

Box List: Nigel D. Goldenfeld papers, 1949-2013
ID: Physics Department, UIUC
Arrangement: 11/10/52

Series 1: Research Files
Series 2: Correspondence
Series 3: Class Materials
Series 4: Administration
Series 5: Notebooks
Series 6: Publications
Series 7: Posters

Complete Finding Aid:

<https://archon.library.illinois.edu/archives/index.php?p=collections/controlcard&id=13242&q=goldenfeld>

Repository:

University Archives
University of Illinois at Urbana-Champaign
<http://archives.library.illinois.edu/>

Series 1: Research Files

Research Files (1949-2006) consists of Goldenfeld's research notes, data, and equations on various topics such as High T_c, liquid crystals, polymers, dendrites, and rubbers. This series is arranged by Goldenfeld's original order.

Box 1

Filing Cabinet 1, Drawer 5

1. High T_c: Theory (generic), 1969-1984
2. R (T,H), Hc₂, creep, 1988-1993
3. $\lambda(T)$, 1970-1972
4. small pairs, 1985
5. Pairing (Ξ), 1987-1988
6. Unconventional Pairing, 1987-1993
7. Vortex Glass, 1990-1992
8. High T_c Theory / RVB, 1984
9. $\lambda(T)$ - Anlage, 1991-1992
10. $\lambda(T)$ II, 1989-1993
11. RVB, 1980-1989
12. Andreev Reflection, 1964/1982
13. Anions, 1989-1990
14. R(t) in Y123, 1990
15. Case II Diffusion, 1981-1991
16. K, T $\rightarrow$ O SC, 1986-1995
17. C(T) T $\rightarrow$ O, 1989-1994
18. Layers in YBCO, 1973-1990
19. Surface Stiffness of ⁴He xtals, 1989-1991
20. Loop Gas/He⁴, 1984-1992
21. F.LIV Files, undated

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22. CA: Solidification, 1989-1994
23. Yoshi CDS/Xtal, 1990
24. CA-RG, 1985-1990
25. Onuki, 1987-1989
26. ^3He , 1983-1990

Box 2

1. Josephson Effect, 1970-1992
2. Surface SD, 1989-1995
3. Evolution/Optimisation/AI, 1978-1992
4. Genes/Evolution, 1976-1993
5. Computers/Cooperation, 1974-1994
- Filing Cabinet 3, Drawer 1**
6. Washboard, 2004-2006
7. Local Info, c. 2000s
- Filing Cabinet 3, Drawer 2**
8. Polymer melts/Coherent scattering Nigel Goldenfeld, 1981
9. Bricklayer Model Nigel Goldenfeld, 1976-1981
10. Liquid Crystals Nigel Goldenfeld (1 of 2), 1949/1972-1981
11. Liquid Crystals Nigel Goldenfeld (2 of 2), 1949/1972-1981 OVERSIZE
- Filing Cabinet 3, Drawer 4**
12. Pattern Formation Conference, August 1984
13. Phase Space of BLM [Boundary Layer Model], 1984
14. Boundary Layer Model - Theory II, 1983-1986
15. Periodic Perturbations, c. 1980s
16. Systematic Runs II (with Olivier), c. 1980s
17. Noise in BLM Simulator, 1986
18. Genie, 1986
19. Steady State Solns for BLM, c. 1980s
20. String Dynamics, 1985
21. Stability II, 1985
22. Numerics #3 BLM, 1984
23. K 1/3 string model, c. 1980s
24. Numerics #2 BLM, 1983

Box 3

Filing Cabinet 3, Drawer 4

1. Aggregation, 1984-1989
2. Moving Front for Dendrite, c. 1980s
3. Directional Solidifications, 1976-1985
4. Boris Shraiman's Stuff, 1984-1989
5. Eutectics, 1991-1995
6. η - analysis, 1977-1982
7. Lie Groups, Self-Similarity, 1976-1983
8. Stability analysis for BLM steady states, 1981-1984
9. Scaling Theory of GM, c. 1980s
10. Grooves, c. 1980s
11. BLM + - EK³ term, c. 1980s
12. Six-fold shooting, c. 1980s

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13. Systematic runs of BLM IV, 1984
14. Numerical Marginal Stability for BLM, c. 1980s
15. Monte Carlo/Dendrite, 1999-2001
16. Numerical String Model, 1980-1983
17. Asymptotics of BLM, 1984
18. Moving Front - Numerical, 1981-1984
19. BLM III/Anisotropy, 1984
20. Needle Crystal Expts, c. 1980s
21. Min anisotropy?/steady state shoot, c. 1980s
22. Stability II (Eispac), c. 1980s
23. JSL: Non-cwm physics, 1984
24. Shooting stability, 1976-1984
25. Moving Front/Theory, 1972-1985
26. Linear stability of planar interface, c. 1980s
27. Papers on Pattern Selection, 1982-1992
28. Papers on Dendrites and Strings, 1980-1992

Box 4

1. Dendrites II (1 of 2), 1969-1993
 2. Dendrites II (2 of 2), 1969-1993
 3. Dendrites III, 1965-1985
- Filing Cabinet 3, Drawer 5**
4. Dendrites, 1986-1992
 5. Dendrites IV, 1985-1993
 6. Hele Shaw Fingers, 1976-1994
 7. Saffman Taylor, 1980-1987
 8. Dendrite Velocity Selection, 1986-1991
 9. Zeldovich and Non-Linear Stability, 1980-1988
 10. Non-local steady state problem, 1984
 11. Spinodal Decomposition, 1982-1994
 12. Nucleation, 1961-1994
 13. Phase Turbulence in PDE's, 1985-1992
 14. Phase Model, 1987-1993

Box 5

1. Genetic Algorithms, 1986
2. Papers on evolution, etc., 1982-1987
3. Polymer crystal growth, 1983-1990
4. Dislocation Dynamics, 1985-1988
5. Dynamics of topological defects, 1983-1987
6. Froths, 1984-1991
7. Grids Generation, 1986-1987
8. Neutron Scattering, c. 1980s
9. Faceted xtal growth roughening, 1979-1984
10. Dislocations, 1969-1986
11. Monte Carlo, 1985-1993
12. Vortex dynamics/strings, 1982-1994
13. Quantum elasticity, 1981

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14. He³ and He⁴ interface, 1983-1987
15. Patterns: dislocations, 1976-1986
16. Goldstone's Theorem, 1964-1986
17. Linear Response, 1963-1993
18. Batteries, 1987
19. Dimensions/attractors, 1993
20. Simulated annealing, 1982-1986
21. Super in CDW, 1987
22. (MAT) Matrix Method, ca. 1980s
23. Shoot (Shooting Method), ca. 1980s
24. Phase sep. in nuclei, Fermi liquids, 1984-1986
25. Pair creation, 1976
26. Liquid crystal interfaces, 1984-1987
27. Rubbers, 1979-1986
28. Rubber II, 1975-1987
29. RG & SD/Bray, 1988-1991
30. X(T), 1988-1989
31. Penetration Depth Comment, 1990
32. EM 8 C(T) HLM Etc. 1974-1995
33. C (T_c, H), 1974-1993

Box 6

Filing Cabinet 4, Drawer 2

1. Fluctuations in superconductivity/paraconductivity, 1968-1993
2. Specific heat flucst, 1972-1991
3. D-wave review II, 1994-1996
4. Figures, ca. 1990s
5. $\lambda(T)$ and impurities, 1992-1996
6. $\lambda(T)$ and impurities file #2, 1993-1997
7. $\lambda(T)$ /Review, 1994-1995
8. $\lambda(T_c)$, 1976-1995
9. Photoemission, 1993-1995
10. Tunnelling, 1995
11. turbulence meeting, 1994
12. Shear flow, 1986-1992
13. Decay of He⁴ Turb. 1989-2004
14. UBC paraconductivity, 1994
15. UIUC P(7, M), 1992-1996

Box 7

1. Wavelets, 1991-1997
2. Radiation, 1987-1998
3. Powder/sand, 1993-1996
4. CA-QM, 1984-1993
5. American put/RG, 1998
6. RG: Asymptotics BAO, 1975-2002

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7. RG - flames, 1992-1993
8. Phase equations and homogenization, 1994-1998
9. WRB-RG, 1995
10. RG & Asymptotia, 1998-2000

Filing Cabinet 4, Drawer 4

11. RG Papers (1 of 3), 1993-2000
12. RG Papers (2 of 3), 1993-2000
13. RG Papers (3 of 3), 1993-2000
14. Structural Stability, 1960-1986
15. Porous media diffusion, 1991-1993
16. (S-K) Sternberg-Koiter Paradox, 1990-1991
17. Multi Scale & RG (1 of 4), 1993-2001
18. Multi Scale & RG (2 of 4), 1993-2001
19. Multi Scale & RG (3 of 4), 1993-2001

Box 8

1. Multi Scale & RG (4 of 4), 1993-2001
2. $f(x-vt)$ & RG, 1988-1998
3. Ziane/RG, 1984-1993
4. Ziane/RG, 1998
5. Focussing in porous media, 1985-2000
6. PDE-phase diagram, 1988-2002
7. Decay of turbulence as SD, 1992-1993
8. Non-Eqm steady states, 1982-1998
9. RG-IA, crit exp, 1966-1994
10. Groundwater, 1987-1994
11. Photon localisation, 1991
12. Multiple scattering, 1990-1991
13. $O(E^2)$ -Barenblatt eqn, ca. 1990s
14. Rigorous RG Kupiainen et al. 1992-1994
15. Wilson RG, 1991-1998
16. Statistical fingers, 1987-1992
17. RG & Amplitude Eqns, 1977-1991
18. RG for E^- , 1992-1993

Series 2: Correspondence

Correspondence (1983-2006) consists of correspondence to colleagues, journal referee letters, and correspondence with award organizations. This series is arranged chronologically.

19. Correspondence (1) CV (1 of 2), 1983-1988
20. Correspondence (1) CV (2 of 2), 1983-1988
21. 1980s correspondence

Box 9

1. Letters of recommendation, 1985-1994
2. Letters to journals, referees (1 of 5), 1985-2000

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3. Letters to journals, referees (2 of 5), 1985-2000
4. Letters to journals, referees (3 of 5), 1985-2000
5. Letters to journals, referees (4 of 5), 1985-2000
6. Letters to journals, referees (5 of 5), 1985-2000
7. 1990s correspondence (1 of 7)
8. 1990s correspondence (2 of 7)
9. 1990s correspondence (3 of 7)
10. 1990s correspondence (4 of 7)
11. 1990s correspondence (5 of 7)
12. 1990s correspondence (6 of 7)
13. 1990s correspondence (7 of 7)
14. Barenblatt correspondence, 1991-2004
15. O. Penrose Onsager Prize, 1994
16. Thuneberg & Volovik Onsager Prize, 1994
17. L. Kadanoff Onsager Prize, 1997
18. Onsager Prize, 1997
19. Onsager, 1998
20. UI3M, 1998
21. Bruce Fouke, 2006

Series 3: Class Materials

Class Materials (1982-2012) consists predominantly of materials relating the physics qualifying exams. This includes correspondence with the exam committee, and exam questions and solutions. The series also includes class notes, seminars, and handouts. The physics qualifying exams are listed first in chronological order, and the rest of the series is in Goldenfeld's original order.

Physics Qualifying Exam

22. Physics Qualifying Exam 1982-1991
23. Physics Qualifying Exam 1992
24. Physics Qualifying Exam 1995 Fall
25. Physics Qualifying Exam 1995 Fall
26. Physics Qualifying Exam 1996 Spring
27. Physics Qualifying Exam 1996 Fall
28. Physics Qualifying Exam 1997 Spring
29. Physics Qualifying Exam 1997 Fall

Box 10

1. Physics Qualifying Exam 1998 Spring
2. Physics Qualifying Exam 1998 Fall
3. Physics Qualifying Exam 1999 Spring
4. Physics Qualifying Exam 1999 Fall
5. Physics Qualifying Exam 2000 Spring
6. Physics Qualifying Exam 2000 Fall
7. Physics Qualifying Exam 2001 Spring
8. Physics Qualifying Exam 2001 Fall
9. Physics Qualifying Exam 2002 Spring
10. Physics Qualifying Exam 2002 Fall
11. Physics Qualifying Exam 2003 Spring
12. Physics Qualifying Exam 2003 Fall

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13. Physics Qualifying Exam 2003 October
14. Physics Qualifying Exam 2004 Spring
15. Physics Qualifying Exam 2004 Fall
16. Physics Qualifying Exam 2005 Spring
17. Physics Qualifying Exam 2005 Fall
18. Physics Qualifying Exam 2006 Spring
19. Physics Qualifying Exam 2006 Fall
20. Physics Qualifying Exam 2007 Spring
21. Physics Qualifying Exam 2007 Fall
22. Physics Qualifying Exam 2008 Fall
23. Physics Qualifying Exam 2009 Fall
24. Physics Qualifying Exam 2010
25. Physics Qualifying Exam 2011 Fall
26. Physics Qualifying Exam 2012 Fall
27. Physics Qualifying Exam 2012 Fall

Class Materials

28. Poster RG & TWB original, ca. 1990s
29. Seminar on phase separation in polymers
30. Rubber poster, ca. 1980s
31. Seminars on BLM, DS, ..., ca. 1980s
32. Seminars on material, ca. 1980s
33. MRL/NSF site visit, Oct. 86 Dynamics of Interfaces
34. Seminars, ca. 1980s
35. MRL site visit, 1989
36. Doctor Gravitarum, 1988
37. Fractals, ca. 1980s
38. Silly papers, ca. 1980s

Box 11

1. Seminar: Liq Xstals, 1982
2. Poster RG/turbulence, ca. 1990s
3. Unused good problems, ca. 2000s

Series 4: Administrative

Administrative (1957-2013) consists of files from internal university departments such as the Institute for Genomic Biology, search committees, Goldenfeld's non-university activities, biographical data, Goldenfeld's salary, sabbatical, promotions, his temporary leave for Numerix and more. This series also contains Grant proposals. This series is arranged by subject, and alphabetically within.

UIUC Committees/Departments

4. 50 years of UIUC physics, 1999
5. A&P (AH) 2006
6. A & P Committee (1 of 2), 2001-2006
7. A & P Committee (2 of 2), 2001-2006
8. A & P 2010-2011
9. Applied Math Initiative, 2002
10. Computer Committee, 1998
11. Comp. Finance programs, 1998
12. Current conferences, 1999-2000

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13. DonFest, 1997
14. Emergent State of Matter course proposal, April 2004
15. ESM Approval, 2005
16. Ethics/Econ. Declaration, 2005-2008
17. Fellowship Board, 2001
18. Grading Policy, 1996
19. Misc. faculty bureaucracy, 1986-1998
20. Office of Technology Management - IP, 2004
21. Physics Development and Special Proposals, 1993-1994
22. Qual Ad Hoc, 1997
23. Schools, 1994-1995
24. Schools, 1996
25. Space Committee, 1998
26. Swanlund Chair
- Institute for Genomic Biology (IGB)**
27. IGB Proposal, 2003
28. IGB safety, 2005-2006
29. Institute for Genomic Biology fellowship appointment and symposium, 2006-2007
30. Nigel-IGB, 2004
- Search Committees**
31. Biophysics Search Committee, 2003-2004
32. Condensed Matter Theory, 2002
33. Microbiology Search, 2003
- Non-University Activities**
34. Annual Report of NonUniversity Activities, 1996-1998
35. Chicagofest, 1994
36. DOE Review Panel, 1993
37. ICAM, ca. 2000s
38. Int. J. Th. & Appl. Finance, 1997
39. Mittag-letter, 1993
40. NAS, 2012
41. Popular Science/La Recherche, 1985-1989
42. Sci. Am., 1985-1987
43. SLOAN, 1987-1991

Box 12

Personal

1. APS '99
2. Artwork from old papers, undated
3. Bio data, 1995
4. Budget and Policy, Sep. 1997
5. Env Health & Safety, May 1995
6. Mailing list, 1993-2001
7. MRL Office letter, 1995
8. Numerix leave spring 1997
9. Photo of NDG (Nigel Goldenfeld), undated
10. Promo to full professor, 1995
11. Retention, 2013
12. Sabbatical, 1994
13. Salary and post-tenure reviews, 1992-2011
14. SFE Pub. list, etc. 2002
15. SPARCs, 1989-1991

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16. Summer salary, 2002
17. UBC, 1989
18. Univ. School, 1994
19. Urbana: job/visa, 1957-1991
20. USSR visit, Sep 89
21. Xerox award, 1991

Proposals

22. DOE Mic. Genome, 2004
23. FIBR (Frontiers in Integrative Biology Research), 2003
24. FIBR, 2004
25. FIBR full proposal, 2005
26. IBM R56000 proposal, 1999
27. Interagency Solicitation for Multiscale Modelling, 2004
28. NASA: 2000 Ceperley, 1998-2000
29. National Science Foundation [NSF] proposals, 1987-1997
30. NSF 2001/2002 grant
31. NSF Biocomplexity, 2002
32. NSF Biocomplexity proposal, 2002
33. NSF – Dendrite Grant, 1986-1994
34. NSF-DMR-8701393, June '89
35. NSF DMR 87-01393, 1990
36. NSF DMR 90-15791, Jan 1991
37. NSF DMR 90-15791 proposal, 1993
38. NSF DMR 93-14938, 1996-1999
39. NSF Math Geosciences, 2005
40. NSF proposal, 1998
41. Polymer Grant, 1990-1998
42. Research Board, April 15, 2012

Series 5: Notebooks

Notebooks (1982-1989) consists of Goldenfeld's notebooks of seminar, meeting and conference notes.

Box 13

1. Notebooks: ca. 1980s
2. Notebooks: 1982, 1989 I, 1989 II
3. Notebooks: 1990, Jan. 1991
4. Notebooks Jan. 1994, Seminars Fall 1994-May1995, Aug. 1995, Seminars May 1995-Nov. 1997, 2000 (BIO 100)
5. Notebooks: Sep 2001, June 2004
6. Notebooks: June 2004-Sep 2006, Sep. 2006-May 2007
7. Notebooks: May 2007, Colloquium 2007-8, May 2008-May 2010
8. Notebooks: undated

Binders

9. Rubber, Autumn '86
10. Rubber II, ca. 1980s
11. Paul Goldbart and Nigel Goldenfeld, March 26th, 1987
12. RG Approach to Pattern Selection, 1989

Series 6: Publications

Publications (1982-2013) consists of Goldenfeld's publications. This series is arranged chronologically.

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Box 14

1. Publications 1982-1985
2. Publications 1986-1987
3. Publications 1988-1989
4. Publications 1990-1991
5. Publications 1992
6. Publications 1993
7. Publications 1994-1995
8. Publications 1996-1999
9. Publications 2000s
10. Publications undated

Series 7: Posters

This series is arranged chronologically, with binders listed at the end.

1. Research Presentation Posters, ca. 2000s
 - a. "Real Time Transposable Element Activity in Individual Live Cells: Theory and Simulation"
 - b. "Scaling and Criticality in Two Dimensional Turbulence"
 - c. "A-prophage Induction Modeled as a Cooperative Failure Mode of Lytic Repression"

OVERSIZE Series 1: Research Files

Box 15 Oversize

1. Liquid Crystals Nigel Goldenfeld (2 of 2), 1949/1972-1981 OVERSIZE

Processing Note: Student grades, job applications that are not Goldenfeld's, and copies of Goldenfeld's green card and visa paperwork were weeded. Rusty paperclips were replaced. Titles added by archivist are indicated with brackets []. This series was processed by Lana Kay Tutterow spring 2024 under the supervision of Bethany Anderson.