

CURRICULUM VITAE

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M.S., Physics, University of Minnesota, Minneapolis, 1982
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Appointments: Director, James Franck Institute, The University of Chicago, 2007 –
Director, University Chicago – Argonne National Laboratory Consortium for
Nanoscience Research, 2001 -
Director, University of Chicago Materials Research Center, 2001 - 2006
Professor, The University of Chicago, 2000 -
Associate Professor, The University of Chicago, 1996 - 2000
Assistant Professor, The University of Chicago, 1991 - 1996
Visiting Professor, Delft University of Technology,
The Netherlands, 1994
Senior Researcher, Centre for Submicron Technology,
Delft University of Technology, The Netherlands, 1989 - 1991
Postdoctoral Fellow, The University of Chicago, 1987-88

Honors & Awards: Quantrell Award for Excellence in Undergraduate Teaching, 2006
Fellow, American Physical Society, 2002
Outstanding Achievement Award, University of Minnesota, 2002
Research Corporation Cottrell Scholarship, 1994-96
Alfred P. Sloan Research Fellowship, 1992-94
David and Lucile Packard Fellowship, 1991-96
Arthur H. Compton Lecturer, The University of Chicago, 1988
James Franck Fellowship, University of Chicago, 1987-88
University of Minnesota Dissertation Fellowship, 1986-87
Fulbright Scholarship 1981-82

Professional Activities and Committee Membership:

Editorial Board: Granular Matter

Guest Editor: Focus Issue on Granular Materials, Chaos, 1999

Co-Organizer: NanoHybrid Structures Workshop, University of Chicago, 2002; Workshop on
Formation of Structures in Granular Matter, Lorentz Center, Leiden University,
2002; Frontiers of Science Symposium 2000, National Academy of Sciences;
APS/DMP Focus Session on Avalanches & Granular Materials, 1997; Granular
Dynamics Workshop, University of Chicago, 1995

Committees: Chair, NAS CMMP2010 data sub-committee 2006/07

Chair, Physical Sciences Division Committee on Diversity at the University of
Chicago, 2005-

Member, External Advisory Board, CIMAT, Chile, 2004-

Member, Essential Science Task Force, Chicago Museum of Science and
Industry, 2003-

Member, Scientific Advisory Committee, Argonne Center for Nanoscale
Materials, 2003-

Member, Technical Advisory Board, Atomworks, 2003-.

Publications:

1. B. G. Orr, A. M. Goldman and H. M. Jaeger, "Reentrant Superconductivity due to Localization at the Percolation Threshold of Thin Superconducting Films," *Physica B* **126**, 471 (1984).
2. B. G. Orr, H. M. Jaeger and A. M. Goldman, "Transition Temperature Oscillations in Thin Superconducting Films," *Phys. Rev. Lett.* **53**, 2046 (1984).
3. B. G. Orr, H. M. Jaeger and A. M. Goldman, "Local Superconductivity in Ultrathin Tin Films," *Phys. Rev. B* **32**, 7586 (1985).
4. B. G. Orr, H. M. Jaeger, A. M. Goldman and C. G. Kuper, "Global Phase Coherence in Two-Dimensional Superconductors," *Phys. Rev. Lett.* **56**, 378 (1986).
5. D. Berman, B. G. Orr, H. M. Jaeger and A. M. Goldman, "Conductances of Filled Two-Dimensional Networks," *Phys. Rev. B* **33**, 4301 (1986).
6. B. G. Orr, J. R. Clem, H. M. Jaeger and A. M. Goldman, "Phase Fluctuations in Josephson Junctions," *Phys. Rev. B* **34**, 3491 (1986).
7. H. M. Jaeger, D. B. Haviland, A. M. Goldman and B. G. Orr, "Threshold for Superconductivity in Ultrathin Amorphous Gallium Films," *Phys. Rev. B* **34**, 4920 (1986).
8. D. Partin, J. Kang, J. Maps, D. Berkley, H. M. Jaeger and A. M. Goldman, "Superconducting Transition in Thin Films of Lead Telluride Doped with Thallium," *Phys. Rev. B* **36**, 2280 (1987).
9. H. M. Jaeger, D. B. Haviland and A. M. Goldman, "Zero-Point Fluctuations in Ultrathin Superconducting Films," *Jpn. J. Appl. Phys.* **26** supp. 26-3, 1305 (1987).
10. H. M. Jaeger, D. B. Haviland and A. M. Goldman, "Quantum Fluctuations and Dissipation in Ultrathin Superconducting Films," in *Proceedings of the 2nd Soviet-Italian Symposium on Weak Superconductivity*, eds. A. Barone and A. Larkin, May 1987, Naples, Italy (World Scientific, Singapore, 1987) p. 96.
11. H. M. Jaeger, "Global Phase Coherence and Dissipation in Ultrathin Superconducting Films," *Physica B* **152**, 218 (1988).
12. H. M. Jaeger, Chu-heng Liu and Sidney R. Nagel, "Relaxation at the Angle of Repose", *Phys. Rev. Lett.* **62**, 40 (1989).
13. H. M. Jaeger, D. B. Haviland, B. G. Orr and A. M. Goldman, "Onset of Superconductivity in Ultrathin Granular Metal Films", *Phys. Rev. B* **40**, 182 (1989).
14. D. B. Haviland, H.M. Jaeger, B. G. Orr and A. M. Goldman, "Local Superconductivity in the Strong Localization Limit of Ultrathin Granular Films", *Phys. Rev. B* **40**, 719 (1989).

15. B. Ellman, H. M. Jaeger, D. P. Katz, T. F. Rosenbaum, A. S. Cooper, and G. P. Espinosa, "Transport Studies of $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ Near the Insulator-Metal / Superconductor Transition", *Phys. Rev. B* **39**, 9012 (1989).
16. H.M. Jaeger, Chu-heng Liu, Sidney R. Nagel and T.A. Witten, "Friction in Granular Flows", *Europhysics Lett.* **11**, 619 (1990).
17. H.M. Jaeger, Chu-heng Liu, Sidney R. Nagel and T.A. Witten, "Flow in Granular Materials: Self-Organized Non-Critical Behavior", in *Relaxation and Related Topics in Complex Systems*, eds. I.A. Campbell and C. Giovannella (Plenum Press, London, 1990) p.235.
18. Chu-heng Liu, H.M. Jaeger and Sidney R. Nagel, "Finite Size Effects in a Sandpile", *Phys. Rev. A* **43**, 7091 (1991).
19. R.G.P. van der Kraan, J.F. Jongste, H.M. Jaeger, G.C.A.M. Janssen and S. Radelaar, "Quantum Size Effects and Grain Boundary Scattering in Polycrystalline Cobalt Disilicide Films", *Phys. Rev. B* **44** (Rapid Comm.), 13140 (1991).
20. J.A. van Hulst, H.M. Jaeger, G. Rietveld, D. van der Marel and F. Tuinstra, Comment on "Superconducting Phases of Bi and Ga Induced by Deposition on a Ni Sublayer", *Phys. Rev. B* **47**, 548 (1993).
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22. A. Priolo, H.M. Jaeger, A.J. Dammers and S. Radelaar, "Conductance of Two-dimensional Disordered Voronoi Networks", *Phys. Rev. B* **46**, 14889 (1992).
23. H.R. Borsje, H.M. Jaeger and S. Radelaar, "Ultrahigh Resolution Negative e-Beam Resist: AlF_3 ", *Microelectronic Engineering* **17**, 311 (1992).
24. H.M. Jaeger, H.R. Borsje and S. Radelaar, "Nanolithography with Metal Halides", in *Imaging Technologies and Applications*, ed. Robert J. Heaston, *Proc. SPIE* **1778**, 107 (1992).
25. Heinrich M. Jaeger and Sidney R. Nagel, "La Physique de l'Etat Granulaire", *La Recherche* **249**, 1380 (1992).
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28. T.G.M. Oosterlaken, G.J. Leusink, G.J. Kuiper, S.J.M. Bakker, A.H. Verbruggen, H.M. Jaeger, G.C.A.M. Janssen, and S. Radelaar, "Superconducting Transition Temperature in Thin Amorphous Tungsten-Germanium Films", *Physica C* **214**, 359 (1993).

29. J. B. Knight, H.M. Jaeger and Sidney R. Nagel, "Vibration-Induced Size Separation in Granular Media: the Convection Connection", *Phys. Rev. Lett.* **70**, 3728 (1993).
30. Terry L. Morkved, Pierre Wiltzius, H.M. Jaeger, D.G. Grier, and T.A. Witten, "Mesoscopic Self-Assembly of Gold Islands on Diblock-Copolymer Films", *Appl. Phys. Lett.* **64**, 422 (1994).
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59. J. B. Knight, H. M. Jaeger, and S. R. Nagel, "Magnetic Resonance Imaging of Granular Convection," in *Advances in Fluidization and Fluid-Particle Systems*, vol. 93, *AIChE Symposium Series 317*, eds. D. King, H. Arastoopour, J. C. Chen, A. W. Weimer, and W.-C. Yang (American Institute of Chemical Engineers, New York, 1997) pp. 109-112.
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62. Heinrich M. Jaeger, Sidney R. Nagel and Robert P. Behringer, "The Physics of Granular Materials", *Parity* **12**, 4 (1997) [Japanese Translation of #49].
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64. Heinrich M. Jaeger and Sidney R. Nagel, "Dynamics of Granular Material", *American Scientist* **85**, 540 (1997).
65. J. B. Knight, E. R. Nowak, E. Ben-Naim, H. M. Jaeger, and S. R. Nagel, "Fluctuations in the Density of a Granular Material During Vibration," *Phys. Rev. E* **57**, 1971 (1998).
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67. T. L. Morkved, W. A. Lopes, J. Hahm, S. J. Sibener, and H. M. Jaeger, "Silicon Nitride Membrane Substrates for the Investigation of Local Structure in Polymer Thin Films", *Polymer* **39**, 3871 (1998).
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82. Milica Medved, Damien Dawson, Heinrich M. Jaeger, and Sidney R. Nagel, "Convection in Horizontally Vibrated Granular Material", Chaos **9**, 691 (1999).
83. Wenjie Li, Henbin Wang, Luping Yu, Terry L. Morkved, and Heinrich M. Jaeger, "Syntheses of Oligophenylenevinylenes-Polyisoprene Diblock Copolymers and their Microphase Separation", Macromolecules **32**, 3034 (1999).
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85. T. Thurn-Albrecht, J. DeRouchey, T. P. Russell, and H. M. Jaeger, "Overcoming Interfacial Interactions with Electric Fields", Macromolecules **33**, 3250 (2000).
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