

INFORMAZIONI PERSONALI

Stephan Luckhaus

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ESPERIENZA
PROFESSIONALE

1978	Postdoc at the university of Bonn, Germany
1978-1983 and 1984-1988	Postdoc at the university of Heidelberg
1983-1984	Visitor at University of Chicago with a grant from DFG
1986 and 1988	Visiting Fellow at ANU, Canberra, Australia
1988	Habilitation, at the university of Heidelberg, with a thesis on :The Parametric Capillarity Problem in Arbitrary Dimension
1988-1997	Professor (C3) for applied mathematics at the university of Bonn
1993 and 1994	Visiting prof. 1ere cl. at universite St Etienne, France
1997	Visiting Scholar at Stanford University.
Since 1997	Professor (C4, chair for Mathematical Optimization) at the University of Leipzig, Germany
1999	Visiting prof. Scuola Normale Sup Pisa
2002	Nomination as external member of the Max Planck Institute for Mathematics in the Sciences, Leipzig
2002	Visiting prof. universite Toulouse, France
2002	Member of the Academy of Sciences and Literature, Mainz
2003	Max Planck Prize for international cooperation, awarded by Humboldt foundation and Max Planck Society
2007	Member Academia Leopoldina

ISTRUZIONE E FORMAZIONE

- 1971-1975 Student of mathematics with minor physics at the University of Muenster, Germany
- 1975 Diplom in Mathematics, with a thesis on: The Douglas Problem for Surfaces of Prescribed Mean Curvature
- 1975-1978 Ph D student in mathematics at the university of Heidelberg, Germany
- 1978 Ph D (Dr. rer. nat.) from university of Heidelberg. With a thesis on: Regularity for Solutions to Semilinear Elliptic Systems

COMPETENZE PERSONALI

Lingua madre Deutsch

Altre lingue

	COMPRENSIONE		PARLATO		PRODUZIONE SCRITTA
	Ascolto	Lettura	Interazione	Produzione orale	
English	C1	C1	C1	C1	C1
Italiano	B2	B2	B2	B2	B2

ULTERIORI INFORMAZIONI

Pubblicazioni

1) A free boundary problem-in time-for the spread of Covid-19

Luckhaus, S., Stevens, A. Journal of Mathematical Biology, 2023, 86(3), 45

2) Kermack and McKendrick Models on a Two-Scale Network and Connections to the Boltzmann Equations

Luckhaus, S., Stevens, A.
Lecture Notes in Mathematics, 2023, 2313, pp. 417–427

3) Rigidity estimates for isometric and conformal maps from S^{n-1} to R^n

Luckhaus, S., Zemas, K.
Inventiones Mathematicae, 2022, 230(1), pp. 375–461

4) A Compactness and Structure Result for a Discrete Multi-well Problem with $SO(n)$ Symmetry in Arbitrary Dimension

Kitavtsev, G., Lauteri, G., Luckhaus, S., Rüländ, A.
Archive for Rational Mechanics and Analysis, 2019, 232(1), pp. 531–555

5) Surface energies emerging in a microscopic, two-dimensional two-well problem

Kitavtsev, G., Luckhaus, S., Rüland, A.
Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 2017, 147(5), pp. 1041–1089

6) Automated detection of the choroid boundary within OCT image data using quadratic measure filters

Wagner, M., Scheibe, P., Francke, M., ... Kiess, W., Rauscher, F.G.
Journal of Biomedical Optics, 2017, 22(2), 025004

7) Surface energies arising in microscopic modeling of martensitic transformations

Kitavtsev, G., Luckhaus, S., Rüland, A.
Mathematical Models and Methods in Applied Sciences, 2015, 25(4), pp. 647–683

8) Surface energies arising in microscopic modeling of martensitic transformations in shape-memory alloys

Kitavtsev, G., Luckhaus, S., Rüland, A.
Key Engineering Materials, 2015, 651-653, pp. 941–943

9) Nonlinear Elastic Free Energies and Gradient Young-Gibbs Measures

Kotecký, R., Luckhaus, S.
Communications in Mathematical Physics, 2014, 326(3), pp. 887–917

10) Monotonicity Formula and Regularity for General Free Discontinuity Problems

Bucur, D., Luckhaus, S.
Archive for Rational Mechanics and Analysis, 2014, 211(2), pp. 489–511

11) Langevin Dynamics with a Tilted Periodic Potential

Carinci, G., Luckhaus, S.
Journal of Statistical Physics, 2013, 151(5), pp. 870–895

12) Measure Valued Solutions of the 2D Keller-Segel System

Luckhaus, S., Sugiyama, Y., Velázquez, J.J.L.
Archive for Rational Mechanics and Analysis, 2012, 206(1), pp. 31–80

13) Non-existence of positive stationary solutions for a class of semi-linear PDEs with random coefficients

Coville, J., Dirr, N., Luckhaus, S.
Networks and Heterogeneous Media, 2010, 5(4), pp. 745–763

14) On a mesoscopic many-body Hamiltonian describing elastic shears and dislocations

Luckhaus, S., Mugnai, L.
Continuum Mechanics and Thermodynamics, 2010, 22(4), pp. 251–290

15) An age-structured mathematical model for the within host dynamics of malaria and the immune system

Tumwiine, J., Luckhaus, S.,
Mugisha, J.Y.T., Luboobi, L.S.
Journal of Mathematical Modelling and Algorithms, 2008, 7(1), pp. 79–97

16) Uniform rectifiability from mean curvature bounds

Luckhaus, S.
Zeitschrift für Analysis und ihre Anwendungen, 2008, 27(4), pp. 451–461

17) Asymptotic profile with the optimal convergence rate for a parabolic equation of chemotaxis in super-critical cases

Luckhaus, S., Sugiyama, Y.
Indiana University Mathematics Journal, 2007, 56(3), pp. 1279–1297

18) Two scales hydrodynamic limit for a model of malignant tumor cells

De Masi, A., Luckhaus, S., Presutti, E.
Annales de l'institut Henri Poincaré (B) Probability and Statistics, 2007, 43(3), pp. 257–297

19) A general theory for elastic phase transitions in crystals

Arnrich, S., Blesgen, T., Luckhaus, S.
Analysis, Modeling and Simulation of Multiscale Problems, 2006, pp. 179–196

20) Discrete free energy functionals for elastic materials with phase change

Blesgen, T., Luckhaus, S., Mugnai, L.
Analysis, Modeling and Simulation of Multiscale Problems, 2006, pp. 425–434

21) Deterministic equivalent for the Allen-Cahn energy of a scaling law in the Ising model

Belletтини, G., Gelli, M.S., Luckhaus, S., Novaga, M.
Calculus of Variations and Partial Differential Equations, 2006, 26(4), pp. 429–445

22) Large time behavior of solutions in super-critical cases to degenerate Keller-Segel systems

Luckhaus, S., Sugiyama, Y.
Mathematical Modelling and Numerical Analysis, 2006, 40(3), pp. 597–621

23) The dynamics of transition layers in solids with discontinuous chemical potentials

Blesgen, T., Luckhaus, S.
Mathematical Methods in the Applied Sciences, 2006, 29(5), pp. 525–536

24) The continuum reaction-diffusion limit of a stochastic cellular growth model

Luckhaus, S., Triolo, L.
Atti della Accademia Nazionale dei Lincei, Classe di Scienze Fisiche, Matematiche e Naturali, Rendiconti Lincei Matematica e Applicazioni, 2004, 15(3-4), pp. 215–223

25) Diffusion induced segregation in the case of the ternary system sphalerite, chalcopryrite and cubanite

Blesgen, T., Luckhaus, S., Bente, K.
Crystal Research and Technology, 2004, 39(11), pp. 969–979

26) Crystal chemistry of Fe-containing sphalerites

Lepetit, P., Bente, K., Doering, T., Luckhaus, S.
Physics and Chemistry of Minerals, 2003, 30(4), pp. 185–191

27) Modeling and numerical simulation of diffusion induced segregation

Blesgen, T., Luckhaus, S., Bente, K.
Crystal Research and Technology, 2002, 37(6), pp. 570–580

28) A stochastic selection principle in case of fattening for curvature flow

Dirr, N., Luckhaus, S., Novaga, M.
Calculus of Variations and Partial Differential Equations, 2001, 13(4), pp. 405–425

29) Entropy solutions to the Buckley-Leverett equations

Luckhaus, S., Plotnikov, P.I.
Siberian Mathematical Journal, 2000, 41(2), pp. 329–348

30) Modelling surface runoff and infiltration of rain by an elliptic-parabolic equation coupled with a first-order equation on the boundary

Filo, J., Luckhaus, S.
Archive for Rational Mechanics and Analysis, 1999, 146(2), pp. 157–182

31) Approximation of degenerate parabolic systems by nondegenerate elliptic and parabolic systems

Kačur, J., Luckhaus, S.
Applied Numerical Mathematics, 1998, 26(3), pp. 307–326

32) A regularity result for the solution of the dam problem

Gilardi, G., Luckhaus, S.
Nonlinear Analysis, Theory, Methods and Applications, 1996, 26(1), pp. 113–138

33) Convergence of the homogenization process for a double-porosity model of immiscible two-phase flow

Bourgeat, A., Luckhaus, S., Mikelić, A.
SIAM Journal on Mathematical Analysis, 1996, 27(6), pp. 1520–1543

34) Asymptotic Expansion for a Periodic Boundary Condition

Filo, J., Luckhaus, S.
Journal of Differential Equations, 1995, 120(1), pp. 133–173

35) Implicit time discretization for the mean curvature flow equation

Luckhaus, S., Sturzenhecker, T.
Calculus of Variations and Partial Differential Equations, 1995, 3(2), pp. 253–271

36) A nonlinear boundary value problem involving a nonlocal term

Luckhaus, S., Zheng, S.
Nonlinear Analysis, 1994, 22(2), pp. 129–135

37) Convergence of minimizers for the p-Dirichlet integral

Luckhaus, S.
Mathematische Zeitschrift, 1993, 213(1), pp. 449–456

38) On explosions of solutions to a system of partial differential equations modelling chemotaxis

Jäger, W., Luckhaus, S.

Transactions of the American Mathematical Society, 1992, 329(2), pp. 819–824

39) Solutions for the two-phase Stefan problem with the Gibbs–Thomson Law for the melting temperature

Luckhaus, S.

European Journal of Applied Mathematics, 1990, 1(2), pp. 101–111

40) Gradient estimates for solutions of parabolic equations and systems

Engler, H., Kawohl, B., Luckhaus, S.

Journal of Mathematical Analysis and Applications, 1990, 147(2), pp. 309–329

41) Multinomial approximations for nonparametric experiments which minimize the maximal loss of Fisher information

Luckhaus, S., Sauermann, W.

Probability Theory and Related Fields, 1989, 81(2), pp. 159–184

42) The Gibbs–Thompson relation within the gradient theory of phase transitions

Luckhaus, S., Modica, L.

Archive for Rational Mechanics and Analysis, 1989, 107(1), pp. 71–83

43) A Stefan problem in combustion

Luckhaus, S., Thiel, U.

Acta Applicandae Mathematicae, 1987, 9(3), pp. 199–217

44) Dynamical evolution of elasto-perfectly plastic bodies

Anzellotti, G., Luckhaus, S.

Applied Mathematics & Optimization, 1987, 15(1), pp. 121–140

45) A degenerate diffusion problem not in divergence form

Dal Passo, R., Luckhaus, S.

Journal of Differential Equations, 1987, 69(1), pp. 1–14

46) Global boundedness for a delay differential equation

Luckhaus, S.

Transactions of the American Mathematical Society, 1986, 294(2), pp. 767–774

47) On nonstationary flow through porous media

Alt, H.W., Luckhaus, S., Visintin, A.

Annali di Matematica Pura ed Applicata, 1984, 136(1), pp. 303–316

48) Flow of oil and water in a porous medium

Kroener, D., Luckhaus, S.

Journal of Differential Equations, 1984, 55(2), pp. 276–288

49) Quasilinear elliptic-parabolic differential equations

Wilhelm Alt, H., Luckhaus, S.

Mathematische Zeitschrift, 1983, 183(3), pp. 311–341

50) Phase transition in multicomponent systems

Luckhaus, S., Visintin, A.

Manuscripta Mathematica, 1983, 43(2-3), pp. 261–288

51) Existence and regularity of weak solutions to the Dirichlet problem for semilinear elliptic systems of higher order

Luckhaus, S.

Journal für die Reine und Angewandte Mathematik, 1979, 1979(306), pp. 192–207

ALLEGATI

Dati personali

Autorizzo il trattamento dei miei dati personali contenuti nel presente curriculum vitae ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali".

Autorizzo la pubblicazione del presente curriculum vitae sul portale di Ateneo "Amministrazione trasparente" in ottemperanza al D.Lgs. 33/2013 e al D.Lgs. 97/2016."

Data 5/5/2025

f.to Stephan Luckhaus