

CURRICULUM VITAE: John S. Wettlaufer

Professional Preparation:

- May 1985 B.S., Honors, Mathematics and Physics
University of Puget Sound, Tacoma, Washington
- August 1991 Ph.D., University of Washington, Seattle, Washington

Appointment History:

- 2/23/2008-present A.M. Bateman Professor of Geophysics
Professor of Mathematics & of Physics
Fellow, Silliman College
Yale University, New Haven, CT
- 11/1/2014-present Research Professor of Applied Mathematics & Theoretical Physics
*Nordic Institute for Theoretical Physics &
Stockholm University*, Stockholm
- 9/1/2013-7/1/2014 Professor of Applicable Mathematics, Mathematical Institute
& Senior Research Fellow in Mathematics, Jesus College
University of Oxford, Oxford, UK
- 7/1/2014-2018 Visiting Professor of Mathematics, Mathematical Institute
University of Oxford, Oxford, UK
- 1/1-12/31/2012 Tage Erlander Professor
Nordic Institute for Theoretical Physics, Stockholm
- 8/1-12/31/2011 Visiting Professor, *Nordic Institute for Theoretical Physics*
Stockholm, Sweden (sabbatical fall term)
- 6/1/2010-9/1/2011 Visiting Professorial Fellow, Oxford Centre for Collaborative Applied
Mathematics, Mathematical Institute, *University of Oxford*, England
- 1/1/2002-2/23/2008 Professor of Geophysics and Physics
Yale University, New Haven, CT
- 7/1-12/31/2008 Visiting Professor, *Nordic Institute for Theoretical Physics*
Stockholm, Sweden (sabbatical fall term)
- 4/2007 Houghton Professor, *Massachusetts Institute of Technology*
Boston, Massachusetts, USA
- 1/1/2002- Affiliate Professor, Department of Physics
University of Washington, Seattle, WA
- 1/1/1999-3/1/1999 JSPS Visiting Professor, *Hokkaido University*, Sapporo, Japan
- 9/1991 - 12/31/2001 Postdoc researcher through faculty ranks.
University of Washington, Seattle, WA

Awards, Honoric Posts and Lectureships:

2021	Member, Nobel Committee for Physics (2021-)
2021	Member, Connecticut Academy of Science and Engineering
2019	Fellow of the American Geophysical Union
2015	Member, Royal Swedish Academy of Sciences (Physics Class III)
2013	Royal Society of London Wolfson Research Merit Award
2014	Plenary Speaker, International Conference on the Physics & Chemistry of Ice
2013	John Carlson Lecturer, Lorenz Center, MIT
2012	Tage Erlander Professor
2010-11	John Simon Guggenheim Fellow
2010	OCCAM Visiting Fellow, Mathematical Institute, University of Oxford
2008	Elected; A.M. Bateman Chair
2007	Houghton Lecturer, MIT
2005	Visiting Fellow Commoner, Trinity College, Cambridge
2003	Fellow of the American Physical Society
1999	The Japanese Society for Promotion of Science Visiting Professor
1996	Research Faculty Fellowship, University of Washington
1985	Sigma Pi Sigma; American Institute of Physics National Honor Society

PEER REVIEWED PUBLICATIONS: John S. Wettlaufer (167 + 2 Books)

Many available at http://users.math.yale.edu/users/wettlaufer/wettlaufer_pubs.html

For wider access see <http://scholar.google.com> or most recently

<https://arxiv.org/search/?query=wettlaufer&searchtype=author&source=header>

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2. Bonfils, A., D. Mitra, W. Moon and J.S. Wettlaufer, Asymptotic interpretation of the Miles mechanism of wind-wave instability. *J. Fluid Mech.* 944, A8 (2022).
3. Vachier, J., and J.S. Wettlaufer, Biolocomotion and premelting in ice. *Frontiers in Physics* **10**, 904836 (2022).
4. Giorgini, L., N. Chen, W. Moon and J.S. Wettlaufer, A Non-Gaussian Stochastic Model for Large-Scale ENSO Dynamics, *Phys. Rev. Research* **4**, L022065 (2022).

5. Vachier, J., and J.S. Wettlaufer, Premelting controlled active matter in ice. *Phys. Rev. E* **105**, 024601 (2022).
6. Nambiar, S., and J.S. Wettlaufer, The hydrodynamics of slender swimmers near deformable interfaces. *Phys. Rev. Fluids* **7**, 054001 (2022).
7. Ravichandran, S., S. Toppaladoddi and J.S. Wettlaufer, The combined effects of buoyancy, rotation, and shear on phase boundary evolution. *J. Fluid Mech.* **941**, A39 (2022).
8. Agarwal, S. and J.S. Wettlaufer, Minimal Data Fidelity for Successful Detection of Stellar Features or Companions. *Astron. J.* **163**(1), 6 (2022).
9. Moon, W., L.T. Giorgini, and J.S. Wettlaufer, Nonadiabatic stochastic resonance: An analytical solution, *Phys. Rev. E* **104**, 044130 (2021).
10. Simon, M. and J.S. Wettlaufer, Capillary control of soft composite columns, *Phys. Rev. Materials* **5**, 055603 (2021).
11. Worster, M.G., S.S.L. Peppin and J.S. Wettlaufer, Colloidal mushy layers, *J. Fluid Mech.* **914**, A28 (2021).
12. Toppaladoddi, S., A.J. Wells, C.R. Doering and J.S. Wettlaufer, Thermal Convection over Fractal Surfaces, *J. Fluid Mech.* **907**, A12 (2021).
13. Ravichandran, S. and J.S. Wettlaufer, Melting driven by rotating Rayleigh-Benard convection, *J. Fluid Mech.* **916**, A28 (2021).
14. Lutz, T., L.A. Wilen and J.S. Wettlaufer, A method for measuring fluid pressure and solid deformation profiles in uniaxial porous media flows, *Rev. Sci. Instrum.* **92** 025101 (2021).
15. Giorgini, L., W. Moon and J.S. Wettlaufer, Analytical survival analysis of the Ornstein-Uhlenbeck process, *J Stat Phys* **181**, 2404 (2020).
16. Lim, S-H., L. Giorgini, W. Moon and J.S. Wettlaufer, Predicting critical transitions in multiscale dynamical systems using reservoir computing *Chaos* **30**, 123126 (2020).
17. Marath, N. and J.S. Wettlaufer, Impurity effects in thermal regelation, *Soft Matter.* **16**, 5886 (2020).
18. Giorgini, L., S-H. Lim, W. Moon and J.S. Wettlaufer, Predicting Rare Events in Stochastic Resonance, *Europhys. Lett.* **129**, 40003 (2020).
19. Moon, W., N. Balmforth and J.S. Wettlaufer, Nonadiabatic asymptotic escape and stochastic resonance, *J. Phys. A: Math. Theor.* **53**, 095001 (2020).
20. S. Ravichandran and J.S. Wettlaufer, Transient convective spin-up dynamics, *J. Fluid Mech.* **897** A24 (2020).

21. Wettlaufer, J.S. Surface phase transitions in ice: from fundamental interactions to applications, *Phil. Trans. Roy. Soc. A* **377**, 20180261 (2019).
22. Pramanik, S. and J.S. Wettlaufer, Confinement effects in Premelting Dynamics with Elasticity Induced Curvature, *SIAM J. Applied Math.* **79**, 938 (2019).
23. Doering, C.R., S. Toppaladoddi and J.S. Wettlaufer, Absence of Evidence for the Ultimate Regime in two-dimensional Rayleigh-Bénard Convection, *Phys. Rev. Lett.* **123**, 259401 (2019).
24. Moon, W. and J.S. Wettlaufer, Coupling functions in climate, *Phil. Trans. R. Soc. A* **377**, 20190006 (2019).
25. Marath, N. and J.S. Wettlaufer, Hydrodynamic interactions and the diffusivity of spheroidal particles, *J. Chem. Phys.* **151**, 024107 (2019).
26. Toppaladoddi, S. and J.S. Wettlaufer, The combined effects of shear and buoyancy on phase boundary stability, *J. Fluid Mech.* **868**, 648 (2019).
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29. Agarwal, S. and J.S. Wettlaufer, Fluctuations in Arctic sea-ice extent: comparing observations and climate models, *Phil. Trans. Roy. Soc. A.* **376**, 20170332 (2018).
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