**Arrangement:**

**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/**](http://archives.library.illinois.edu/)

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**Series 1: Research Files**

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

**Box 1**

**Filing Cabinet 1, Drawer 5**

1. High Tc: Theory (generic), 1969-1984
2. R (T,H), Hc2, creep, 1988-1993
3. ʎ(T), 1970-1972
4. small pairs, 1985
5. Pairing (Ǝ), 1987-1988
6. Unconventional Pairing, 1987-1993
7. Vortex Glass, 1990-1992
8. High Tc Theory / RVB, 1984
9. ʎ(T) - Anlage, 1991-1992
10. ʎ(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 -> O SC, 1986-1995
17. C(T) T->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
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**

1. Washboard, 2004-2006
2. Local Info, c. 2000s

**Filing Cabinet 3, Drawer 2**

1. Polymer melts/Coherent scattering Nigel Goldenfeld, 1981
2. Bricklayer Model Nigel Goldenfeld, 1976-1981
3. Liquid Crystals Nigel Goldenfeld (1 of 2), 1949/1972-1981
4. Liquid Crystals Nigel Goldenfeld (2 of 2), 1949/1972-1981 OVERSIZE

**Filing Cabinet 3, Drawer 4**

1. Pattern Formation Conference, August 1984
2. Phase Space of BLM [Boundary Layer Model], 1984
3. Boundary Layer Model - Theory II, 1983-1986
4. Periodic Perturbations, c. 1980s
5. Systematic Runs II (with Olivier), c. 1980s
6. Noise in BLM Simulator, 1986
7. Genie, 1986
8. Steady State Solns for BLM, c. 1980s
9. String Dynamics, 1985
10. Stability II, 1985
11. Numerics #3 BLM, 1984
12. K 1/3 string model, c. 1980s
13. 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
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-ewm 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**

1. Dendrites, 1986-1992
2. Dendrites IV, 1985-1993
3. Hele Shaw Fingers, 1976-1994
4. Saffman Taylor, 1980-1987
5. Dendrite Velocity Selection, 1986-1991
6. Zeldovich and Non-Linear Stability, 1980-1988
7. Non-local steady state problem, 1984
8. Spinodal Decomposition, 1982-1994
9. Nucleation, 1961-1994
10. Phase Turbulence in PDE’s, 1985-1992
11. 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
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 (Tc, H), 1974-1993

**Box 6**

**Filing Cabinet 4, Drawer 2**

1. Fluctuations in superconductivity/paraconductivity, 1968-1993
2. Specific heat flucts, 1972-1991
3. D-wave review II, 1994-1996
4. Figures, ca. 1990s
5. λ(T) and impurities, 1992-1996
6. λ(T) and impurities file #2, 1993-1997
7. λ(T)/Review, 1994-1995
8. λ(Tc), 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
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**

1. RG Papers (1 of 3), 1993-2000
2. RG Papers (2 of 3), 1993-2000
3. RG Papers (3 of 3), 1993-2000
4. Structural Stability, 1960-1986
5. Porous media diffusion, 1991-1993
6. (S-K) Sternberg-Koiter Paradox, 1990-1991
7. Multi Scale & RG (1 of 4), 1993-2001
8. Multi Scale & RG (2 of 4), 1993-2001
9. 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 (E2)-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.

1. Correspondence (1) CV (1 of 2), 1983-1988
2. Correspondence (1) CV (2 of 2), 1983-1988
3. 1980s correspondence

**Box 9**

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

1. Physics Qualifying Exam 1982-1991
2. Physics Qualifying Exam 1992
3. Physics Qualifying Exam 1995 Fall
4. Physics Qualifying Exam 1995 Fall
5. Physics Qualifying Exam 1996 Spring
6. Physics Qualifying Exam 1996 Fall
7. Physics Qualifying Exam 1997 Spring
8. 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
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**

1. Poster RG & TWB original, ca. 1990s
2. Seminar on phase separation in polymers
3. Rubber poster, ca. 1980s
4. Seminars on BLM, DS, …, ca. 1980s
5. Seminars on material, ca. 1980s
6. MRL/NSF site visit, Oct. 86 Dynamics of Interfaces
7. Seminars, ca. 1980s
8. MRL site visit, 1989
9. Doctor Gravitarum, 1988
10. Fractals, ca. 1980s
11. 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**

1. 50 years of UIUC physics, 1999
2. A&P (AH) 2006
3. A & P Committee (1 of 2), 2001-2006
4. A & P Committee (2 of 2), 2001-2006
5. A & P 2010-2011
6. Applied Math Initiative, 2002
7. Computer Committee, 1998
8. Comp. Finance programs, 1998
9. Current conferences, 1999-2000
10. DonFest, 1997
11. Emergent State of Matter course proposal, April 2004
12. ESM Approval, 2005
13. Ethics/Econ. Declaration, 2005-2008
14. Fellowship Board, 2001
15. Grading Policy, 1996
16. Misc. faculty bureaucracy, 1986-1998
17. Office of Technology Management - IP, 2004
18. Physics Development and Special Proposals, 1993-1994
19. Qual Ad Hoc, 1997
20. Schools, 1994-1995
21. Schools, 1996
22. Space Committee, 1998
23. Swanlund Chair

**Institute for Genomic Biology (IGB)**

1. IGB Proposal, 2003
2. IGB safety, 2005-2006
3. Institute for Genomic Biology fellowship appointment and symposium, 2006-2007
4. Nigel-IGB, 2004

**Search Committees**

1. Biophysics Search Committee, 2003-2004
2. Condensed Matter Theory, 2002
3. Microbiology Search, 2003

**Non-University Activities**

1. Annual Report of NonUniversity Activities, 1996-1998
2. Chicagofest, 1994
3. DOE Review Panel, 1993
4. ICAM, ca. 2000s
5. Int. J. Th. & Appl. Finance, 1997
6. Mittag-letter, 1993
7. NAS, 2012
8. Popular Science/La Recherche, 1985-1989
9. Sci. Am., 1985-1987
10. 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
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**

1. DOE Mic. Genome, 2004
2. FIBR (Frontiers in Integrative Biology Research), 2003
3. FIBR, 2004
4. FIBR full proposal, 2005
5. IBM R56000 proposal, 1999
6. Interagency Solicitation for Multiscale Modelling, 2004
7. NASA: 2000 Ceperley, 1998-2000
8. National Science Foundation [NSF] proposals, 1987-1997
9. NSF 2001/2002 grant
10. NSF Biocomplexity, 2002
11. NSF Biocomplexity proposal, 2002
12. NSF – Dendrite Grant, 1986-1994
13. NSF-DMR-8701393, June ‘89
14. NSF DMR 87-01393, 1990
15. NSF DMR 90-15791, Jan 1991
16. NSF DMR 90-15791 proposal, 1993
17. NSF DMR 93-14938, 1996-1999
18. NSF Math Geosciences, 2005
19. NSF proposal, 1998
20. Polymer Grant, 1990-1998
21. 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**

1. Rubber, Autumn ‘86
2. Rubber II, ca. 1980s
3. Paul Goldbart and Nigel Goldenfeld, March 26th, 1987
4. RG Approach to Pattern Selection, 1989

**Series 6: Publications**

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

**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
         1. “Real Time Transposable Element Activity in Individual Live Cells: Theory and Simulation”
         2. “Scaling and Criticality in Two Dimensional Turbulence”
         3. “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.