

Local regularity of weak solutions of semilinear parabolic systems with critical growth

In: Journal of evolution equations. - Basel [u.a.]: Birkhäuser, Bd. 7.2007, 1, S. 177-196; [Link unter URL](#)

[Imp.fact.: 0.679]

Chen, Li; Hsiao, Ling; Warnecke, Gerald

Study on a cross diffusion parabolic system

In: Acta mathematicae applicatae sinica. - Heidelberg [u.a.]: Springer, Bd. 23.2007, 1, S. 9-28; [Abstract unter URL](#)

Chen, Q. ; Jost, Jürgen; Wang, Guofang

Liouville theorems for dirac-harmonic maps

In: Journal of mathematical physics. - Melville, NY: American Institute of Physics, Bd. 48.2007, 11, S. 113517-

1-11351713; [Link unter URL](#)

[Imp.fact.: 1.018]

Dall' Acqua, Anna

On the lifetime of a conditioned brownian motion in the ball

In: Journal of mathematical analysis and applications. - Amsterdam [u.a.]: Elsevier, Bd. 335.2007, 1, S. 389-405;

[Link unter URL](#)

[Imp.fact.: 0.758]

Deckelnick, Klaus; Grunau, Hans-Christoph

Boundary value problems for the one-dimensional Willmore equation

In: Calculus of variations and partial differential equations. - Berlin: Springer, Bd. 30.2007, 3, S. 293-314;

[Link unter URL](#)

[Imp.fact.: 0.992]

Deckelnick, Klaus; Hinze, Michael

Convergence of a finite element approximation to a state-constrained elliptic control problem

In: Society for Industrial and Applied Mathematics: SIAM journal on numerical analysis. - Philadelphia, Pa. : SIAM,

Bd. 45.2007, 5, S. 1937-1953; [Link unter URL](#)

[Imp.fact.: 1.335]

Ferrero, Alberto; Grunau, Hans-Christoph

The Dirichlet problem for supercritical biharmonic equations with power-type nonlinearity

In: Journal of differential equations. - Orlando, Fla. : Elsevier, Bd. 234.2007, 2, S. 582-606; [Link unter URL](#)

[Imp.fact.: 1.166]

Franca, Leopoldo P. ; John, Volker; Matthies, Gunnar; Tobiska, Lutz

An inf-sup stable and residual-free bubble element for the Oseen equations

In: Society for Industrial and Applied Mathematics: SIAM journal on numerical analysis. - Philadelphia, Pa. : SIAM,

Bd. 45.2007, 6, S. 2392-2407; [Link unter URL](#)

[Imp.fact.: 1.335]

Ganesan, Sashikumaar; Matthies, Gunar; Tobiska, Lutz

On spurious velocities in incompressible flow problems with interfaces

In: Computer methods in applied mechanics and engineering. - Amsterdam [u.a.]: Elsevier Science, Bd. 196.2007, 7, S. 1193-1202; [Abstract unter URL](#)

[Imp.fact.: 1.553]

Ganesan, Sashikumaar; Tobiska, Lutz

An accurate finite element scheme with moving meshes for computing 3D-axisymmetric interface flows

In: International journal for numerical methods in fluids. - Chichester: Wiley, insges. 20 S.; [Abstract unter URL](#), 2007

Gazzola, Filippo; Grunau, Hans-Christoph

Global solutions for superlinear parabolic equations involving the biharmonic operator for initial data with optimal slow decay

In: Calculus of variations and partial differential equations. - Berlin: Springer, Bd. 30.2007, 3, S. 389-415;

[Link unter URL](#)

[Imp.fact.: 0.992]

Gollwitzer, Christian; Matthies, Gunnar; Richter, Reinhard; Rehberg, Ingo; Tobiska, Lutz

The surface topography of a magnetic fluid - a quantitative comparison between experiment and numerical simulation

In: Journal of fluid mechanics. - Cambridge [u.a.]: Cambridge Univ. Press, Bd. 571.2007, S. 455-474; [Link unter URL](#)

[Imp.fact.: 2.061]

Grunau, Hans-Christoph; Sweers, Guido

Regions of positivity for polyharmonic green functions in arbitrary domains

In: American Mathematical Society: Proceedings of the American Mathematical Society. - Providence, RI: Soc., Bd. 135.2007, 11, S. 3537-3546; [Link unter URL](#)
[Imp.fact.: 0.513]

Guan, Pengfrei; Lin, Chang-Shou; Wang, Guofang

Local gradient estimates for quotient equations in conformal geometry

In: International journal of mathematics. - Singapore [u.a.]: World Scientific, Bd. 18.2007, 4, S. 349-361;

[Link unter URL](#)

[Imp.fact.: 0.531]

Heuveline, Vincent; Schieweck, Friedhelm

H 1-interpolation on quadrilateral and hexahedral meshes with hanging nodes

In: Computing. - Wien [u.a.]: Springer, Bd. 80.2007, 3, S. 203-220; [Link unter URL](#)

[Imp.fact.: 0.881]

Heuveline, Vincent; Schieweck, Friedhelm

On the inf-sup condition for higher order mixed FEM on meshes with hanging nodes

In: Mathematical modelling and numerical analysis. - Les Ulis: EDP Sciences, Bd. 41.2007, 1, S. 1-20;

[Link unter URL](#)

Jost, Jürgen; Wang, Guofang; Zhou, Chunqin

Super-Liouville equations on closed Riemann surfaces

In: Communications in partial differential equations. - Philadelphia, PA: Taylor & Francis, Bd. 32.2007, 7, S. 1103-1128; [Link unter URL](#)

[Imp.fact.: 1.094]

Kumar, Jitendra; Peglow, Mirko; Warnecke, Gerald; Heinrich, Stefan

An efficient numerical technique for solving population balance equation involving aggregation, breakage, growth and nucleation

In: Powder technology. - Amsterdam [u.a.]: Elsevier, Bd. 179.2007, S. 205-228; [Link unter URL](#)

[Imp.fact.: 1.232]

Lübke, Robert; Seidel-Morgenstern, Andreas; Tobiska, Lutz

Numerical method for accelerated calculation of cyclic steady state of ModiConSMB-processes

In: Computers & chemical engineering. - Amsterdam [u.a.]: Elsevier, Bd. 31.2007, 4, S. 258-267; [Link unter URL](#)

[Imp.fact.: 1.501]

Lukáčová-Medvidová, M. ; Warnecke, Gerald; Zahaykah, Y.

On the stability of evolution Galerkin schemes applied to a two-dimensional wave equation system

In: Society for Industrial and Applied Mathematics: SIAM journal on numerical analysis. - Philadelphia, Pa. : SIAM, Bd. 44.2007, 4, S. 1556-1583; [Link unter URL](#)

[Imp.fact.: 1.335]

Matthies, Gunar; Schieweck, Friedhelm

On the reference mapping for quadrilateral and hexahedral finite elements on multilevel adaptive grids

In: Computing. - Wien [u.a.]: Springer, Bd. 80.2007, 3, S. 95-119; [Link unter URL](#)

[Imp.fact.: 0.881]

Matthies, Gunar; Skrzypacz, Piotr; Tobiska, Lutz

A unified convergence analysis for local projection stabilisations applied to the Oseen problem

In: Mathematical modelling and numerical analysis. - Les Ulis: EDP Sciences, Bd. 41.2007, 4, S. 713-742;

[Link unter URL](#)

Matthies, Gunar; Tobiska, Lutz

Mass conservation of finite element methods for coupled flow-transport problems

In: International journal of computing science and mathematics. - Genève: Inderscience Enterprise Ltd., Bd. 1.2007, 2/3/4, S. 293-307; [Link unter URL](#)

Peglow, Mirko; Kumar, Jitendra; Hampel, Robert; Tsotsas, Evangelos; Heinrich, Stefan

Towards a complete population balance model for fluidized-bed spray agglomeration

In: Drying technology. - New York, NY [u.a.]: Dekker, Bd. 25.2007, 7/8, S. 1321-1329; [Link unter URL](#)

[Imp.fact.: 1.100]

Qamar, Shamsul; Ashfaq, Azhar; Warnecke, Gerald; Angelov, I. ; Elsner, M. P. ; Seidel-Morgenstern, Andreas

Adaptive high-resolution schemes for multidimensional population balances in crystallization processes

In: Computers & chemical engineering. - Amsterdam [u.a.]: Elsevier, Bd. 31.2007, 10, S. 1296-1311; [Link unter URL](#)

[Imp.fact.: 1.404]

Qamar, Shamsul; Warnecke, Gerald

Numerical solution of population balance equations for nucleation, growth and aggregation processes

In: Computers & chemical engineering. - Amsterdam [u.a.]: Elsevier, Bd. 31.2007, 12, S. 1576-1589; [Link unter URL](#)

[Imp.fact.: 1.404]

Qurrat-UI-Ain; Qamar, Shamsul; Warnecke, Gerald

A high-resolution space-time conservative method for non-linear hyperbolic conservation laws

In: International journal of computational methods. - Singapore [u.a.]: World Scientific Publishing, Bd. 4.2007, 2, S. 223-247; [Link unter URL](#)

Rüdiger, S. ; Shuai, J. W. ; Huisinga, W. ; Nagaiah, Chamakuri; Warnecke, Gerald; Parker, I. ; Falcke, M.

Hybrid stochastic and deterministic simulations of calcium blips

In: Biophysical journal. - Bethesda, Md. : Biophysical Soc., Bd. 93.2007, 6, S. 1847-1857; [Link unter URL](#)

[Imp.fact.: 4.757]

Stynes, Martin; Tobiska, Lutz

Using rectangular Qpelements in the SDFEM for a convection-diffusion problem with a boundary layer

In: Applied numerical mathematics. - Amsterdam [u.a.]: North-Holland Publ. Co., insges. 21 S.; [Abstract unter URL](#)

[Imp.fact.: 0.835]

van den Berg, M. ; Dall' Acqua, Anna; Sweers, G. H.

Estimates for the expected lifetime of conditioned brownian motion

In: Royal Society <Edinburgh>: Proceedings // Royal Society of Edinburgh. - Edinburgh: Soc., Bd. 137.2007, 5, S. 1091-1099; [Link unter URL](#)

[Imp.fact.: 0.758]

Originalartikel in begutachteten nationalen Zeitschriften

Dittmar, Bodo; Hantke, Maren

The Robin function and its eigenvalues

In: Georgian mathematical journal. - Lemgo: Heldermann, Bd. 14.2007, 3, S. 403-417

Lange, Adian; Richter, Reinhard; Tobiska, Lutz

Linear and nonlinear approach to the Rosensweig instability

In: Gesellschaft für Angewandte Mathematik und Mechanik: GAMM-Mitteilungen. - Weinheim: Wiley-VCH, Bd. 30.2007, 1, S. 171-184

Buchbeiträge

Kumar, Jitendra; Peglow, Mirko; Warnecke, Gerald; Heinrich, Stefan; Tsotsas, Evangelos; Mörl, Lothar;

Hounslow, Mike; Reynolds, Gavin

Numerical methods on population balances

In: Modern drying technology; Vol. 1: Computational tools at different scales. - Weinheim: WILEY-VCH, S. 209-260, 2007

Artikel in Kongressbänden

Ganesan, Sashikumaar; Tobiska, Lutz

Non-isothermal spreading of a liquid droplet with dynamic contact angles on a horizontal surface

In: International Conference on Multiphase Flow <6, 2007, Leipzig>: Proceedings of the ICMF 2007, 6th International Conference on Multiphase Flow. - Leipzig, insges. 7 S.

[International Conference on Multiphase Flow; 6 (Leipzig): 2007.07.09-07.13]

Ganesan, Sashikumaar; Tobiska, Lutz

On the influence of finite element discretisations on spurious velocities in two-phase flows

In: International Conference on Multiphase Flow <6, 2007, Leipzig>: Proceedings of the ICMF 2007, 6th International Conference on Multiphase Flow. - Leipzig, insges. 8 S.

[International Conference on Multiphase Flow; 6 (Leipzig): 2007.07.09-07.13]

Hampel, Robert; Peglow, Mirko; Kumar, Jitendra; Tsatsas, Evangelos; Heinrich, Stefan

Study of agglomeration kinetics in fluidized beds referring to the moisture content of particles

In: International Conference on Population Balance Modelling <3, 2007, Québec City>: Proceedings // 3rd International Conference on Population Balance Modelling. - Univ. Laval, insges. 8 S.

[International Conference on Population Balance Modelling; 3 (Québec City): 2007.09.19-51]

Dissertationen

Nadupuri, Suresh Kumar

Numerical study of drying in porous media. - Magdeburg, Univ., Fak. für Mathematik, Diss., 2007; [Link unter URL](#); X, 96 S.: graph. Darst.; 21 cm

Nagaiah, Chamakuri

Adaptive numerical simulation of reaction - diffusion systems. - Magdeburg, Univ., Fak. für Mathematik, Diss., 2007; [Link unter URL](#); XII, 164 S.: Ill., graph. Darst.; 21 cm

Institut für Mathematische Optimierung

Universitätsplatz 2, 39106 Magdeburg
Tel. +49 (0)391 67 18756, Fax +49 (0)391 67 11171
imo@uni-magdeburg.de

1. Leitung

Prof. Dr. rer.nat.habil. Robert Weismantel (geschäftsführender Leiter)
Prof. Dr. rer. nat.habil. Dr. h.c. Eberhard Girlich
Prof. Dr. rer.nat.habil. Friedrich Juhnke
Prof. Dr. rer.nat.habil. Volker Kaibel

2. Hochschullehrer

Prof. Dr. rer. nat.habil. Dr. h.c. Eberhard Girlich
Prof. Dr. rer.nat.habil. Friedrich Juhnke
Prof. Dr. rer.nat.habil. Volker Kaibel
Prof. Dr. rer.nat.habil. Robert Weismantel
apl. Prof. Dr. rer.nat.habil. Frank Werner
Prof. em. Dr. rer.nat.habil. Karl Manteuffel

3. Veröffentlichungen

Originalartikel in begutachteten internationalen Zeitschriften

Aschenbrenner, Matthias; Hemmecke, Raymond

Finiteness theorems in stochastic integer programming

In: Foundations of computational mathematics. - New York, NY: Springer, Bd. 7.2007, 2, S. 183-227; [Link unter URL](#)
[Imp.fact.: 1.269]

Blazewicz, Jacek; Pesch, Erwin; Sterna, Malgorzata; Werner, Frank

A note on the two machine job shop with the weighted late work criterion

In: Journal of scheduling. - Boston, Mass.[u.a.]: Kluwer Academic Publ., Bd. 10.2007, 2, S. 87-95; [Link unter URL](#)
[Imp.fact.: 0.852]

Brucker, Peter; Sotskov, Yuri N. ; Werner, Frank

Complexity of shop-scheduling problems with fixed number of jobs - a survey

In: Mathematical methods of operations research. - Heidelberg: Physica-Verl., Bd. 65.2007, 3, S. 461-481;
[Link unter URL](#)
[Imp.fact.: 0.259]

De Loera, Jesús A. ; Hemmecke, Raymond; Köppe, Matthias; Weismantel, Robert

FPTAS for optimizing polynomials over the mixed-integer points of polytopes in fixed dimension

In: Mathematical programming. - Berlin: Springer; [Link unter URL](#), 2007
[Imp.fact.: 1.117]

De Loera, Jesús A. ; Hemmecke, Raymond; Onn, Shmuel; Weismantel, Robert

N-fold integer programming

In: Discrete optimization. - New York, NY [u.a.]: Elsevier, insges. 15 S.; [Abstract unter URL](#), 2007

Gangadwala, Jignesh; Haus, Utz-Uwe; Jach, Matthias; Kienle, Achim; Michaels, Dennis; Weismantel, Robert

Global analysis of combined reaction distillation process

In: Computers & chemical engineering. - Amsterdam [u.a.]: Elsevier, Bd. 32.2007, 1/2, S. 343-355; [Link unter URL](#)
[Imp.fact.: 1.404]

Gärtner, Bernd; Kaibel, Volker

Two new bounds for the random-edge simplex algorithm

In: Society for Industrial and Applied Mathematics: SIAM journal on discrete mathematics. - Philadelphia, Pa. : Soc., Bd. 21.2007, 1, S. 178-190; [Link unter URL](#)
[Imp.fact.: 0.518]

Haus, Utz-Uwe; Michaels, Dennis; Seidel-Morgenstern, Andreas; Weismantel, Robert

A method to evaluate the feasibility of TMB chromatography for reduced efficiency and purity requirements based on discrete optimization

In: Computers & chemical engineering. - Amsterdam [u.a.]: Elsevier, Bd. 31.2007, 11, S. 1525-1534; [Link unter URL](#)
[Imp.fact.: 1.404]

Hemmecke, Raymond; Morton, Jason; Shiu, Anne; Sturmfels, Bernd; Wienand, Oliver

Three counterexamples on semi-graphoids

In: Combinatorics, probability & computing. - Cambridge: Univ. Press, insges. 18 S.; [Abstract unter URL](#), 2007
[Imp.fact.: 0.667]

Hemmecke, Raymond; Weismantel, Robert

Representation of sets of lattice points

In: Society for Industrial and Applied Mathematics: SIAM journal on optimization. - Philadelphia, Pa. : SIAM, Bd. 18.2007, 1, S. 133-137; [Link unter URL](#)
[Imp.fact.: 1.238]

Inderfurth, Karl; Kovalyov, Mikhail Y. ; Ng, C. T. ; Werner, Frank

Cost minimizing scheduling of work and rework processes on a single facility under deterioration of reworkables

In: International journal of production economics. - Amsterdam [u.a.]: Elsevier Science, Bd. 105.2007, 2, S. 345-356;
[Abstract unter URL](#)
[Imp.fact.: 1.008]

Jungwattanakit, Jitti; Reodecha, Manop; Chaovalitwongse, Paveena; Werner, Frank

Constructive and simulated annealing algorithms for hybrid flow shop problems with unrelated parallel machines

In: Thammasat international journal of science and technology. - Bangkok, Bd. 12.2007, 1, S. 31-41;

[Abstract unter URL](#)

Jungwattanakit, Jitti; Reodecha, Manop; Chaovalitwongse, Paveena; Werner, Frank

Constructive and tabu search heuristics for hybrid flow shops with unrelated parallel machines and setup times

In: International journal of computational science. - Wanchai: Global Information Publisher, Bd. 1.2007, 2, S. 204-214;

[Abstract unter URL](#)

Köppe, Matthias

A primal Barvinok algorithm based on irrational decompositions

In: Society for Industrial and Applied Mathematics: SIAM journal on discrete mathematics. - Philadelphia, Pa. : Soc., Bd. 21.2007, 1, S. 220-236; [Link unter URL](#)
[Imp.fact.: 0.518]

Kovalyov, Mikhail Y. ; Werner, Frank

Problem F2||Cmax with forbidden jobs in the first or last position is easy

In: European journal of operational research. - Amsterdam: North-Holland Publ. Co., Bd. 177.2007, 2, S. 1310-1311;

Abstract unter URL

[Imp.fact.: 0.824]

Saez-Rodriguez, Julio; Simeoni, Luca; Lindquist, Jonathan A. ; Hemenway, Rebecca; Bommhardt, Ursula; Arndt, Börge; Haus, Utz-Uwe; Weismantel, Robert; Gilles, Ernst D. ; Klamt, Steffen; Schraven, Burkhard

A logical model provides insights into T cell receptor signaling

In: Public Library of Science: PLoS Computational Biology. - San Francisco, Calif. : Public Library of Science, Bd. 3.2007, 8, insges. 11 S.; [Abstract unter URL](#)

[Imp.fact.: 4.914]

Originalartikel in begutachteten zeitschriftenartigen Reihen

Andersen, Kent; Louveaux, Quentin; Weismantel, Robert; Wolsey, Laurence A.

Inequalities from two rows of a simplex tableau

In: Integer programming and combinatorial optimization. - Berlin [u.a.]: Springer, S. 1-15; Lecture notes in computer science; 4513, 2007

[International IPCO Conference; 12 (Ithaca, NY): 2007.06.25-27]

Höding, Michael

Datenbanktechnologie heute

In: Die Zukunft der Anwendungssoftware - die Anwendungssoftware der Zukunft. - Aachen: Shaker, S. 95-108; Magdeburger Schriften zur Wirtschaftsinformatik, 2007

Kaibel, Volker; Peinhardt, Matthias; Pfetsch, Marc E.

Orbitopal fixing

In: Integer programming and combinatorial optimization. - Berlin [u.a.]: Springer, S. 74-88; Lecture notes in computer science; 4513, 2007

[International IPCO Conference; 12 (Ithaca, NY): 2007.06.25-27]

Wissenschaftliche Monografien

Michaels, Dennis

Discrete optimization techniques for nonlinear mixed-integer optimization problems arising from chemical engineering. - Zugl.: Magdeburg, Univ., Fak. für Mathematik, Diss., 2007; Tönning [u.a.]: Der Andere Verlag; XX, 115 S: graph. Darst.; 21 cm

Weismantel, Robert

Lectures on mixed integer nonlinear programming (MINLP). - CORE lecture series; Louvain-la-Neuve: CORE; V, 125 S, 2007

Buchbeiträge

Boutejdar, Ahmed; Elsherbini, A. ; Omar, Abbas Sayed

Improvement of bassband and sharpness factor of parallel coupled microstrip bandpass filters using discontinuities correction

In: Mediterranean Microwave Symposium 2007. - Budapest, S. 121-124

[Mediterranean Microwave Symposium; (Budapest): 2007.05.14-16]

Boutejdar, Ahmed; Sherbini, Adel; Omar, Abbas Sayed

Improvement of bassband and sharpness factor of parallel coupled microstrip bandpass filter using discontinuities correction and DGS cells

In: Mediterranean Microwave Symposium 2007. - Budapest, S. 307-310

[Mediterranean Microwave Symposium; (Budapest): 2007.05.14-16]

Jungwattanakit, Jitti; Reodecha, Manop; Chaovalitwongse, Paveena; Werner, Frank

Fuzzy dispatching rules for flexible flow shop problems with unrelated parallel machines for a continuous fuzzy

domain

In: Service value innovation and challenges. - Kaohsiung, insges. 10 S., 2007

[Asia Pacific Industrial Engineering & Management System; 8 (Kaohsiung): 2007.12.09-12]

Artikel in Kongressbänden

Jungwattanakit, Jitti; Reodecha, Manop; Chaovalitwongse, Paveena; Werner, Frank

Fuzzy LPT algorithms for flexible flow shop problems with unrelated parallel machines for a continuous fuzzy domain

In: Proceedings of the 2007 IE Network National Conference. - Phuket, S. 208-213

[IE Network National Conference: (Phuket); 2007.10.24-26]

Habilitationen

Wagler, Annegret K.

Beyond perfection - on relaxations and superclasses. - Magdeburg, Univ., Fak. für Mathematik, Habil.-Schr., 2006;

[Link unter URL](#); X, 182 S.: graph. Darst.; 30 cm, 2007

Dissertationen

Michaels, Dennis

Discrete optimization techniques for nonlinear mixed-integer optimization problems arising from chemical

engineering. - Zugl.: Magdeburg, Univ., Fak. für Mathematik, Diss., 2007; Tönning [u.a.]: Der Andere Verlag; XX, 115

S: graph. Darst.; 21 cm

Institut für Mathematische Stochastik

Universitätsplatz 2, 39106 Magdeburg
Tel. +49 (0)391 67 18651, Fax +49 (0)391 67 11172
imst@mathematik.uni-magdeburg.de

1. Leitung

Prof. Dr. rer.nat.habil. Gerd Christoph
Prof. Dr. rer.nat.habil. Norbert Gaffke
Prof. Dr. rer.nat.habil. Rainer Schwabe (geschäftsführender Leiter)
apl. Prof. Dr. rer.nat.habil. Waltraud Kahle

2. Hochschullehrer

Prof. Dr. rer.nat.habil. Gerd Christoph
Prof. Dr. rer.nat.habil. Norbert Gaffke
Prof. Dr. rer.nat.habil. Rainer Schwabe
apl. Prof. Dr. rer.nat.habil. Berthold Heiligers (extern)
apl. Prof. Dr. rer.nat.habil. Waltraud Kahle
Priv.-Doz. Dr. rer.nat.habil. Thomas Müller-Gronbach
Emeritus: Prof. Dr. rer.nat.habil. Otfried Beyer

3. Veröffentlichungen

Originalartikel in begutachteten internationalen Zeitschriften

Creutzig, Jacob; Müller-Gronbach, Thomas; Ritter, Klaus

Free-knot spline approximation of stochastic process
In: Journal of complexity. - Brugge: Catherine Press, Bd. 23.2007, 4/6, S. 867-889; [Link unter URL](#)
[Imp.fact.: 1.422]

Gelissen, Faik; Voelker, Michael; Schwabe, Rainer; Besch, Dorothea; Aisenbrey, Sabine; Szurman, Peter; Grisanti, Salvatore; Herzau, Volker; Bartz-Schmidt, Karl U.

Full macular translocation versus photodynamic therapy with verteporfin in the treatment of neovascular age-related macular degeneration - 1-year results of a prospective, controlled, randomised pilot trial (FMT-PDT)
In: Graefe's archive for clinical and experimental ophthalmology. - Berlin: Springer, Bd. 245.2007, 8, S. 1085-1095;
[Link unter URL](#)
[Imp.fact.: 1.609]

Graßhoff, Ulrike; Großmann, Heiko; Holling, Heinz; Schwabe, Rainer

Design optimality in multi-factor generalized linear models in the presence of an unrestricted quantitative factor
In: Journal of statistical planning and inference. - Amsterdam: Elsevier, Bd. 137.2007, 12, S. 3882-3893;
[Link unter URL](#)
[Imp.fact.: 0.497]

Kahle, Waltraud

Optimal maintenance policies in incomplete repair models
In: Reliability engineering & system safety. - London: Elsevier, Bd. 92.2007, 5, S. 563-565; [Link unter URL](#)
[Imp.fact.: 0.747]

Kircher, Tilo T. ; Seiferth, Nina Y. ; Plewnia, Christian; Baar, Sophia; Schwabe, Rainer

Self-face recognition in schizophrenia

In: Schizophrenia research. - Amsterdam: Elsevier, Bd. 94.2007, 1/3, S. 264-272; [Link unter URL](#)

[Imp.fact.: 4.264]

Müller-Gronbach, Thomas; Ritter, Klaus

An implicit Euler scheme with non-uniform time discretization for heat equations with multiplicative noise

In: BIT. - Dordrecht: Springer, Bd. 47.2007, 2, S. 393-418

[Imp.fact.: 0.841]

Schmelter, Thomas

Considerations on group-wise identical designs for linear mixed models

In: Journal of statistical planning and inference. - Amsterdam: Elsevier, Bd. 137.2007, 12, S. 4003-4010;

[Link unter URL](#)

[Imp.fact.: 0.497]

Schmelter, Thomas

The optimality of single-group designs for certain mixed models

In: Metrika. - Heidelberg: Physica-Verl., Bd. 65.2007, 2, S. 183-193; [Link unter URL](#)

[Imp.fact.: 0.451]

Originalartikel in begutachteten zeitschriftenartigen Reihen

Großmann, Heiko; Holling, Heinz; Großhoff, Ulrike; Schwabe, Rainer

A comparison of efficient designs for choices between two options

In: Advances in model oriented design and analysis. - Heidelberg: Physica-Verl., S. 83-90; Contributions to Statistics, 2007

Schmelter, Thomas; Benda, Norbert; Schwabe, Rainer

Some curiosities in optimal designs for random slopes

In: Advances in model oriented design and analysis. - Heidelberg: Physica-Verl., S. 189-195; Contributions to Statistics, 2007

Buchbeiträge

Müller-Gronbach, Thomas; Ritter, Klaus

Minimal errors for strong weak approximation of stochastic differential equations

In: Monte Carlo and quasi Monte Carlo methods 2006. - Berlin: Springer, S. 53-82, 2007

Müller-Gronbach, Thomas; Ritter, Klaus; Wagner, Tim

Optimal pointwise approximation of a linear stochastic heat equation with additive space-time white noise

In: Monte Carlo and quasi Monte Carlo methods 2006. - Berlin: Springer, S. 577-589, 2007

Artikel in Kongressbänden

Tschöke, Helmut; Braungarten, Gunter; Franke, Hans-Ulrich

Dieselmischkraftstoffe mit Bioethanol und Biodiesel - Emissionen, Leistung und Verbrauch

In: Biokraftstoffe. - CTI, insges. 18 S., 2007

[CTI Fachkonferenz; (München): 2007.06.26-27]