

Biographical Sketch Khaled A. Sallam

Professional Preparation

Cairo University, Egypt	Mechanical Power Engineering	B.S. 1993
Cairo University, Egypt	Mechanical Power Engineering	M.E. 1997
University of Michigan, Ann Arbor	Aerospace Engineering	M.S. 2000
University of Michigan, Ann Arbor	Aerospace Engineering	Ph.D. 2002
University of Michigan, Ann Arbor	Atomization & Sprays	Postdoc 2002-2003

Appointments

- 1) **Assistant professor**, School of Mechanical and Aerospace Engineering, Oklahoma State University, August 2003 - present.
- 2) **Postdoctoral research fellow**, Department of Aerospace Engineering, The University of Michigan, Ann Arbor, Michigan, 2002-2003.
- 3) **Research Assistant**, Department of Aerospace Engineering, The University of Michigan, Ann Arbor, Michigan, 1997-2001.
- 4) **Teaching Assistant**, Department of Mechanical Power Engineering, Cairo University, Egypt, 1993-1997.
- 5) **Teaching Assistant**, Department of Mechanical Engineering, The American University in Cairo (AUC), Egypt, 1996.

Publications

Articles:

- 1) **K. A. Sallam**, C. Aalburg and G. M. Faeth, "Breakup of Round Liquid Jets in Gaseous Crossflows," *AIAA Journal*, in press (2005).
- 2) C. Aalburg, B. Van Leer, G. M. Faeth and **K. A. Sallam**, "Properties of Nonturbulent Round Liquid Jets in Uniform Gaseous Crossflows," *Atom. Sprays*, in press (2005).
- 3) **K. A. Sallam** and G.M. Faeth (2003), "Surface Properties during Turbulent Primary Breakup of free Liquid Jets," *AIAA Journal*, vol. 41, pp. 1514-1524.
- 4) **K. A. Sallam**, Z. Dai and G. M. Faeth (2002), "Liquid Breakup at the Surface of Turbulent Round Liquid Jets in Still Gases," *International Journal of Multiphase Flow*, vol. 28, pp. 427-449.
- 5) **K. A. Sallam**, Z. Dai and G. M. Faeth (1999), "Drop Formation at the Surface of Plane Turbulent Liquid Jets in Still Gases," *International Journal of Multiphase Flow*, vol. 25, pp. 1161-1180.

Conference Proceedings:

- 1) R. Sankar Krishnan, C.-L. Ng, M. J. Duffy, **K. A. Sallam**, and H. M. Metwally, "Breakup of Round Nonturbulent Liquid Jet in Turbulent Gaseous Crossflow," Accepted: APS/DFD Meeting in Seattle, 21-23 November 2004 (Abstract only).
- 2) S. M. Bogadi, A. D. Welch and **K. A. Sallam**, "Monodisperse Nanoparticles Generation by Electrostatic Atomization," Accepted: APS/DFD Meeting in Seattle, 21-23 November 2004 (Abstract only).

- 3) C. Aalburg, K. Lee, G. M. Faeth and **K. A. Sallam**, “Experimental Study of the Breakup of Turbulent Round Liquid Jets in Gaseous Crossflows,” Accepted: APS/DFD Meeting in Seattle, 21-23 November 2004 (Abstract only).
- 4) **K. A. Sallam**, S. M. Bogadi, and R. Sankarakrishnan, “Fabrication and Transport of Metallic Nano Particles via Electrostatic Atomization,” Accepted in: *Transport Phenomena in Micro and Nanodevices Meeting*, cosponsored by NSF, Kona coast, Hawaii, October 2004.
- 5) R. Sankarakrishnan, C.-L. Ng, **K. A. Sallam**, and H. M. Metwally “Breakup of Round Nonturbulent Liquid Jets in Turbulent Crossflow,” Accepted: *43rd AIAA Aerospace Sciences Meeting*, Reno, Nevada, 10-13 January 2005.
- 6) **K. A. Sallam**, C. Aalburg, G. M. Faeth, K.-C. Lin, C.D. Carter, and T. A. Jackson “Primary Breakup of Aerated-Liquid Jets in Uniform Gaseous Crossflows,” Accepted: *19th Annual Conference, ILASS-Europe*, Nottingham, UK, September 2004.
- 7) **K. A. Sallam**, C. Aalburg, and G. M. Faeth, “Primary Breakup of Nonturbulent Round Liquid Jets in Uniform Gaseous Crossflows,” Accepted: *19th Annual Conference, ILASS-Europe*, Nottingham, UK, September 2004.
- 8) S. Jakkamreddy, R. Sankarakrishnan, and **K. A. Sallam**, “Metallic Nano Particles Generation by Electrostatic Atomization,” *Oklahoma NSF EPSCoR Annual State Conference*, Stillwater, Oklahoma, May 2004, pp. 4 (Poster only).
- 9) **K. A. Sallam**, C. Aalburg, G. M. Faeth, K.-C. Lin, C.D. Carter, and T. A. Jackson “Properties of Aerated-Liquid Jets in Supersonic Crossflows,” *17th Annual Conference on Liquid Atomization and Spray Systems*, Arlington, Virginia, May 2004.
- 10) **K. A. Sallam**, C. Aalburg, G. M. Faeth, K.-C. Lin, C.D. Carter, and T. A. Jackson “Breakup of Aerated-Liquid Jets in Supersonic Crossflows,” AIAA paper No. 2004-0970, *42nd AIAA Aerospace Sciences Meeting*, Reno, Nevada, January 2004.
- 11) C. Aalburg, **K. A. Sallam**, and G. M. Faeth, “Properties of Nonturbulent Round Liquid Jets in Uniform Crossflows,” AIAA paper No. 2004-0969, *42nd AIAA Aerospace Sciences Meeting*, Reno, Nevada, January 2004.
- 12) **K. A. Sallam**, C. Aalburg, and G. M. Faeth, “Experimental Study of the Breakup of Nonturbulent Round Liquid Jets in Gaseous Crossflows,” *APS 56th Annual Meeting of the Division of Fluid Dynamics, Bulletin of the American Physical Society*, Vol. 48, No. 10, pp. 27-28, 2003 (abstract only).
- 13) C. Aalburg, B. van Leer, G. M. Faeth, and **K. A. Sallam**, “Properties of Nonturbulent Round Liquid Jets in Uniform Gaseous Crossflow,” *APS 56th Annual Meeting of the Division of Fluid Dynamics, Bulletin of the American Physical Society*, Vol. 48, No. 10, pp. 158-159, 2003 (abstract only).
- 14) **K. A. Sallam**, C. Aalburg, and G. M. Faeth, “Primary Breakup of Nonturbulent Liquid Jets in Gaseous Crossflows,” *16th Annual Conference on Liquid Atomization and Spray Systems*, Monterey, California, May 2003 (also featured on the proceeding cover).
- 15) **K. A. Sallam**, C. Aalburg, and G. M. Faeth, “Primary Breakup of Round Nonturbulent Liquid Jets in Gaseous Crossflows,” AIAA Paper No. 2003-1326, *41st AIAA Aerospace Sciences Meeting*, Reno, Nevada, January 2003.
- 16) **K. A. Sallam** and G. M. Faeth, “Measurements of Deformation and Breakup of Liquid Jets in Gaseous Crossflows,” *APS 55th Annual Meeting of the Division of Fluid Dynamics, Bulletin of the American Physical Society*, Vol. 47, No. 10, p. 43, 2002 (abstract only).

- 17) **K. A. Sallam**, Z. Dai, and G. M. Faeth, "Turbulent Primary Breakup of Round and Plane Liquid Jets in Still Air," AIAA Paper No. 2002-1115, *40th AIAA Aerospace Sciences Meeting*, Reno, Nevada, January 2002.
- 18) **K. A. Sallam** and G. M. Faeth, "Surface Properties of Turbulent Liquid Jets in Still Air," *APS 54th Annual Meeting of the Division of Fluid Dynamics, Bulletin of the American Physical Society*, Vol. 46, No. 10, p. 136, 2001 (abstract only).
- 19) **K. A. Sallam**, Z. Dai, and G. M. Faeth, "Liquid Breakup Properties at the Surface of Turbulent Liquid Jets in Still Air," *14th Annual Conference on Liquid Atomization and Spray Systems*, Dearborn, Michigan, May 2001, pp. 301-303 (poster only).
- 20) **K. A. Sallam**, G. M. Faeth, and Z. Dai, "Turbulent Primary Breakup of Round and Plane Liquid Jets," *APS 53rd Annual Meeting of the Division of Fluid Dynamics, Bulletin of the American Physical Society*, Vol. 45, No. 9, pp. 176-177, 2000 (abstract only).
- 21) **K. A. Sallam**, Z. Dai, and G. M. Faeth, "Turbulent Primary Breakup of Round and Plane Liquid Jets in Still Air," *8th International Conference on Liquid Atomization and Spray Systems*, Pasadena, California, 16-20 July 2000, pp. 167-168 (poster only).
- 22) **K. A. Sallam**, Z. Dai, and G. M. Faeth, "Breakup of Turbulent Liquid Jets in Still Gases," AIAA Paper No. 99-3759, *30th AIAA Fluid Dynamics Conference*, Norfolk, Virginia, June 1999.
- 23) **K. A. Sallam**, Z. Dai, and G. M. Faeth, "Breakup Lengths of Turbulent Liquid Jets in Still Gases," *Proceedings of the 12th Annual Conference on Liquid Atomization and Spray Systems*, Indianapolis, Indiana, May 1999, pp. 219-223.
- 24) Z. Dai, **K. A. Sallam**, and G. M. Faeth, "Turbulent Primary Breakup of Plane Free Bow Sheets," *Proceedings of the 22nd Symposium on Naval Hydrodynamics*, National Academy Press, Washington, D.C., 1998, pp. 568-581.
- 25) **K. A. Sallam**, A. S. Sabry, M.A. Serag-Eldin, and M.A. Fouad, "Characteristics Based Nonlinear Simulation of Reactive Silencers," *Proceedings of the International Congress on Fluid Dynamics & Propulsion*, Cairo, Egypt, December 1996, pp. 370-385.

Synergistic Activities

- 1) Journal Reviewer:
 - *AIAA Journal*, *Atomization and Sprays*, *International Journal of Multiphase Flow*, and *Journal of Fluids Engineering*.
- 2) Professional Affiliation:
 - Member of ASME, AIAA, APS, ILASS-Americas and Tau Beta Pi.
- 3) Broadening the participation of women in Engineering Research:
 - Supervised two undergraduate (junior) female students (9/2002-7/2003) funded by the University of Michigan Undergraduate Research Opportunities Program and the Marian Sarah Parker Scholars Program. The students presented the work in *the 17th national conference on undergraduate research*, 2003, Salt lake city, Utah.
- 4) Distinguished Achievement Award, University of Michigan, Ann Arbor, 2001.

Collaborators & Other Affiliations

- 1) Collaborators and Co-authors (within the last 48 months):
 - Dr. C. Aalburg, G. E. World Research, University of Munich, Munich, Germany.
 - Dr. C. D. Carter, Air Force Research Laboratory, Wright-Patterson AFB, OH.

Dr. W.-H. Chou, Trane Corp., LaCrosse, WI.
Dr. Z. Dai, G. E. Aircraft Engines, Cincinnati, OH.
Dr. J. F. Diez, University of Michigan, Ann Arbor, MI.
Dr. L.-P. Hsiang, L.-P. Hsiang Associates, Tainan, Taiwan.
Dr. S.-J. Ja, Nomadics Inc., Stillwater, OK.
Mr. S. Jakkamreddy, Oklahoma State University, Stillwater, OK.
Dr. T. A. Jackson, Air Force Research Laboratory, Wright-Patterson AFB, OH.
Dr. K.-C. Lin, Taitech Inc., Beavercreek, OH.
Dr. H. M. Metwally, Fluent Inc., Evanston, IL.
Dr. B. N. Strecker, Nomadics Inc., Stillwater, OK.
Prof. B. Van Leer, University of Michigan, Ann Arbor, MI.
Dr. P.-K. Wu, Atlantic Research Corp., Gainesville, VA.
Prof. F. Xu, University of Central Florida, Orlando, FL.

2) The PI's Graduate and Postdoctoral Advisor:

Prof. G. M. Faeth, University of Michigan, Ann Arbor, MI.

3) Thesis Advisor for 5 graduate students:

Mr. Steven Bogadi (M.S.), Mr. Michael Duffy (M.S.), Mr. Chee-Loon Ng (Ph.D.),
Mr. Ramprakash Sankarakrishnan (M.S.) and Ms. Angela Welch (M.S.)