Jeffrey S. Olafsen

Contact Information:

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Education:

Ph.D.	Physics	December, 1994	Duke University
M.A.	Physics	December, 1991	Duke University
B.S.	Physics	May, 1989	University of Southern Mississippi *summa cum laude*
B.S.	Mathematics	May, 1989	University of Southern Mississippi *summa cum laude*

Employment & Research Experience:

2006 – Present — Associate Professor — Baylor University
Chemical & soft condensed matter physics, Insect biomechanics, Dissipative and dynamical systems, Bioinformatics, Imaging algorithm development and analysis

1999 – 2006 — Assistant Professor — University of Kansas
Nonlinear, chaotic, and non-equilibrium systems, image analysis algorithms

1997 – 1999 — Postdoctoral Fellow/Instructor — Georgetown University
Jeffrey S. Urbach, supervisor
Driven granular gases, inelasticity, clustering, phase transitions

1995 – 1997 — Lecturer/Research Associate — University of Massachusetts, Amherst
Robert B. Hallock, supervisor
Thin films, Wetting, Quantum fluids, Third Sound, Cryogenics

1994 – 1995 — Research Associate — Duke University
Robert P. Behringer, supervisor
Low temperature convection, Quantum fluids, Couette-Taylor flow

1991 – 1994 — Research Assistant — Duke University
Robert P. Behringer & Horst Meyer, advisors
Quantum fluids, steady-state thermal conductivity, superfluidity
Thermal boundary resistance, liquid helium convection

1989 – 1991 — Teaching Assistant — Duke University
Richard Palmer & John Thomas, supervisors

1987 – 1989 — NSF REU — University of Southern Mississippi
Raymond F. Folse, advisor
Stratified fluids, bifurcating flow fields, Laser Doppler Velocimetery (LDV)

1986 – 1987 — Lab Instructor — University of Southern Mississippi
Raymond F. Folse, supervisor — Department of Physics

Summer 1985 — Engineering Aide — U.S. Naval Coastal Systems Lab
Gary Kekelis, supervisor — Panama City, Florida

Teaching Experience:

Associate Professor, Baylor University (2006 – Present)

- Special Research Problems–(PHY IV95, Fall '07, '08, '10, '11, '14; Spring '08, '09, '10).
- General Physics II– (PHY 1430, Fall '06, '07, '08,'18; Spring '07) Physics I (Summer '15).
- Honors General Physics II – (PHY 1430H, Fall 2008; Spring 2008, 2013).
- Descriptive Astronomy – (PHY 1455, Summer 2011, Summer 2016, 2017, 2018).
- Fundamentals of Astronomy – (PHY 2455, and the Associated Laboratory, Fall 2010, 2011).
- Undergraduate Research Physics – (PHY 3V95, Fall '12, '14, '15, '17, Spring '16, '18).
- Physics Research I–(PHY 4195/2190, Fall '07, '08, '09, '10, Spring '11 - '19).
- Physics Research II–(PHY 4196/4190, Spring '07, '08, '09, '10, Fall '11 - '18).
- Thermodynamics and Statistical Physics–(PHY 4340, Fall 2009, 2012 - 2017).
- Solid State Physics-(PHY 4372, Spring '15, '16).
- Graduate Statistical Mechanics – (PHY 5340, Spring 2011, 2012).
- Special Topics in Physics – Nonlinear Dynamics (PHY 5381-01, Spring '09, '14, '17).
- Graduate Research – (PHY 5V95, Summer 2010, Fall 2010, Spring 2011).

Assistant Professor, University of Kansas (1999 – 2006)

- Taught introductory physics for non-science majors and developed peer-assisted learning lab.
- Undergraduate courses in Thermodynamics/Statistical Physics, Math Methods, Undergraduate Engineering Physics Senior Design, and General Physics II – Electricity & Magnetism.
- Honors Freshman Tutorials (HON 190): "What should everyone know about science?" (Fall 2001, 2002), "Hypatia to Hopper – Scientific Women or Female Scientists?" (Fall 2003), "What Just Happened?" (Fall 2004), and "The Art of Storytelling" (Fall 2005).
- Graduate course in Statistical/Non-Equilibrium Physics.

Instructor, Georgetown University (1998 – 1999)

- Taught integrated laboratory component of introductory physics for majors and non-majors. Revised instructional materials, provided web resources, conducted pre-lab demonstrations.
- Responsible for preparing and mentoring two undergraduate teaching assistants.

Lecturer, University of Massachusetts, Amherst (1997)

- Team instructed introductory physics. Ran supplemental recitation lectures (2 class hrs/week).
- Supervised teaching assistant.

Teaching Assistant, Duke University (1989 – 1991)

- Conducted recitation and lab sections for introductory physics for pre-med students.
- Graded homework for graduate courses in quantum mechanics and thermodynamics.

Teaching Assistant, University of Southern Mississippi (1986 – 1987)

- Conducted help sessions and graded homework and lab reports for introductory physics courses.
- Organized and conducted SPS tutorial sessions.

Educational and Synergistic Activities:

- Academy of Teaching & Learning, Summer Faculty Institute, Baylor University, Summer 2014.
- Preliminary review of Big 12 Astronomy programs for Astronomy and Astrophysics degree program proposal, Undergraduate Committee, Department of Physics, Baylor University, Spring 2008.
- Authored Textbook Solution Manual: M. D. Sturge (deceased) and J. S. Olafsen, A Solutions Manual for Statistical and Thermal Physics: Fundamentals and Applications by M. D. Sturge, Published by A. K. Peters, Ltd. (2005). Revised (2006). *Currently preparing 2nd Edition, 2015-16).*
- "An Ongoing Reflection" teaching essay, published by KU Center for Teaching Excellence (2005).
- KU Center for Teaching Excellence (CTE) Faculty Seminar (Spring 2004). Publishing teaching innovations as scholarly work.
- Helped organize Best Practices Institute (BPI) offered each spring and served as facilitator in 2004.

Educational and Synergistic Activities (continued):

- Participated in CTE BPI workshop as attendee, focusing on innovations for instruction in large lecture classrooms (Spring 2003).
- Led session of KU CTE Teaching Summit for Graduate Teaching Assistants in order to better prepare GTAs for their role as facilitators to student learning entitled, "Problem Solving in Technical Classes: How to guide your students to determine the answer without giving them the answer" (Fall 2003, Fall 2004, and Spring 2005).
- **NSF funded Kansas Collaborative for Excellence in Teacher Preparation (KCETP)** student-centered formatted workshop for introducing secondary education teachers to innovative methods of teaching the physics of electricity and magnetism as applied to communication. (2001).
- Created hands-on laboratory component for introductory physics class to help train future teachers to make inexpensive physics demonstrations for classroom use, in conjunction with **KCETP** (2000).
- Provided research-grade projects for Engineering Physics Senior Design Course (PHSX 601). Table-top projects present original research challenges for students to solve; all projects involve mechanical design, construction, troubleshooting and the measurement through LabVIEW platform to produce a research grade "deliverable" device for use in PI's laboratory (1999 – 2006).

Instructional Funding:

Amount	Source	Period
$ 5,000	Baylor University Outstanding Tenured Faculty Teaching Award	2012
1,000	KU Center for Teaching Excellence (CTE) Faculty Seminar Award	2004
1,000	KU CTE Best Practices Teaching Fund	2004
750	KU CTE Teaching Grant	2003
750	KU CTE Best Practices Teaching Fund	2003
2,500	NSF KCETP Grant	2001
1,250	NSF KCETP Grant	2000

Honors & Awards:

2015 URSA Scholar's Week Poster Presentation, Best Individual Student Poster – Martin Martinez
2012 Baylor University Outstanding Tenured Faculty Teaching Award
2008 Kaleidoscope highlight for *Physical Review E* **78**, 042301 (2008) paper with K. Combs
2005 National Register's Who's Who In Executives and Professionals
2004 GSNP Video Award, Gallery of Images, APS March Meeting
2002-04 University of Kansas Center for Research (KUCR) Research Development Travel Funds
1999-05 Graduate Faculty Travel Awards, University of Kansas
1998 Video Winner, 16th Annual Picture Gallery of Motion
51st Annual Meeting of the Division of Fluid Dynamics, November 22-24, 1998.
1992-95 Duke University Conference Travel Fellowship (3 yearly awards)
1989-90 Phi Kappa Phi Graduate Fellowship
1989 University of Southern Mississippi, Outstanding Senior Physics Award
1989 University of Southern Mississippi, Phi Kappa Phi Silver Bowl, *Graduated Top of Class*
1989 Mississippi Academy of Sciences, 1st Place - Undergraduate Presentation Award, Physics
1988 University of Southern Mississippi British Studies Travel Scholarship
1988 Mississippi Academy of Sciences, 1st Place - Undergraduate Presentation Award, Physics
1987 Golden Key National Honor Society Scholarship
1986 University of Southern Mississippi, Outstanding Freshman Physics Award
1986 University of Southern Mississippi, Outstanding Freshman Student, Male
1985-89 National Dean's List
1985-89 University of Southern Mississippi President's List
1985-89 University of Southern Mississippi Honors College Scholarship
1985-89 University of Southern Mississippi Excellence Scholarship
1985 University of Southern Mississippi Valedictorian Scholarship

Publications (undergraduate authors underlined):

1. L. J. Olafsen, J. S. Olafsen, and I. K. Eaves, "Time-dependent spatial intensity profiles of near-infrared idler pulses from nanosecond optical parametric oscillators," *Applied Physics B*, (2018). Volume 124, Issue 6, DOI: 10.1007/s00340-018-6975-0
2. M. Martinez and J. S. Olafsen, "Inelastic Wedge Billiards", *EPJ Web Conf.* **140** 05009 (4 pages) for Powders and Grains 2017 – 8th International Conference on Micromechanics on Granular Media. DOI: 10.1051/epjconf/201714005009 (2017).
3. Tyler Hartwig, Zeyu Huang, Sara Martinson, Ritchie Cai, Jeffrey S. Olafsen, and Keith Schubert, "Magnetic Resonance Image Applied to 3-Dimensional Printing Utilizing Various Oils," CSREA press, ISBN: 1-60132-465-0, pp. 114-117 (2017) published in *Proceedings of the 2017 International Conference on Modeling, Simulation and Visualization Methods (MSV'17).*
4. K. Combs, B. Ball, and J. S. Olafsen, "A hybrid model for a single granular particle driven by a non-Gaussian viscous bath." *Granular Matter*, Volume 17, Issue 4, pp 523-529 (2015).
5. G. Benesh and J. S. Olafsen, "On the Stability of a Can of Soda", *Physics Teacher* **52**, 344 – 348 (2014).
6. B. Bammes and J. S. Olafsen, "Empirically modeling polymer collapse in a poor solvent via a non-equilibrium, granular chain experiment." *Granular Matter*, Volume 16, Number 2, **16**: 259 – 268 (2014).
7. N. Beasley, J. Jantzi, R. Kinser, and J. S. Olafsen, "Dilation, Compression, and Convection in Granular Shear Experiments," *American Institute of Physics Conference Proceedings* 1542, pp. 449 – 452 (2013).
8. L. J. Olafsen, I. K. Eaves, and J. S. Olafsen, "Synchronized Mid-infrared Beam Characterization of Narrow Gap Semiconductors," *American Institute of Physics Conference Proceedings*, **1416**, pp. 88-90; doi:10.1063/1.3671705 (2011).
9. Z. F. Alemdar, J. Browning and J. Olafsen, "Photogrammetric Measurements of RC Bridge Column Deformations." *Engineering Structures*, **33**, 2407-2415 (2011).
10. J. Olafsen (ed.) Experimental and Computational Techniques in Soft Condensed Matter Physics, Cambridge University Press, September 2010.
11. J. Olafsen "Image Acquisition and Analysis in Soft Condensed Matter." Chapter appearing in Experimental and Computational Techniques in Soft Condensed Matter Physics, Cambridge University Press, September 2010.
12. K. Combs and J. S. Olafsen, "Energy Injection in a Non-Equilibrium Granular Gas Experiment." *AIP Conference Proceedings*, **1145**, 997-1000 (2009).
13. K. Combs, J. S. Olafsen, A. Burdeau, and P. Viot, "Thermostatistics of a single particle on a granular dimer lattice: Influence of defects." *Physical Review E*, **78**, 042301 (2008).
14. Z. F. Alemdar, J. Browning, J. S. Olafsen and N. Hunt, "Monitoring RC Bridge Column Hinging with Photogrammetry." Proceedings of the *14th World Conference on Earthquake Engineering*, Beijing, China, October 12-17, 2008.
15. I. S. Aranson, A. Snezhko, J. S. Olafsen, and J. S. Urbach, "Comment on 'Long-Lived Giant Number Fluctuations in a Swarming Granular Nematic.'" *Science*, **320**, 612 (2008).
16. G. W. Baxter and J. S. Olafsen, "Experimental Evidence for Molecular Chaos in Granular Gases." *Physical Review Letters*, **99**, 028001 (2007).
17. G. W. Baxter and J. S. Olafsen, "The Temperature of a Vibrated Granular Gas." *Granular Matter*, **9**, 135-139 (2007).
18. X. Zhao, S. M. Williams, and J. S. Olafsen, "Water release from shaken silica substrates in a catalytic reactor." *ASCE Conference Proceedings*, **188**, 76 (2006).
19. M. D. Sturge (deceased) and J. S. Olafsen, A Solutions Manual for Statistical and Thermal Physics: Fundamentals and Applications by M. D. Sturge, Published by A.K. Peters, Ltd. (2005). Revised (2006).
20. J. S. Olafsen and J. S. Urbach, "Two-dimensional melting far from equilibrium in a granular monolayer." *Physical Review Letters*, **95**, 098002 (2005).

Publications (continued):

21. K. Kohlstedt, A. Snezhko, M.V. Sapoznikov, I. S. Aranson, J. S. Olafsen, and E. Ben-Naim, "Velocity Distributions of Granular Gases with Drag and with Long-Range Interactions." *Physical Review Letters*, **95**, 068001 (2005).
22. S. Feldt and J. S. Olafsen, "Inelastic Gravitational Billiards." *Physical Review Letters*, **94**, 224102 (2005).
23. J. Atwell and J. S. Olafsen, "Anisotropic dynamics in a shaken granular dimer gas experiment." *Physical Review E*, **71**, 062301 (2005).
24. B. Bammes and J. S. Olafsen, "Polymer-like folding of a two-dimensional granular chain in water." *Chaos*, **14,** S9 (2004).
25. J. S. Olafsen and J. S. Urbach, "Crystallization in a 2D Granular Fluid." Included in: A Gallery of Fluid Motion, M. Samimy *et al.*, editors. Cambridge University Press, 2004.
26. G. W. Baxter and J. S. Olafsen, "Kinetics: Gaussian Statistics in Granular Gases." *Nature*, **425**, 680 (2003).
27. J. T. Botz, C. Loudon, J. B. Barger, J. S. Olafsen, and D. W. Steeples, "Effects of Slope and Particle Size on Ant Locomotion: Implications for Choice of Substrate by Antlions." *Journal of the Kansas Entomological Society*, **76**, 3 (2003).
28. M. V. Sapoznikov, I. S. Aranson, and J. S. Olafsen, "Coarsening of granular clusters: Two types of scaling behaviors." *Physical Review E*, **67**, 010302(R) (2003).
29. J. T. Botz, C. Loudon, J. B. Barger, J. S. Olafsen, and D. W. Steeples, "Slipping on sandy slope – physical determinants of antlion pit function." *Integrative & Comparative Biology*, **42**, 6 (2002).
30. I. S. Aranson and J. S. Olafsen, "Velocity fluctuations in electrostatically driven granular media." *Physical Review E*, **66**, 061302 (2002).
31. J. S. Urbach and J. S. Olafsen, "Experimental Observations of Non-equilibrium Distributions and Transitions in a 2D Granular Gas." Lecture Notes in Physics: Granular Gases, Springer-Verlag, pp. 410-428, (2001).
32. J. S. Urbach and J. S. Olafsen, "Spheres on a Vibrating Plate: Clustering and Collapse." Proceedings of the 5th Experimental Chaos Conference, World Scientific, 2001.
33. J. S. Olafsen and J. S. Urbach, "Velocity Distributions and Density Fluctuations in a Granular Gas." *Physical Review E*, **60**, R2468 (1999).
34. J. S. Olafsen and J. S. Urbach, "Crystallization in a 2D Granular Fluid." *Physics of Fluids*, **11**, S5 (1999).
35. J. S. Olafsen and R. P. Behringer, "AC Thermal Conductivity Measurements in Dilute Mixtures of ^{3}He in Superfluid ^{4}He." *Journal of Low Temperature Physics*, **117**, 53 (1999).
36. J. S. Olafsen and J. S. Urbach, "Clustering, Order, and Collapse in a Driven Granular Monolayer." *Physical Review Letters*, **81**, 4369 (1998).
37. J. S. Olafsen and R. P. Behringer, "Dynamic Measurements of Thermal Transport Coefficients and Boundary Resistance, II. Model for ^{3}He-Superfluid ^{4}He Mixtures." *Journal of Low Temperature Physics*, **111**, 863 (1998).
38. J. S. Olafsen and R. P. Behringer, "Dynamic Measurements of Thermal Transport Coefficients and Boundary Resistance, I. Normal ^{4}He." *Journal of Low Temperature Physics*, **106**, 673 (1997).
39. J. S. Olafsen and R. P. Behringer, "Temporal Response of the Thermal Boundary Resistance in Superfluid Helium." *Physical Review B*, **52**, 61 (1995).
40. J. S. Olafsen, *Probing Thermal Transport Properties in Liquid Helium Using a Time-Varying Heat Current.* Doctoral Thesis, Duke University, Durham, NC (1994).
41. J. S. Olafsen and R. P. Behringer, "Thermal Response of Normal and Superfluid Helium to an AC Heat Flux." *Physica B*, **194-196**, 595 (1994).
42. J. S. Olafsen, *Bifurcations in Flow Fields Generated by a Torsionally Oscillating Sphere in a Linearly Stratified Fluid.* Undergraduate Thesis, Honors College, University of Southern Mississippi, Hattiesburg, MS (1989).

Other Publications (undergraduate authors underlined):

1. B. Bammes, K. Schwartz, B. Ball, and J. S. Olafsen *How polymers fold*, (whitepaper) submitted to Dr. Paul Sokol in the DMR/CMP program at NSF, Summer 2015.
2. L. Buckingham and J. S. Olafsen, "Column Strain Analysis via Image Tracking." Report for KU TRI (University of Kansas Transportation Research Institute), Summer 2008.
3. E. Meyer, R. Hale, R. Taghavi, J. S. Olafsen, and G. Mathur, "Design of Portable Rumble Strips." Report submitted to the Smart Work Zone Deployment Initiative, December 2006.
4. J. S. Olafsen, "An Ongoing Reflection" teaching essay, published by KU Center for Teaching Excellence (CTE) in *Reflections from the Classroom* (2005).
5. J. S. Olafsen, "A Review of *Statistical Physics of Crystals and Liquids*," for the *Bulletin of the Materials Research Society*, February (2005).
6. E. Meyer, R. Hale, R. Taghavi, J. S. Olafsen, and G. Mathur, "Design of Portable Rumble Strips (Phase 1)." Report submitted to the Smart Work Zone Deployment Initiative, July 2005.
7. I. Aranson, A. Snezhko, M. Sapoznikov, E. Ben-Naim, A. Peleg, J. Olafsen and K. Kohlstedt, "Novel Behaviors in Electrostatically Driven Granular Media" included in *The DOE Center of Excellence for the Synthesis and Processing of Advanced Materials: Research Briefs* (2004).

Pre-prints / Papers Submitted / Unpublished (undergraduate authors underlined):

1. *Sturge's Thermodynamics and Thermostatistics*, J. S. Olafsen, Textbook, Taylor & Francis publisher, Fall 2018 (500 pp.) Submitted to publisher, October 31, 2018.
2. L. J. Olafsen, J. S. Olafsen and I. K. Eaves, "Multi-wavelength beam profile analysis of near-infrared idler pulses from a nanosecond optical parametric oscillator," Submitted to *Applied Physics B*, Fall 2018.
3. K. Taljan and J. S. Olafsen, "Recovering Gaussian statistics from a non-equilibrium system: A coupled logistic map." Submitted to *Physical Review Letters*. In preparation for re-submission.
4. J. Jantzi and J. S. Olafsen, "Rotational statistics in granular flows of smooth cylindrical particles." In preparation for submission to *Physical Review Letters*.
5. L. J. Olafsen, J. S. Olafsen, I. K. Eaves, "Spatiotemporal beam analysis," in preparation.

Undergraduates Supervised in Research at Baylor University:

Vera Von Bergen, URC Funded Research Student ('07)
Leben Reibe, URC Funded Research Student ('07)
Kristin Combs, URC Funded & Summer Research Student, URSA funded ('07, '08, '09)
Jacob Jantzi, Summer Research Student, URSA funded ('07,'08,'09, '10) PHY 4195/6 ('09, '10)
Corey LaFontaine, REU Summer Research Student ('07)
Lindsay Buckingham, Summer Research Student, URSA funded ('08)
Kyle Taljan, REU Summer Research Student ('08)
Kurt Schwartz, Research Student (PHY 1V95/ 4195/6, '08 – '09)
Rachel Wilkerson, University Scholar, Research Student (PHY 1V95, '09), SURPh ('10)
Divya Krishnappa, Research Student ('09 - '12)
Alex Sabey, Summer Research Student URSA/SURPh ('09, '11), (PHY 1V95/4195/6 '10, '11)
Alan Tabatabai, REU Summer Research Student ('09)
Andrew Yost, Summer Research Student, SURPh ('10), (PHY IV95/4195/6, '10)
Ben Ball, REU Summer Research Student ('10)
Nathan Beasley, Summer Research Student, SURPh ('11), URSA ('11) , SURPh('12)
Brandon Mattingly, Summer Research Student, SURPh ('11), URSA ('11)
Melissa Curtis, Summer Research Student, URSA ('14)
Martin Martinez, Summer Research Student, URSA ('14), URC ('15)
Christlynn Henderson, Undergraduate Research Student, Spring '16 (SURPh '16)
Blake Gigout, Undergraduate Research Student, Summer '17 (SURPh '17)
Carinna Polley, Undergraduate Research Student, Fall '17, Spring '18

Undergraduate Students Supervised at University of Kansas:

Mike Amerine, PHSX 601, KU '00
Jesse Atwell, Summer Research Student, UGRA, PHSX 501 (Research), KU '03

Undergraduate Students Supervised at University of Kansas (continued):

Ben Bammes, Summer Research Student, PHSX 501 (Research), UGRA
Shannon Cline, PHSX 601
William Cross, Summer Research Student, UGRA, PHSX 501 (Research)
Alan Dibos, PHSX 501 (Research), PHSX 601
Cory Doolittle, PHSX 601, Summer Research Student, UGRA, PHSX 501 (Research)
Steve Drullinger, PHSX 601
Sarah Feldt, Summer Research Student, UGRA, PHSX 501 (Research), KU '04
Ashford Galbreath, Summer Research Student
Kyle Gonterwitz, PHSX 601, KU '04
Kenny Johnston, PHSX 601
Ryan Kinser, PHSX 501 (Research), KU '03
Kevin Kohlstedt, PHSX 601, Summer Research Student, UGRA, PHSX 501 (Research), KU '04
Dan Kolsky, Summer Research Student
Adam Kraus, PHSX 501 (Research), KU '03
Kristin Larson, PHSX 601, KU '04
Dana Maher, Summer Research Student, UGRA, PHSX 501 (Research)
Lindsay Mayer, PHSX 601
Jesse Noffsinger, PHSX 501 (Research), KU '05
Cooper Snapp, PHSX 601, KU '00
Simon Roh, PHSX 501 (Research)
Nick Shea, PHSX 601, Summer Research Student, UGRA, PHSX 501 (Research), KU '01
David Tenny, Summer Research Student, UGRA, KU '04

Undergraduate Student Honors and Accomplishments Associated with Research:

- *Baylor University URSA Research Awards / URC Support*
  Vera von Bergen ('07 – URC)
  Leben Reibe ('07 – URC)
  Kristin Combs ('08 URSA, '07 – URC)
  Jacob Jantzi ('08, '09 URSA)
  Lindsay Buckingham ('08 URSA)
  Alex Sabey ('09, '11 URSA)
  Nathan Beasley ('11 URSA)
  Brandon Mattingly ('11 URSA)
  Melissa Curtis('14 URSA)
  Martin Martinez('14 URSA, '15-URC)
- *Senior and Honors Theses by Undergraduate Researchers*
  Jacob Jantzi, *Translational and Rotational Velocity Statistics in a Rotating Granular Tumbler*, Honors College Thesis, Baylor University, May 2010.
- *KU Undergraduate Research Awards (UGRA's)*
  Sarah Feldt ('02, '03)
  Jesse Atwell ('02)
  Kevin Kohlstedt ('02)
  Cory Doolittle ('02)
  William Cross ('03)
  Dana Maher ('04, '05)
  Ben Bammes ('04, '05)
- *Summer REU*
  Kevin Kohlstedt ('03, '04) – Argonne National Lab with Igor Aranson, Collaborator
- *Goldwater Scholars*
  Rachel Wilkerson ('10 – '11) Baylor University
  Sarah Feldt ('03 – '04)

- *Goldwater Scholars* (continued)
  Ryan Kinser ('02 – '03)
- *Goldwater Nominees*
  Kristin Combs ('07 – '08) Baylor University
  Nathan Beasley ('11 – '12) Baylor University
  Melissa Curtis ('14 – '15) Baylor University
- *Students graduating with honors (research)*
  Kevin Kohlstedt, '04
  Sarah Feldt, '04
- *Graduate Fellowships awarded to Undergraduate Research Students:*

Ryan Kinser	(NSF Fellowship, '03–'04 / University of Michigan)
Sarah Feldt	(Regents Fellowship, '04–'05 / University of Michigan)
	(NSF Fellowship, '05–'06 / University of Michigan)
Kevin Kohlstedt	(McCormick Fellowship, '04–'05, Northwestern University)
	(DOE Fellowship, '05–'06 Northwestern University)

- *Other Honors/Awards*
  Kaleidoscope highlight for *Physical Review E*: **http://pre.aps.org/kaleidoscope/October2008**
  PRE **78**, 042301 (2008) with K. Combs, October 2008, DOI: **10.1103/PhysRevE.78.042301**
  Ben Bammes, '04 - GSNP Video Award, Gallery of Images, APS March Meeting

Graduate Students Supervised in Research:

Kai Yang, Baylor University Department of Physics (Fall 2017 – Present)

B.J. Enzweiler, Baylor University Department of Physics ('10 – '11) M.A. May 2011

Zeynep Firat Alemdar
(co-supervised with JoAnn Browning, Civil Engineering, KU), Graduated 2011

Nick Hunt
(co-supervised with JoAnn Browning & Adolfo Matamoros, Civil Engineering, KU)

Jason T. Botz,
Graduation Date: 2005
(co-supervised with Catherine Loudon, Ecology & Evolutionary Biology, KU)

Mary Ann F. Harrison,
Graduation Date: 2000
(co-supervised with Y. C. Lai)
Thesis title: *On-Off Intermittency and Patterning in Spatially-Extended Dynamical Systems*

Current and Previous Collaborators:

Igor S. Aranson, Materials Science Division, Argonne National Laboratory
G. William Baxter, School of Science, Penn State, Erie (The Behrend College)
Robert P. Behringer, Department of Physics, Duke University
Greg Benesh, Department of Physics, Baylor University
Eli Ben-Naim, Los Alamos National Laboratory
Mehmet Bilgen, Hoglund Brain Imaging Center, University of Kansas Medical Center (KUMC)
JoAnn Browning, Department of Civil Engineering, University of Kansas
Kenneth Fischer, Department of Mechanical Engineering, University of Kansas
Raymond Folse, Department of Physics & Astronomy, University of Southern Mississippi
Rick Hale, Department of Aerospace Engineering, University of Kansas
Robert Hallock, Department of Physics & Astronomy, U. of Massachusetts, Amherst
Hisao Hayakawa, Yukawa Institute for Theoretical Physics, Kyoto University, Japan
Joe Kuehl, Department of Mechanical Engineering, Baylor University
Catherine Loudon, Division of Biology, University of Kansas
Lorin Maletsky, Department of Mechanical Engineering, University of Kansas
Adolfo Matamoros, Department of Civil Engineering, University of Kansas

Current and Previous Collaborators: (continued)

Horst Meyer, Department of Physics, Duke University
Linda Olafsen, Department EECS, Baylor University
Keith Schubert, Department of EECS, Baylor University
Surajit Sen, Department of Physics, SUNY Buffalo
Christopher Sorensen, Department of Physics, Kansas State University
Carolyn Skurla, Department of Mechanical Engineering, Baylor University
Don Steeples, Department of Geology, University of Kansas
Jeffrey Urbach, Department of Physics, Georgetown University
Pascal Viot, Universite Pierre et Marie Curie, Paris, France
Susan Williams, Department of Chemical & Petroleum Engineering, University of Kansas
Sara Wilson, Department of Mechanical Engineering, University of Kansas

Research Funding (PI unless otherwise noted):

Amount	**Source**	**Period**
$ 6,867	Baylor University URC Grant *Dynamic measurements of the Coefficient of Restitution: Three crucial experiments for Non-equilibrium Thermodynamics*	2015-16
1,000	Baylor Institute for Oral History *Perspectives on the Beginnings of IT at Baylor*	2015-16
5,000	Baylor University URSA Grant *Flexible Foot Prosthetics: Design and Testing for Variable Environments*	2014
5,000	Baylor University URSA Grant *Undergraduate Research in Soft Condensed Matter Physics*	2011
5,000	Baylor University URSA Grant *Undergraduate Research in Granular Systems*	2009
5,000	Baylor University URSA Grant *Undergraduate Research in Non-Equilibrium Systems*	2008
25,000	Baylor University Faculty Research Investment Program (FRIP) Grant *Beam Quality in High-Efficiency IR Semiconductor Lasers*	2007-2008
2,500	Big XII Fellowship Grant *Collaborative Research with Civil Engineering Department, University of Kansas*	2007
5,820	Baylor University Research Committee (URC) Grant *Assessment of Sensory Capabilities of Antlions*	2006-2007
120,000*	NSF Small Grant for Exploratory Research (SGER)	2005-2007(08)
60,000*	*NSEER Payload Project for NSF Award #0420347 – Control of Plastic Hinging Behavior of RC Bridge Systems.* Co-PI. *(Third year of funding of $60,000 from KU TRI)*	
223,000	Kansas NSF EPSCoR Equipment Grant *Portable Magnetic Resonance Imaging Resource for Basic Research in Biomechanical and Living Systems.*	2005-2006
6,864	General Research Fund Award, University of Kansas *Experiments to improve chemical extraction from silica and iron oxide substrates for NASA applications in regolith processing and* in situ *resource utilization (ISRU) in Lunar and Martian environments.*	2005-2006
175,000*	Federal Highway Administration *Design of Portable Rumble Strips, Phase 2.* Co-PI, KU Portion $37,650	2004-2005
5,000	Kansas NASA EPSCoR Grant *Granular Fluid Models of Non-equilibrium Surface Dynamics.*	2003

Research Funding (continued):

Amount	Source	Period
6,240	General Research Fund Award, University of Kansas *Fundamental Tests of Non-equilibrium Systems.*	2003-2004
$300,000*	DOE BES (Administered through Argonne National Laboratory) *BES Center of Excellence on Granular Flows and Kinetics.* PI: David Hoffman, Iowa State University. KU portion, $20,000	2001-2005
9,286	General Research Fund Award, University of Kansas (KU) *Clustering and Coarsening in an Electrostatically Driven Granular Media.*	2002-2003
8,000	Summer Research Fellowship, American Chemical Society Supplement to *Mixing, Diffusion and Energy Distribution in Driven Granular Media.*	2002
3,984	NSF EPSCoR Award, KANSAS NSF EPSCoR *Biocomplexity in the Behavior of Antlion Larvae, Pit Construction and Perturbations to their Granular Environment.*	2001
5,423	General Research Fund Award, University of Kansas *Ballistic Sifting of Grains in Myrmeleon Pit Construction.*	2001-2002
25,000	Petroleum Research Fund, American Chemical Society *Mixing, Diffusion and Energy Distribution in Driven Granular Media.*	2000-2002
9,882	New Faculty General Research Fund Award, University of Kansas *Mixing and Pattern Formation in Granular Systems.*	2000-2001

*-denotes multi-institutional grant

Societies & Service:

Undergraduate Program Director, Department of Physics, Baylor University, 2015 – Present
Barry M. Goldwater Scholarship Faculty Representative, Baylor University, 2011 – Present
Director of Undergraduate Research, Department of Physics, Baylor University 2010 – Present
Expanded Core Curriculum Committee, College of Arts & Sciences, Baylor University, 2017 - Present
Prelim Committee, Department of Physics, Baylor University, 2010–12 (Chair, 2011 – 2012), 2016-18
Departmental Newsletter (Editor), Department of Physics, Baylor University, 2006 – 2014
Machinist Search Committee/BSB Machine Shop Advisory Committee, Baylor University, 2008 – Present
Co-Chair, Tenure Track Faculty Search Committee, Department of Physics, Baylor University, 2007-09
Undergraduate Committee, Department of Physics, Baylor University, 2006 – Present
Referee, Powder Technology Journal, 2008 – Present
Webmaster, Department of Physics, Baylor University, 2007 – 2008, *Electronic Act. Comm.* (2009 – Present)
Curriculum Committee, Honors Program, U. of Kansas, 2005 – 2006
Chair, Annual Newsletter, Department of Physics & Astronomy, U. of Kansas, 2004 – 2006
Undergraduate Committee, Department of Physics & Astronomy, U. of Kansas, 2004 – 2006
Committee on Endowment, Department of Physics & Astronomy, U. of Kansas, 2004 – 2005
Faculty Panel Discussion, KU Libraries Instructional Council, May 2004
KU Chapter, Phi Kappa Phi Honor Society, 2000 – 2006
President, KU Chapter, 2004 – 2006, Vice-President, KU Chapter, 2003 – 2004
Ad Hoc *Committee on Undergraduate Laboratory Course,* Department of Physics & Astronomy, *U. of Kansas, 2003 – 2004*
Shop/Space Committee, Department of Physics & Astronomy, U. of Kansas, 2003 – 2006
Chair, Library Committee, Department of Physics & Astronomy, U. of Kansas, 2003 – 2006
Proposal Reviewer, American Chemical Society's Petroleum Research Fund, 2002 – 2006
Instructional Labs Committee, Department of Physics & Astronomy, U. of Kansas, 2001 – 2003
Referee, Journal of Fluorescence, 2001 – Present
Faculty Advisor, Society of Physics Students, U. of Kansas, 2000 – 2002
Dark at the Top of the Hill, Natural History Museum Program, Fall 2000, Fall 2002

Societies & Service (continued):
Honors Coordinator, Department of Physics & Astronomy, U. of Kansas, 2000 – 2002
Graduate Recruitment Committee, Department of Physics & Astronomy, U. of Kansas, 2000
Referee, Physical Review Letters, 2000 – Present
Computer Committee, Department of Physics and Astronomy, U. of Kansas, 1999
Referee, Physical Review E, 1999 – Present
Search Committee, Technician Position, Department of Physics, Georgetown University, 1998
American Physical Society, 1991 – Present (Lifetime membership)
Divisions of Fluid Dynamics, Condensed Matter, and Computational Physics
Groups on Few Body & Multiparticle Dynamics, Instrument & Measurement Science, and Statistical & Nonlinear Physics; Forums on Physics & Society and History of Physics
Sigma Pi Sigma
Massachusetts Teachers Association, 1995 – 1997
National Association of Graduate and Professional Students, 1991 – 1995
Graduate and Professional Student Council of Duke University, 1989 – 1995
1994 – Physics Department Graduate Student Representative
Omicron Delta Kappa
Golden Key National Honor Society
Phi Kappa Phi
Gamma Beta Phi
Alpha Lambda Delta
Phi Eta Sigma

Invited Talks:

1. *Improving the Undergraduate Experience with Experiments in Nonlinear, Non-Equilibrium and Soft Matter Systems, Department of Chemistry and Physics, LeTourneau University, March 30, 2017.*

2. *Tabletop Experiments in Nonlinear, Non-equilibrium, and Chaotic Systems with Undergraduate Researchers, Department of Physics, Lamar University, March 12, 2015*

3. *Tabletop Experiments in Nonlinear, Non-equilibrium, and Chaotic Systems with Undergraduate Researchers, Department of Physics, Hamline University, January 29, 2014.*

4. *Tabletop Experiments in Nonlinear, Non-equilibrium, and Soft Matter Systems with Undergraduate Researchers, Department of Physics, University of Colorado Denver, March 12, 2014*

5. *Molecular Chaos in Driven Granular Gases,* International Conference on Complex Dynamics of Granular Systems, Kavli Institute for Theoretical Physics, Chinese Academy of Sciences
Hosted by C.K. Chan, June 4, 2013 in Beijing, China

6. *Granular Engineering by Larval Neuroptera for Prey Capture,* Workshop on Complex Dynamics in Granular Systems, Kavli Institute for Theoretical Physics, Chinese Academy of Sciences
Hosted by Meiying Hou, June 13, 2013 in Beijing, China

7. *Improving the Undergraduate Experience with Tabletop Experiments in Non-equilibrium, Biological, and Chaotic Systems.* Department of Physics & Astronomy, Trinity University
Hosted by Dennis Ugolini, February 21, 2012

8. *Tabletop Experiments in Nonlinear and Non-equilibrium Systems*
Department of Physics & Astronomy, Texas Christian University.
Hosted by Bruce Miller, February 18, 2011

Invited Talks (continued):

9. *Recapturing Thermostatistical Behavior in Systems Driven Far from Equilibrium*
   International Symposium on Complexity in Materials Far from Equilibrium,
   Hosted by Virginia Tech, Department of Physics, May 14-16, 2008

10. *Experiments in Nonlinear and Non-equilibrium Systems by Undergraduate Researchers: Improving Undergraduate Education and Graduate Student Recruitment*
    Department of Physics, Texas A&M University, Hosted by Winfried Teizer, 2007

11. *Improving the Undergraduate Experience with Experiments in Nonlinear and Non-equilibrium Systems* Department of Physics, Wheaton College, 2006

12. *Tabletop Experiments in Non-equilibrium, Biological, and Chaotic Systems*
    Department of Physics, Baylor University, 2006

13. *Improving the Undergraduate Experience with Experiments in Nonlinear and Non-equilibrium Systems* Department of Physics, Rochester Institute of Technology, 2006

14. *Experiments in Nonlinear and Non-equilibrium Systems by Undergraduate Researchers: Improving Undergraduate Education and Graduate Student Recruitment*
    Department of Physics, Virginia Tech, Hosted by Rahul Kulkarni, 2005

15. *A Model System to Study Polymer Folding in Poor Solvents*
    Department of Mathematics, University of Kansas, Hosted by Bozenna Pasik-Duncan, 2005

16. *Experiments in Nonlinear, Non-equilibrium and Biological Systems*
    Department of Physics & Astronomy, University of Southern Mississippi
    Hosted by Christopher Winstead, 2005

17. *The Weather in London: Experiments in Nonlinear, Non-equilibrium, and Biological Physics*
    University of Kansas, Hosted by the Department of Physics & Astronomy, 2004

18. *Coarsening, Velocity Statistics, and Energy Injection in Driven Granular Gases*
    3rd Workshop on Granular Flow and Kinetics, Hosted by University of New Mexico & LANL, 2004

19. *Granular Engineering of Pits for Prey Capture by Antlions*
    Department of Physics, SUNY Buffalo, Hosted by Surajit Sen, 2003

20. *Effective Temperature and Soft Matter Physics*
    Physics Department, Kansas State University, Hosted by Chris Sorensen, 2003

21. *Granular Engineering of Pits for Prey Capture by Antlions*
    Center for Nonlinear Studies, Los Alamos National Laboratory, Hosted by Eli Ben-Naim, 2003

22. *Granular Engineering of Pits for Prey Capture by Antlions*
    University of California, Irvine, Hosted by Michael Dennin, 2003

23. *Energy Injection and non-Gaussian Velocity Statistics in Driven Granular Gases*
    2nd Workshop on Granular Flow & Kinetics, Hosted by Argonne National Laboratory, 2003

24. *What is a Granular Temperature?*
    Physical Chemistry Seminar, University of Kansas, Hosted by Department of Chemistry, 2002

25. *Open Questions in Granular Media*
    1st Workshop on Granular Flow & Kinetics, Hosted by Argonne National Laboratory, 2002

Invited Talks (continued):

26. *Granular Engineering by Larval Neuroptera*
University of California, Irvine and CCCNLS, Hosted by CCCNLS, 2001.

27. *Physics of Granular Media*
Benedictine College, Hosted by the Department of Physics, 1999.

28. *Instabilities and Transitions in a 2D Granular Layer*
University of Kansas, Hosted by the Department of Physics & Astronomy, 1999.

29. *Non-equilibrium Distributions and Transitions in a 2D Granular Gas*
Invited talk, Centennial March Meeting, Atlanta, Georgia
Hosted by the Division of Condensed Matter Physics of APS, 1999.

30. *Macroscopic Gases: Granular Media and Thermodynamics*
Drew University, Hosted by the Department of Physics, 1999.

31. *Physics in Granular Media: Marbles, Galaxies and Thermodynamics*
Davidson College, Hosted by the Department of Physics, 1999.

32. *Melting Transition in a 2D Granular Monolayer*
University of Mississippi, Hosted by the Department of Physics & Astronomy, 1999.

33. *Granular Media as Macroscopic, Dissipative Gases*
Lewis & Clark College, Hosted by the Department of Physics, 1999.

34. *Granular Media: Nearly a Solid, Fluid and Gas, (but not quite)*
SUNY Geneseo, Hosted by the Department of Physics & Astronomy, 1998.

35. *Rotated Sandpiles in a Confined Geometry*
Center for Nonlinear Studies (CNLS), Los Alamos National Lab, Hosted by Robert Ecke, 1997.

36. *Convection, Conduction and Wetting: Experiments in ^{3}He - ^{4}He Mixtures*
University of New Mexico, Hosted by Robert Duncan, 1997.

37. *Fluid Dynamics and Granular Media: Sand as a Dry Fluid*
University of North Florida, Hosted by the Dept. of Natural Sciences, 1997.

38. *The Cold Truth: Thermal Transport Properties in ^{3}He-^{4}He Mixtures*
University of Massachusetts, Hosted by Robert Hallock, 1995.

39. *Dynamic Measurement of Thermal Transport Properties in Liquid Helium*
Emory University, Hosted by Daniel Lathrop, 1995.

40. *Probing Thermal Transport Properties in Liquid Helium*
University of Toronto, Hosted by Stephen Morris, 1994.

Other Presentations (Contributed talk & abstract unless otherwise noted):

1. J. S. Olafsen, C. Winstead and R. F. Folse, *Flow Regions About a Rotating Sphere in a Linearly Stratified Fluid.* Student Session, Southeastern Section of the American Physical Society Meeting, 1987.

2. J. S. Olafsen, C. Winstead and R. F. Folse, *Observation of the Onset of Turbulence in a Stratified Fluid Caused by a Rotating Sphere.* 52nd Annual Meeting of the Mississippi Academy of Sciences, 1988.

Other Presentations (continued):

3. J. S. Olafsen and R. F. Folse, *Flow Fields About a Torsionally Oscillated Sphere in a Linearly Stratified Fluid.* 53rd Annual Meeting of the Mississippi Academy of Sciences, 1989.

4. J. S. Olafsen and R. P. Behringer, *Thermal Response of a Simple Fluid to an AC Heat Flux.* 1993 APS April Meeting, Bulletin Am. Phys. Soc., **38**, 1007 (1993).

5. J. S. Olafsen and R. P. Behringer, *Thermal Response of Normal and Superfluid Helium to an AC Heat Flux.* 20th International Conference on Low. Temp. Physics (1993).

6. J. S. Olafsen and R. P. Behringer, *Measurements of Thermal Transport Coefficients and Boundary Resistance in Extremely Dilute ^{3}He - Superfluid ^{4}He Mixtures Using a Time-Varying Heat Flux.* 1994 APS March Meeting, Bulletin Am. Phys. Soc., **39**, 790 (1994).

7. J. S. Olafsen and R. P. Behringer, *Variable Height Measurements and the Thermal Boundary Resistance in Extremely Dilute ^{3}He - Superfluid ^{4}He Mixtures Using a Time-Varying Heat Flux.* 1994 APS April Meeting, Bulletin Am. Phys. Soc., **39**, 1048 (1994).

8. J. S. Olafsen and R. P. Behringer, *Time-Varying Heat Flux Measurements of the Thermal Transport Coefficients in ^{3}He - Superfluid ^{4}He Mixtures.* 47th Annual APS Division of Fluid Dynamics (DFD) Meeting, Bulletin Am. Phys. Soc., **39**, 1981(1994).

9. J. S. Olafsen and R. P. Behringer, *A Three Resistance Model for Thermal Transport Measurements in ^{3}He - Superfluid ^{4}He Mixtures.* 1995 APS April Meeting, Bulletin Am. Phys. Soc., **40**, 996 (1995).

10. J. S. Olafsen and R. P. Behringer, *Comprehensive Results of Thermal Transport Measure-ments in ^{3}He - Superfluid ^{4}He Mixtures Using a Three Resistance Model.* 48th Annual APS DFD Meeting, Bulletin Am. Phys. Soc., **40**, 2046 (1995).

11. B. D. Painter, J. S. Olafsen and R. P. Behringer, *Effect of Spatial Perturbations on Pattern Selection at the Onset of Couette-Taylor Flow.* 48th Annual APS DFD Meeting, Bulletin Am. Phys. Soc., **40**, 2018 (1995).

12. J. S. Olafsen and J. S. Urbach, *Phase Transitions in a Granular Monolayer.* 17th Workshop on Chaos and Nonlinear Dynamics (Dynamics Days '98).

13. J. S. Olafsen and J. S. Urbach, *Collapse and Ordering in a Granular Monolayer.* 1998 APS March Meeting, Bulletin Am. Phys. Soc., **43**, 620 (1998).

14. J. S. Urbach and J. S. Olafsen, *Non-equilibrium Phases in a Vertically Vibrating Granular Monolayer.* Poster Session, Workshop on Granular Materials: Statics, Excitations, and Dynamics. Albuquerque, NM. (1998).

15. J. S. Olafsen and J. S. Urbach, *Crystallization in a 2D Granular Fluid.* Video Entry, 16th Annual Picture Gallery of Fluid Motion, 51st Annual Meeting of the Division of Fluid Dynamics, November 1998.

16. J. S. Olafsen and J. S. Urbach, *Non-equilibrium Hydrodynamics in a 2D Granular Liquid.* 51st Annual APS DFD Meeting, Bulletin Am. Phys. Soc., **43**, 1971 (1998).

17. J. S. Olafsen and J. S. Urbach, *Correlations in a Driven 2D Granular Fluid.* 52nd Annual APS DFD Meeting, Bulletin Am. Phys.Soc., **44**, 47 (1999).

18. J. S. Olafsen and J. S. Urbach, *Density-Temperature Correlations in a Driven 2D Granular Gas.* 18th Workshop on Chaos and Nonlinear Dynamics, Dynamics Days, (1999).

Other Presentations (continued):

19. J. S. Olafsen, *Rotating Sandpiles in a Confining Geometry*, Poster, Dynamics Days, (2000).

20. D. Kolsky, A. Galbreath and J. S. Olafsen, *Rolling, Sliding and Mixing of a 2D Granular Media in a Thin Vertical Drum*, 53rd Annual APS DFD Meeting, Bulletin Am. Phys. Soc. **45**, 185 (2000).

21. A. Galbreath and J. S. Olafsen, *Mixing in a Thin Vertical Drum.* Poster, Dynamics Days 2001.

22. A. Galbreath and J. S. Olafsen, *Dynamics of a 2D Granular Media in a Thin Vertical Drum*. 2001 APS March Meeting, Bulletin Am. Phys. Soc. **46**, 932 (2001).

23. K. Kohlstedt and J. S. Olafsen, *Stick-slip oscillations of a 1D granular array in a thin, rotating drum*. 54th Annual APS DFD Meeting, Bulletin Am. Phys. Soc. **46**, 49, (2001).

24. I. Aranson and J. S. Olafsen, *Velocity Fluctuations in Electrostatically Driven Granular Gases*. 54th Annual APS DFD Meeting, Bulletin Am. Phys. Soc. **46**, 27, (2001).

25. J. T. Botz, C. Loudon, J. S. Olafsen and D. W. Steeples, *Assessment of sand properties by antlion larvae*. Poster & abstract, Annual Meeting of the Entomological Soc. of America, 2001.
26. N. Shea, J. S. Olafsen, C. Loudon and D. W. Steeples, *Assessing granular pit construction from larval Neuroptera*. 2002 APS March Meeting, Bulletin Am. Phys. Soc. **47**, 187, (2002).

27. K. Kohlstedt and J. S. Olafsen, *Stick-slip Oscillations of a 1D Granular Array of Cylinders in a Thin, Rotating Drum.* 55th Annual APS DFD Meeting, Bulletin Am. Phys. Soc. **47**, 50 (2002).

28. J. Atwell and J. S. Olafsen, *Dynamics in a granular gas of non-spherical particles.* 55th Annual APS DFD Meeting, Bulletin Am. Phys. Soc. **47**, 103 (2002).

29. G. W. Baxter and J. S. Olafsen, *Granular Gas Velocity Fluctuations for Thermalization by a Mechanically Fluidized Bed.* 55th Annual APS DFD Meeting, Bulletin Am. Phys. Soc. **47**, 104 (2002).

30. J. Atwell, G. W. Baxter and J. S. Olafsen, *Clustering in a Granular Gas at a Fluctuating Lattice Surface.* Video Entry, 20th Annual Gallery of Fluid Motion, 55th Annual Meeting of the Division of Fluid Dynamics, November 2002.

31. N. Shea, J. S. Olafsen, C. Loudon and D. W. Steeples, *Smooth Cone Construction by Larval Neuroptera in Granular Media.* Video Entry, 20th Annual Gallery of Fluid Motion, 55th Annual Meeting of the Division of Fluid Dynamics, November 2002.

32. J. T. Botz, B. Barger, C. Loudon, J. S. Olafsen and D. W. Steeples, *Pit efficiency and prey capture by antlion larvae*. Poster & abstract, Entomological Society of Am. Meeting, 2002.

33. J. Atwell and J. S. Olafsen, *2D Granular Gas Dynamics for an Experiment with Non-Spherical Particles.* 2003 APS March Meeting, Bulletin Am. Phys. Soc. **48**, 270 (2003).

34. G. W. Baxter and J. S. Olafsen, *Evidence of Molecular Chaos for a Granular Gas Driven by a Mechanically Fluidized Bed.* 2003 APS March Meeting, Bulletin Am. Phys. Soc. **48**, 270 (2003).

35. I. Aranson, M. Sapozhnikov, and J. S. Olafsen, *Two Types of Scaling Behaviors in Coarsening of Granular Clusters.* 2003 APS March Meeting, Bulletin Am. Phys. Soc. **48**, 271 (2003).

36. G. W. Baxter and J. S. Olafsen, *Evidence of Molecular Chaos for a Granular Gas Driven by a Mechanically Fluidized Bed.* 56th Annual APS DFD Meeting, Bulletin Am. Phys. Soc. **48**, 199 (2003).

Other Presentations (continued):

37. B. Bammes and J. S. Olafsen, *Hydrodynamic interactions of a granular chain in a fluid.* 56th Annual APS DFD Meeting, Bulletin Am. Phys. Soc. **48**, 131 (2003).

38. G. W. Baxter and J. S. Olafsen, *Experimental Evidence of Molecular Chaos in a Driven Granular Gas.* 2004 APS March Meeting, Bulletin Am. Phys. Soc. **49**, 147 (2004).
39. B. Bammes and J. S. Olafsen, *Polymer-like folding of a granular chain in a fluid.* Video Entry, 1st Gallery of Motion, Group on Statistical and Nonlinear Physics (GSNP), APS March Meeting, (2004). Presentation only.

40. B. Bammes and J. S. Olafsen, *A Model Experiment for studying polymer folding in poor solvents.* Los Alamos National Laboratory's 24th Annual Conference on Statistical Physics of Macromolecules, Sante Fe, New Mexico (2004).

41. R. Kinser, J. Noffsinger, S. Cline and J. S. Olafsen, *Velocity distributions in a 2D granular Couette-Taylor experiment.* 57th Annual APS DFD Meeting, Bulletin Am. Phys. Soc. **49**, 75 (2004).

42. G. W. Baxter and J. S. Olafsen, *Kinetic Theory in a 2D granular gas experiment for a mechanically fluidized bed.* 57th Annual APS DFD Meeting, Bulletin Am. Phys. Soc. **49**, 94 (2004).

43. B. Bammes and J. S. Olafsen, *Model system for studying polymer folding in a poor solvent.* Poster Session, University of Kansas Biophysics Symposium, January 18, 2005. Poster only.

44. R. Kinser, J. Noffsinger, S. Cline and J. S. Olafsen, *Velocity Distributions in a 2D Granular 'Wind Tunnel.'* Poster Session, NASA Workshop on Granular Materials in Lunar and Martian Exploration, February 2 – 3, 2005.

45. G. W. Baxter and J. S. Olafsen, *Testing Kinetic Theory in a Driven Granular Gas Experiment for a Mechanically Fluidized Bed,* 2005 APS March Meeting, Bulletin Am. Phys. Soc. **50**, 649 (2005).

46. K. Kohlstedt, A. Snezhko, M. Sapoznikov, I. Aronson, J. S. Olafsen and E. Ben-Naim, *Velocity Distributions of Granular Gases with Long-Range Interactions*, 2005 APS March Meeting, Bulletin Am. Phys. Soc. **50**, 896 (2005).

47. G. W. Baxter and J. S. Olafsen, *Experiments on Driven Granular Gases and Comparisons to Kinetic Theory.* APS New York State Spring Symposium (2005).

48. B. Bammes and J. S. Olafsen, *Model System to Study Polymer Folding for Poor Solvents.* 58th Annual APS DFD Meeting, Bulletin Am. Phys. Soc. **50**, 288 (2005).

49. J. S. Olafsen and G. W. Baxter, *Energy Injection in a Mechanically Thermalized, Steady State Granular Boltzmann Bath.* 58th Annual APS DFD Meeting, Bulletin Am. Phys. Soc. **50**, 288 (2005).

50. R. Kinser, J. Noffsinger, S. Cline and J. S. Olafsen, *Velocity Distributions in a 2D Granular 'Wind Tunnel.'* Gallery of Fluid Motion Poster Session, 58th Annual APS DFD Meeting (2005). Poster only.

51. J. S. Olafsen, X. Zhao, and S. M. Williams, *Water release from shaken silica substrates in a catalytic reactor*. ASCE Earth & Space 2006 Conference (2006).

52. J. S. Olafsen, *Granular Flow in a 2D Couette-Taylor Flow Experiment.* 59th Annual APS DFD Meeting, Bulletin Am. Phys. Soc. **51**, 64 (2006).

Other Presentations (continued):

53. J. S. Olafsen and B. Bammes, *Intermediate states in the folding of a granular polymer-like chain in water*. 60th Annual APS DFD Meeting, Bulletin Am. Phys. Soc. **52**, 67 (2007).

54. J. S. Olafsen, K. Combs, G.W. Baxter, *Dynamics of a single particle on a 2D driven granular lattice*. 2008 APS March Meeting, Bulletin Am. Phys. Soc. **53** (2), 150 (2008).
55. A.Burdeau, K. Combs, J.S. Olafsen and P. Viot, *Thermostatistics of a single particle on a granular dimer lattice: influence of defects.* 10th Granada Seminar (September 2008),

56. K. Combs, J. S. Olafsen, A. Burdeau and P. Viot, *Thermostatics of a Single Sphere in a Non-Gaussian Granular Bath*, 2008 APS DFD Meeting, Bulletin Am. Phys. Soc. **53**, 164 (2008).

57. J. Jantzi and J. S. Olafsen, *Translational and Rotational Velocity Statistics in a Rotating Granular Tumbler*, 2008 APS DFD Meeting, Bulletin Am. Phys. Soc. **53**, 279 (2008).

58. J. S. Olafsen, K. Schwartz and B. Bammes, *Folding Dynamics of a polymer-like granular chain in a thin layer of water*, 2008 APS DFD Meeting, Bulletin Am. Phys. Soc. **53**, 165 (2008).
59. K. Combs and J. S. Olafsen, *A simple numerical simulation for a single granular particle in a viscous bath*, 2008 APS DFD Meeting Gallery of Fluid Motion (Poster), San Antonio, TX.

60. L. Buckingham and J. S. Olafsen, *Remote Sensing of Strain in a Distressed Column*, URSA Scholars Week Poster Presentation, BSB Atrium, Baylor University (April 2009).

61. K. Combs and J. S. Olafsen, *A Simple Numerical Simulation for a Single Granular Particle in a Viscous Bath*, URSA Scholars Week Poster Presentation, BSB Atrium, Baylor University (April 2009).

62. J. Jantzi and J. S. Olafsen, *Three-Dimensional Particle Tracking Utilizing Magnetic Resonance Imaging*, URSA Scholars Week Poster Presentation, BSB Atrium, Baylor University (April 2009).

63. K. Schwartz and J. S. Olafsen, *The Dynamics of Polymer Folding in 2D*, URSA Scholars Week Poster Presentation, BSB Atrium, Baylor University (April 2009).

64. K. Combs and J. S. Olafsen, *Energy injection in a non-equilibrium bilayer granular gas experiment*, 2009 Powders and Grains Conference, Golden, Colorado (July, 2009).

65. A. P. Tabatabai and J. S. Olafsen, *Three-Dimensional Particle Tracking of Granular Systems Undergoing Azimuthal Shear*, Poster presentation for Murdock College Science Research Program sponsored by MJ Murdock Charitable Trust at Gonzaga University (October, 2009).

66. A. Sabey and J. S. Olafsen, *Experimental Investigation of Chaotic Regimes Utilizing Spheres of High Restitution*, URSA Scholars Week Poster Presentation, BSB Atrium, Baylor University (March 2010).

67. J. Jantzi and J. S. Olafsen, *Linear and Rotational Particle Tracking Using a Stereoscopic Camera Array*, URSA Scholars Week Poster Presentation, BSB Atrium, Baylor University (March 2010).

68. A. P. Tabatabai and J. S. Olafsen, *Three-Dimensional Particle Tracking of Granular Systems Undergoing Azimuthal Shear*, Poster presentation 2010 Spokane Intercollegiate Research Conference at Gonzaga University (April 24, 2010).

69. J. S. Olafsen, *A non-equilibrium system for the study of polymer-like folding in 2D via experiment and simulation*, Complex Driven Systems: From Statistical Physics to the Life Sciences, NSF sponsored conference at Virginia Tech, (October 2010).

Other Presentations (continued):

70. A. Yost, S. Feldt, and J. S. Olafsen, *Trajectories for an Inelastic Gravitational Billiard.* Poster presented at the APS March Meeting, Dallas, TX (March 2011).

71. A. Sabey and J. S. Olafsen, *Investigating Low Dimensional Chaos with Nearly Elastic Spheres.* Poster presented at the APS March Meeting, Dallas, TX (March 2011).
72. I. Reeves, J. S. Olafsen and L. J. Olafsen, *Spatio-temporal beam profiling of pulsed infrared laser sources.* Poster presented at the APS March Meeting, Dallas, TX (March 2011).

73. J. S. Olafsen and J. Jantzi, *Rotational statistics in dense granular flows of smooth cylindrical particles*. Contributed talk presented at the APS March Meeting, Dallas, TX (March 2011).

74. A. Yost and J. S. Olafsen, *Trajectory Analysis of Inelastic Gravitational Billiards.* Poster presented at the 2011 Scholar's Day Poster Session. Baylor University (April, 2011).

75. A. Sabey and J. S. Olafsen, *Investigating Low Dimensional Chaos with Nearly Elastic Spheres.* Poster presented at the 2011 Scholar's Day Poster Session. Baylor University (April, 2011).

76. L. J. Olafsen, I. K. Eaves, and J. S. Olafsen, *Synchronized Mid-infrared Beam Characterization of Narrow Gap Semiconductors.* Contributed talk presented at the 15th International Conference on Narrow Gap Systems (1–5 August 2011, Blacksburg, VA).

77. N. Beasley and J. S. Olafsen, *Characterization of Granular Shear Flow using Magnetic Resonance Imaging,* Poster presented at the 2012 URSA Scholar's Day Poster Presentations. Baylor University (April 2012).

78. N. Beasley and J. S. Olafsen, *Characterization of Granular Shear Flow using Magnetic Resonance Imaging*, Updated poster presented at the 2013 URSA Scholar's Day Poster Session, Baylor University (April 2013).

79. N. Beasley, J. Jantzi, R. Kinser, and J. S. Olafsen, *Dilation, Compression, and Convection in Granular Shear Experiments*, Powders & Grains 2013, Sydney, Australia (July, 2013).

80. S. Feldt and J. S. Olafsen, *Trajectory Analysis of Inelastic Gravitational Billiards.* Poster presentation at BobFest – a celebration of Robert Behringer's 65th Birthday. Duke University, Durham, NC (October 2013).

81. J. S. Olafsen, *Velocity-dependent coefficient of restitution measurements in an inelastic billiard experiment*, Dynamics Days 2014, Atlanta, Georgia (January, 2014.)

82. J. S. Olafsen, *Reflections by a Scientist on the Open Sourcing of Raw Data,* Talk presented at the 2014 Baylor University Libraries' Symposium Understanding Media: Commemorating the 50th Anniversary of Marshall McLuhan's Groundbreaking Work. Baylor University, September 26, 2014.

83. B. Bammes, K. Schwartz, B. Ball and J. S. Olafsen, *Polymer Folding in an Idealized Systems*, Dynamics Days 2015, Houston, TX (January, 2015.)

84. J. S. Olafsen and Martin Martinez, *Normal and Tangential Coefficient of Restitution Measurements in an Inelastic Billiard Experiment.* APS March Meeting, San Antonio, TX (March, 2015).

85. M.Curtis and J. S. Olafsen, *The Development of a Prosthetic Limb with Varying Flexibility*, Poster presented at the 2015 URSA Scholar's Day Poster Session, Baylor University (April 2015).

Other Presentations (continued):

86. Martin Martinez and J. S. Olafsen, *Chaos in Inelastic Billiards*, Poster presented at the 2015 URSA Scholar's Day Poster Session, Baylor University (April 2015).

87. Martin Martinez and J. S. Olafsen, *Chaos and Nonlinear Behavior in Inelastic Billiards*, Poster presented at the 2016 URSA Scholar's Day Poster Session, Baylor University (April 2016).

88. Christlynn Henderson and J. S. Olafsen, *New Method for Prosthetic Foot Strain Analysis*, Poster presented at the 2017 URSA Scholar's Day Poster Session, Baylor University (March 2017).

89. Jeffrey S. Olafsen, *ITS: The First 50 Years and Before*, Departmental Colloquium, Department of Physics, Baylor University, April 5, 2017.

90. Tyler Hartwig, Zeyu Huang, Sara Martinson, Keith Schubert, Jeff Olafsen, *Magnetic Resonance Image Applied to 3-Dimensional Printing Utilizing Various Oils*, Oral Presentation at The 14th International Conference on Modeling, Simulation and Visualization Methods (MSV'17: July 17-20, 2017, Las Vegas, USA).

91. P. Karbasi, R. Cai1, B. Schultze, H. Nguyen, J. Reed, P. Hall, V. Giacometti, V. Bashkirov, R. Johnson, N. Karonis, J. S. Olafsen, C. Ordoñez, K. E. Schubert, R. W. Schulte, *A Highly Accelerated Parallel Multi-GPU based Reconstruction Algorithm for Generating Accurate Relative Stopping Powers*, Poster for 2017 IEEE Nuclear Science Symposium & Medical Imaging Conference, (October 21-28, 2017).

92. B. Gigout and J. S. Olafsen, *Magnetic Resonance Imaging of Porous Media Flow*, Poster presented at the 2018 URSA Scholar's Day Poster Session, Baylor University (March 2018).

93. B. Gigout and J. S. Olafsen, *Magnetic Resonance Imaging of Porous Media Flow*, Poster presented at the 2019 Dynamics Days Meeting, Northwestern University (January 2019).

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