



Literaturliste zum Spezialseminar *Komplexe Systeme und Strukturbildung*

1. M.C. Cross, P.C. Hohenberg, *Pattern formation outside of equilibrium*, *Rev. Mod. Phys.* **65**, 851–1112 (1995)
2. P. Ball, *The self-made tapestry, Pattern formation in nature*, Oxford University Press, Oxford, 1999
3. (Autor in) *Nichtlineare Dynamik in kondensierter Materie*, 14. IFF-Ferienkurs, Kernforschungsanlage Jülich, Vorlesungsmanuskripte 1983, S. ...
4. (Autor in) *Komplexe Systeme zwischen Atom und Festkörper*, 25. IFF-Ferienkurs, Forschungszentrum Jülich, Vorlesungsmanuskripte, 1994, ISBN 3-89336-128-6, S. ...
5. S. Chandrasekhar, *Hydrodynamic and hydromagnetic stability*, Dover Publications, Inc., New York, 1961
6. I.S. Aranson, L. Kramer, *The world of the complex Ginzburg-Landau equation*, *Rev. Mod. Phys.* **74**, 99 (2002)
7. D’Arcy Thompson, *On Growth and Form*, Cambridge University Press, Cambridge, 1961. Complete Revised Edition: Dover, New York, 1992. (Abteilung Biophysik, offiziell nicht ausleihbar)
Gekürzte deutsche Fassung: D’Arcy Thompson, *Über Wachstum und Form*, Suhrkamp Taschenbuch 410, 1983
8. K. Kassner, Vorträge *Lineare Stabilitätsanalyse und schwach nichtlineare Analyse und Amplitudengleichungen und Langwellengleichungen*, WE-Heraeus-Ferienkurs *Dynamik in dünnen Schichten und Grenzflächen* in Magdeburg, 13.-24. September 2004, unpubliziert
9. K. Kassner, *Pattern formation in diffusion-limited crystal growth*, World Scientific, Singapur, 1996
10. (Autor in) *Propagation in systems far from equilibrium*, eds. J.E. Wesfreid, H.R. Brand, P. Manneville, G. Albinet, N. Boccaro, Springer, Berlin, 1987, ISBN 3-540-19473-8, S. ...

11. Bergmann-Schaefer, *Lehrbuch der Experimentalphysik* Band I, Mechanik, Relativität, Wärme, de Gruyter, Berlin, 1998 (11. Auflage)
12. J.P. Eckmann, *Roads to turbulence in dissipative dynamical systems*, *Rev. Mod. Phys.* **53**, 643 – 654 (1981)
13. B. Eckhardt, B. Hof, H. Faisst, *Turbulenzübergang in der Rohrströmung. Die Lösung eines alten Rätsels*, *Phys. Unserer Zeit* **37**, 212–218 (2006)
14. H. Faisst, B. Eckhardt, *Traveling Waves in Pipe Flow*, *Phys. Rev. Lett.* **91**, 224502-1 (2003)
15. (Autor in) *Computational Condensed Matter Physics*, 37th IFF Spring School, Forschungszentrum Jülich, Lecture Manuscripts, 2006, ISBN 3-89336-430-7, p. ...
16. (Autor in) *Pattern Formation in Liquid Crystals*, eds. A. Buka, L. Kramer, Springer, New York, 1996, ISBN 0-387-94604-7, p. ...
17. S. Chandrasekhar, *Liquid Crystals*, 2nd edition, Cambridge University Press, 1992
18. R.E. Rosensweig, *Ferrohydrodynamics*, Dover Publications, New York, 1997, ISBN 0-486-67834-2
19. C. Gollwitzer, G. Matthies, R. Richter, I. Rehberg, L. Tobiska, *The Surface Topography of a Magnetic Fluid – a Quantitative Comparison between Experiment and Numerical Simulation*, *Journal of Fluid Mechanics* **571**, 455-474 (2007)
20. T. Mahr, I. Rehberg, *Nonlinear dynamics of a single ferrofluid peak in an oscillating magnetic field*, *Physica D* **111**, 335-346 (1998)
21. T. Vicsek, *Fractal Growth Phenomena* (Second Edition), World Scientific, Singapur, 1992
22. P. Pelcé, *Dynamics of Curved Fronts*, Academic Press, Boston (1988)
23. C.J.G. Evertsz, *Laplacian Fractals*, Doktorarbeit Rijksuniversiteit Groningen, The Cheese Press, Edam, Niederlande, 1989
24. A.P. Siebesma, *Multifractals in Condensed Matter*, Doktorarbeit Rijksuniversiteit Groningen, The Cheese Press, Edam, Niederlande, 1989
25. B.B. Mandelbrot, *Die fraktale Geometrie der Natur*, Birkhäuser, Basel, 1987
26. (Autor in) *The Science of Fractal Images*, eds. H. Peitgen, D. Saupe, Springer, Berlin, 1988, ISBN 3-540-96608-0, p. ...
27. M. Uwaha, Y. Saito, *Aggregation growth in a gas of finite density: Velocity selection via fractal dimension of diffusion-limited aggregation*, *Phys. Rev. A* **40**, 4716–4723 (1989)

28. R. Almgren, W. Dai, V. Hakim, *Scaling Behavior in Anisotropic Hele-Shaw Flow*, *Phys. Rev. Lett.* **71**, 3461 (1993)
29. K. Kassner, *Sidebranching in noiseless diffusion-limited aggregation*, *Fractals* **1**, 205-228 (1993)
30. K. Kassner, E. Brener, *Continuum description of noiseless diffusion-limited aggregation*, *Phys. Rev. E* **50**, 2161–2165 (1994)
31. (Autor in) *Science and Technology of Crystal Growth*, eds. J.P. van der Eerden, O.S.L. Bruinsma, Kluwer, Dordrecht, 1995
32. (Autor in) *Handbook of Crystal Growth 1 Fundamentals b Transport and Stability*, ed. D.T.J. Hurle, Elsevier, Amsterdam, 1993, S. ...
33. W. Kurz, D.J. Fisher, *Fundamentals of Solidification*, Trans Tech Publications, Switzerland, 1985, ISBN 0-87849-522-3
34. D.I. Meiron, *Selection of steady states in the two-dimensional symmetric model of crystal growth*, *Phys. Rev. A* **33**, 2704 (1985)
35. (Autor in) *Komplexe Systeme und Nichtlineare Dynamik in Natur und Gesellschaft*, Hrsg. Klaus Mainzer, Springer, Berlin, 1999, ISBN 3-540-65329-5
36. (Autor in) *Dynamical Phenomena at Interfaces, Surfaces and Membranes*, eds. D. Beysens, N. Boccara, G. Forgács. (Nova Science Publishers, Commack, USA, 1992).
37. Rainer Huisken, Volkhard Nordmeier, H. Joachim Schlichting, *Woher hat das Zebra seine Streifen?*, Hrsg. Deutsche Physikalische Gesellschaft *Didaktik der Physik*, Augsburg 2003. Berlin: Lehmanns 2003
38. V. Castets, E. Dulos, J. Boissonade, P. De Kepper, *Experimental Evidence of a Sustained Standing Turing-Type Nonequilibrium Chemical Pattern*, *Phys. Rev. Lett.* **64**, 2953 (1990)
39. A.J. Koch, H. Meinhardt, *Biological Pattern Formation: from basic mechanisms to complex structures*, *Rev. Mod. Phys.* **66**, 1481 (1994)
40. S. Douady, Y. Couder, *Phyllotaxis as a Physical Self-Organized Growth Process*, *Phys. Rev. Lett.* **68**, 2098 (1992)
41. S. Douady, Y. Couder, *Phyllotaxis as a Dynamical Self Organizing Growth Process, Part I: The Spiral Modes Resulting from Time-Periodic Iterations*, *J. Theor. Biol.* **178**, 255-274 (1996)
42. S. Douady, Y. Couder, *Phyllotaxis as a Dynamical Self Organizing Growth Process, Part II: The Spontaneous Formation of a Periodicity and the Coexistence of Spiral and Whorled Patterns*, *J. Theor. Biol.* **178**, 275-294 (1996)

43. S. Douady, Y. Couder, *Phyllotaxis as a Dynamical Self Organizing Growth Process, Part III: The Simulation of the Transient Regimes of Ontogeny*, *J. Theor. Biol.* **178**, 295-312 (1996)
44. S. Liaw, *Phyllotaxis: Its geometry and dynamics*, *Phys. Rev. E* **57**, 4589-4593 (1998)
45. S. Hottton, V. Johnson, J. Wilbarger, K. Zwieniecki, P. Atela, C. Golé, J. Dumais, *The Possible and the Actual in Phyllotaxis: Bridging the Gap between Empirical Observations and Iterative Models*, *J. Plant Growth Regul.* **25**, 313-323 (2006)