

## Prof. Dr. L. A. Bordag

### Publikationen in Jahren 2008 - 2011

1. L.A. Bordag, Study of the risk-adjusted pricing methodology model with methods of Geometrical Analysis, *Stochastics: International Journal of Probability and Stochastic processes*, vol. 83, NN. 4-6, **2011**, pp. 333- 345.  
DOI: 10.1080/17442508.2010.489642
2. L.A Bordag and A. Mikaelyan, Models of self-financing hedging strategies in illiquid markets: symmetry reductions and exact solutions, in press in *Letters in Mathematical Physics*, V. 96, NN. 1-3, pp. 191-207, **2011**  
DOI 10.1007/s11005-011-0463-3
3. L.A Bordag, Pricing options in illiquid markets: optimal systems, symmetry reductions and exact solutions, *Lobachevskiy Journal of Mathematics (LJM)*, Springer Verlag, v. 31, n. 2, pp. 90-90, **2010**
4. L.A. Bordag, Symmetry reductions and exact solutions for nonlinear diffusion equations, *International Journal of Modern Physics A*, vol. 24, N 8-9, 1713-1716, **2009**
5. L.A. Bordag, R. Frey, Nonlinear option pricing models for illiquid markets: scaling, properties and explicit solutions, the chapter 3 in **Nonlinear Models in Mathematical Finance: Research Trends in Option Pricing**, NOVA SCIENCE PUBLISHERS, INC., ISBN 978-1-160456-931-5, pp. 103-130, **2009**
6. L.A. Bordag, On option-valuation in illiquid markets: invariant solutions to a nonlinear model, *Proceedings of the conference Mathematical Control Theory and Finance*, A. Sarychev A. Shiryaev, M. Guerra and M. R. Grossinho (eds), Springer, pp.71-94, **2008**

### Studien in Rahmen von Industrieprojekten 2008 - 2011

1. L.A. Bordag, S.K. Matveev, Berechnung des Öldrucks bei einem punktwisen Ölzuffluss von dem PM Regler in den Lagerspalt und radiale Schwingungen der Welle im Prototypenlager V1, Statusitzung Dresden, Projekt HYDROS, 19.12.2011, Technical Report HYDROS, diese Studie umfasst 37 Seiten, Hamburg, Germany.

2. L.A. Bordag, S.K. Matveev, Berechnungen der Gleichgewichtslage der Welle unter präzisierten geometrischen Voraussetzungen der Druckfluidströmung in LHS 750, Statusitzung Berlin, Projekt HYDROS, 19.01.2009, Technical Report HYDROS, diese Studie umfasst 31 Seiten, Hamburg, Germany.
3. L.A. Bordag, S.K. Matveev, Präzisierte Berechnungen der Druckfluidströmung in LHS 750, Technical Report, diese Studie umfasst 19 Seiten, Projekt HYDROS, October 2008, Hamburg, Germany.
4. L.A. Bordag, S.K. Matveev, Erste Berechnungen der Druckfluidströmung, Technical Report, diese Studie umfasst 27 Seiten, Projekt HYDROS, May 2008, Hamburg, Germany.

## **Vorträge auf internationalen Konferenzen 2008 - 2011**

1. On symmetry reductions and exact solutions to nonlinear models for markets with frictions, *5th Workshop on Nonlinear PDEs and Financial Mathematics*, 25.03.2010-26.03.2010, Leipzig, Germany
2. Geometrical Analysis of Financial Models, International conference *Nonlinear Partial Differential equations and Applications in Finance*, 15.10.2009-17.10.2009, Bologna, Italy
3. Study of the risk-adjusted pricing methodology model with methods of Geometrical Analysis, *Optimal Stopping with Applications*, 21 June-26 June 2009, Turku, Finland
4. Illiquid market models and nonlinear Black-Scholes equations. Symmetry reductions. *Mathematics and Physics of Solitons and Integrable Systems - Conference in honor of Vladimir B. Matveev's 65th birthday*, 27.06.2009-2.07.2009, Dijon, France
5. Pricing options in illiquid markets: symmetry reductions and exact solutions, *Advanced Research Workshop on Financial Mathematics: Methods and Applications*, 17th September 2008, Gdansk, Poland.
6. Symmetry reductions and exact solutions for nonlinear diffusion equations, on *Seventh Alexander Friedmann International Seminar on Gravitation and Cosmology*, 29 June - 5 July, Joao Pessoa, Brazil, 2008.

7. Nonlinear reaction-diffusion equations: algebraic structures and invariant solutions, *Workshop Quantum Vacuum*, Juiz de Fora, 5 - 10 July, Brazil, 2008.