# DANA DABIRI

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## EDUCATIONAL HISTORY

University of California, San Diego, CA
Doctor of Philosophy, Aerospace Engineering
1992
Effect of Forced Boundary Conditions on the Flow Field of a Square Convection Cell

University of California, Berkeley, CA
Master of Science, Mechanical Engineering
1987
Application of a 5-hole Pressure Probe to Measure Flow Behind Bluff Bodies

University of California, San Diego, CA
Bachelors of Science, Mechanical Engineering (Magna Cum Laude)
1985

## EMPLOYMENT HISTORY

| | |
|---|---|
| University of Washington<br>Seattle, Washington, USA<br>Associate Professor, Department of Aeronautics & Astronautics | 9/09 – Present |
| University of Washington<br>Seattle, Washington, USA<br>Assistant Professor, Department of Aeronautics & Astronautics | 1/02 – 9/09 |
| California Institute of Technology<br>Pasadena, CA, USA<br>Research Scientist | 4/93-12/01 |
| General Pixels, Inc.<br>Arcadia, CA, USA<br>Co-founder, Developer & Marketer of PixelFlow | 6/96-12/01 |
| University of California<br>San Diego, CA, USA<br>Post-doctoral Research Associate<br>Graduate Research Student | <br><br>6/92-4/93<br>1/88-6/92 |
| University of California<br>Berkeley, CA, USA<br>Graduate Research Student | <br><br>8/85-12/87 |
| IBM Corporation<br>San Jose, CA, USA<br>Co-op Mechanical Engineer | <br><br>5/86-12/86 |

## AWARDS AND HONORS

Nominated for Distinguished Teaching Award, 2006, University of Washington
UC Regents Fellowship, 1988 – 1989, University of California, San Diego
Gallery of Fluid Motion Best Poster Award, 1993, Albuquerque, New Mexico

## AFFILIATIONS AND OTHER APPOINTMENTS

Adjunct Associate Professor, Department of Mechanical Engineering, University of Washington, 2003-present.

## PUBLICATIONS

Legend: 1: student, 2: institutional collaborator, 3: external collaborator, 4: post-doc, 5: scientist.

**REFEREED ARCHIVAL JOURNAL PUBLICATIONS:**

1. Amin M.[1], Dabiri D., Navaz H. K.[3] Comprehensive study on the effects of fluid dynamics of air curtain and geometry, on infiltration rate of open refrigerated cavities, *Applied Thermal Engineering*, 35, 120-126, 2012
2. Amin M.[1], Dabiri D., Navaz H. K.[3] "Effects of secondary variables on infiltration rate of open refrigerated vertical display cases with single-band air curtain", *Applied Thermal Engineering*, 31, 3055-3065, 2011.
3. Lei Y-C[1], Tien W-H[1], Duncan J.[1], Paul M.[1], Dabiri D., Rösgen T.[3], Hove J.[3] "A vision-based hybrid particle tracking velocimetry (PTV) technique using a modified cascade-correlation peak-finding method", *Submitted to Experiments in Fluids*
4. Amin M.[1], Dabiri D., Navaz H. K.[3] "A Comprehensive Experimental Study on the Effects of Geometry of Open Refrigerated Display Cases and Fluid Dynamics of Air Curtains on Infiltration Rate" *Applied Thermal Engineering*, 31, 3055-3065, 2011
5. Kimura F.[1], McCann J.[2], Khalil G.E.[2], Dabiri D., Xia Y.[2] ,Callis J.B.[2] "Simultaneous velocity and pressure measurements using luminescent Microspheres", *Review of Scientific Instruments* 81, 064101, 2010
6. Duncan J.[1], Dabiri D., Hove J.[3], Gharib M.[3] Universal outlier detection for particle image velocimetry (PIV) & particle tracking velocimetry (PTV) data, *Meas. Sci. Technol.* 21 057002, 2010
7. Duncan J.[1] Bryce T.,[1] Thomsen H.,[1] Dabiri D., Hove J.R.[3] "An Extended Study of a Generalized DPIV Processing Technique", *Measurement Science and Technology*, 20, (7), 075401, 2009.
8. Amin M.[1], Dabiri D., Navaz H.K.[3] "Tracer gas technique: A new approach for steady state infiltration rate measurement of open refrigerated display cases", *Journal of Food Engineering*, 92 (2), 172-181, 2009.
9. Dabiri D. "Digital Liquid Crystal Particle Thermometry/Velocimetry (DLCPT/V) – A Review", Invited Review Article, *Exp. Fluids*, 46 (2), 191-241, 2009.
10. Amin M.[1], Navaz H.K.[3], Kehtarnavaz N.[3], Dabiri D. "Systematic Approach for Solving Large-Scale Problems by Neural Network: Open Refrigerated Display Cases and Droplet Evaporation Problems", *Food and Bioprocess Technology*, 2009.
11. Kimura F.,[1] Rodriguez M.,[1] McCann J.,[4] Carlson B.,[2] Callis J.,[2] Dabiri D., Khalil G.,[2] "Development and Characterization of Fast Responding Pressure-Sensitive Microspheres", *Review of Scientific Instruments*, 79 (7), 074102, 2008.
12. Grothe R.,[1] Rixon G.,[1] Dabiri D. "An Improved Three-Dimensional Characterization of Defocusing Digital Particle Image Velocimetry (DDPIV) Based on a New Imaging Volume Definition", *Measurement Science and Technology*, 19 (6), 065402, 2008.

13. Tien W.H.,[1] Kartes P.,[1] Yamasaki T.,[1] Dabiri D. "A color-coded backlighted defocusing digital particle image velocimetry system", *Exp. Fluids*, 44 (6), 1015-1026, 2008.
14. Pun C.S.,[1] Susanto A.,[1] Dabiri D. "Mode-Ratio Bootstrapping Method for PIV Outlier Correction," *Measurement Science and* Technology, 18 (11), 3511-3522, 2007
15. Fujisawa N.,[3] Verhoeckx M.,[3] Dabiri D., Gharib M.,[3] Hertzburg J.[3] "Recent Progress in Flow Visualization Techniques for Fluid Art," *Journal of Visualization*,10 (2), 163-170, 2007
16. Kurosaka M.,[2] Cain C.B.,[1] Srigrarom S.,[1] Wimer J.D.,[1] Dabiri D., Johnson III W.F.,[1] Hatcher J.C.,[1] Thompson B.R.,[1] Kikuchi M.,[3] Hirano K.,[3] Yuge T.,[3] Honda T.[3] "Azimuthal vorticity-gradient in the formative stages of vortex breakdown," *Journal of Fluid Mechanics*, 569, 1-28, 2006.
17. Kimura F.,[1] Khalil G.,[2] Zettsu N.,[2] Xia Y.,[2] Callis J.,[2] Gouterman M.,[2] Dalton L.,[2] Dabiri D., Rodriguez M.[1] "Dual luminophore polystyrene microspheres for pressure-sensitive luminescent imaging," *Measurement Science & Technology*, 17 (6),1254–1260, 2006.
18. Navaz H.K.,[3] Amin M.,[1] Dabiri D., Faramarzi R.[3] "Past, Present, and Future Research Toward Air Curtain Performance Optimization," *ASHRAE Transactions*, 111, 1083-1088, 2005.
19. Kajitani L.[1] and Dabiri D. "A Full Three-Dimensional Characterization of Defocusing Digital Particle Image Velocimetry," *Measurement Science & Technology*, 16 (3), 790-804, 2005.
20. Dabiri D., "On the Interaction of A Vertical Shear Layer with A Free Surface," *Journal of Fluid Mechanics*, 480, 217-232, 2003.
21. Gharib M.,[3] Pereira F.,[3] Dabiri D. ,[5] Hove, J.R.,[3] & Moddarress D.,[3] "Quantitative Flow Visualization: Toward A Comprehensive Flow Diagnostic Tool," *Integrative & Comparative Biology*, 42 (5), 964-970, 2002.
22. Gharib M.,[3] Pereira F.,[3] Dabiri D. ,[5] & Moddarress D.,[3] "Quantitative Flow Visualization: Toward A Comprehensive Flow Diagnostic Tool," *Visualization & Imaging In Transport Phenomena Annals of the New York Academy Of Sciences*, 972, 1-9, 2002.
23. Navaz H. K.,[3] Faramarzi R.,[3] Gharib M.,[3] Dabiri D.,[5] & Modarress D.,[3] "The Application of Advanced Methods in Analyzing the Performance of the Air Curtain in a Refrigerated Display Case," *J. Fluid Engineering*, 124 (3), 756-764, 2002.
24. Dabiri D.,[5] & Gharib M.,[2] "Simultaneous Free Surface Deformation and Near Surface Velocity Measurements," *Experiments in Fluids* 30 (4), 381-390, 2001.
25. Park H.G.,[1] Dabiri D.,[5] & Gharib M.,[2] "Digital Particle Image Velocimetry/Thermometry and Application to the Wake of a Heated Circular Cylinder," *Experiments in Fluids* 30 (3), 327-338, 2001.
26. Pereira F.,[4] Gharib M.,[2] & Dabiri D.,[5] & Modarress D.[2] "Defocusing DPIV: A 3-Component 3-DDPIV Measurement Technique. Application to Bubbly Flows," *Experiments in Fluids* 29, S078-S084 Suppl., 2000.
27. Huang H. ,[4] Dabiri D.,[5] & Gharib M.,[2] "On Errors of Digital Particle Image Velocimetry," *Measurement Science & Technology* 8 (12), 1427-1440, 1997.
28. Westerweel J.,[3] Dabiri D.,[5] & Gharib M.,[2] "The Effect of a Discrete Window Offset on the accuracy of Cross Correlation Analysis of Digital PIV Recording," *Experiments in Fluids* 23 (1), 20-28, 1997.
29. Dabiri D.,[5] & Gharib M.,[2] "Experimental Investigation of the Vorticity Generation within a Spilling Water Wave," *Journal of Fluid Mechanics* 330, 113-139, 1997.
30. Dabiri D.,[5] & Gharib M.,[2] "The Effects of Forced Boundary Conditions on Flow within a Cubic Cavity Using Digital Particle Image Thermometry and Velocimetry (DPITV)," *Journal of Experimental Thermal and Fluid Science* 13 (4), 349-363, 1996.
31. Zhang X.,[4] Dabiri D.,[5] & Gharib M.,[2] "Optical Mapping of Fluid Density Interfaces: Concepts and Implementations," *Review of Scientific Instruments* 67 (5), 1858-1868, 1996.

32. Zhang X.,[4] Dabiri D.,[5] & Gharib M.,[2] "A Novel Technique For Free-Surface Elevation Mapping," *Physics of Fluids* 6 (9), s11-s11, 1994.

33. Dabiri D.,[1] & Gharib M.,[2] "Digital Particle Image Thermometry: The Method and Implementation," *Experiments in Fluids* 11 (2-3), 77-86, 1991.

**CONFERENCE PROCEEDINGS & OTHER NON-JOURNAL ARTICLES:**

- ***Fully refereed publications***
  1. Craig, M.P., Lu, J., Dabiri, D., Gharib M., & Hove, J.R., "Validation of an in vivo 4D-DPIV system designed for Quantifying Intravital Flow in Real-Time." *8th International Meeting on Zebrafish Development and Genetics*. Madison, Wisconsin, June 25-29, 2008.
  2. Amin M.,[1] Navaz H.K.,[3] Dabiri D., & Faramarzi R.,[3] "Air Curtains of Open Refrigerated Display Cases Revisited: A New Technique For Infiltration Rate Measurements," *Heat Transfer 2008 conference*, **Maribor, Slovenia**, July 9-11, 2008.
  3. Dabiri D.,[5] & Gharib M.,[2] "Three-Dimensional Mapping Of Bubbly Flows In Tow Tanks," *Proceedings of the Twenty-Fifth American Towing Tank Conference*, Iowa City, IA September 24-25, 1998.

- ***Refereed by abstract only publications***
  1. Dabiri D.,[5] "Interaction of A Shear Layer with A Free Surface," *9TH. International Symposium on Flow Visualization*, Edinburgh, Scotland, UK, August 22-25, 2000.
  2. Pereira F.,[4] Gharib M.,[2] Modarress D.,[2] and Dabiri D.,[5] "Implementation of Defocusing DPIV and Application to the Bubbly Flow Around A Propeller," *9TH. International Symposium on Flow Visualization*, Edinburgh, Scotland, UK, August 22-25, 2000.
  3. Pereira F.,[4] Gharib M.,[2] Dabiri D.,[5] & Modarress D.,[2] "Implementation of Defocusing DPIV and Application to the Bubbly Flow Around a Propeller," *Tenth International Symposium on Application of Laser Techniques to Fluid Mechanics*, Lisbon, Portugal, 10-13 July, 2000.
  4. Gharib M.,[2] Modares D., Dabiri D.,[5] Pereira F.,[4] & Taugwalder F.,[5] "Development and Application of a Defocusing Three Dimensional DPIV Technique for the Mapping of Two-Phase Bubbly Flows," *Ninth International Symposium on Application of Laser Techniques to Fluid Mechanics*, Lisbon, Portugal, 13-16 July, 1998.
  5. Dabiri D.,[5] "Generation Mechanisms and Sources of Vorticity within a Spilling Breaking Wave," *21st Symposium on Naval Hydrodynamics*, Trondheim, Norway, 24-28 June, 1996.
  6. Dabiri D.,[5] Zhang X.,[3] & Gharib M.[2] "A Real-Time Free Surface Slope Mapping Technique," *7th International Symposium on Flow Visualization*, Seattle, Washington, 11-14 September, 290, 1995.
  7. Dabiri D.,[5] & Gharib M.[2], "Digital Particle Image Thermometry and Velocimetry," *7th International Symposium on Flow Visualization*, Seattle, Washington, 11-14 September, 558, 1995.
  8. Westerweel J.,[3] Dabiri D.[5], & Gharib M.,[2] "Noise Reduction By Discrete Image Shifting In DPIV," *7th International Symposium on Flow Visualization*, Seattle, Washington, 11-14 September, 688, 1995.
  9. Dabiri D.,[5] Zhang X.[3] & Gharib M.,[2] "A Real-Time Free-Surface Elevation Mapping Technique," *Seventh International Symposium on Application of Laser Techniques to Fluid Mechanics*, Lisbon, Portugal, 11-14 July, 1994.
  10. Dabiri D.,[4] & Gharib M.,[2] "Application of a Simultaneous Temperature and Velocity Measurement Technique to a Buoyancy-driven Convection Cell," *Sixth International Symposium on Application of Laser Techniques to Fluid Mechanics*, Lisbon, Portugal, 14-19 July, 1992.
  11. Dabiri D.,[4] & Gharib M.,[2] "Application of a Simultaneous Temperature and Velocity Measurement Technique to a Buoyancy-Driven Convection Cell," *ASME Fluid Engineering Conference*, Los Angeles, California, 21-26 June 1992.

12. Dabiri D.,[1] & Gharib M.,[2] "Digital Particle Image Thermometry and its Application to a Heated Vortex-Ring," *Applications of Laser Anemometry to Fluid Mechanics*. Fifth International Symposium on Application of Laser Techniques to Fluid Mechanics, Lisbon, Portugal, 9-12 July, 1990.
13. Dabiri D.,[1] & Gharib M.,[2] "Digital Particle Image Thermometry and its Application to a Heated Vortex-Ring," *American Society of Mechanical Engineers, FED*, v 95, Fluid Measurement and Instrumentation Forum, p 27-34, 1990
14. Aliabadi P.,[1] Dabiri D.,[2] & Daily J.W.,[2] "Chaotic Analysis of a Two-Stream Plane Mixing Layer," *AIAA 25th Aerospace Sciences Meeting*, Reno, Nevada, 12-15 January 1987.

**PARTS OF BOOKS (CHAPTERS IN EDITED BOOKS):**

1. Dabiri D., "An Overview of Digital Particle Image Velocimetry" in *Flow Visualization: Techniques and Examples*, Ed. Smits, A. & Lim, T. T. London, Imperial College Press, March, 2000.
2. Dabiri D., "Cross-Correlation Digital Particle Image Velocimetry – A Review" in Turbulência, Ed. Freire, A.S., Iiha A., Breidenthal B., Associação Brasileira de Engenharia e Ciências Mecânicas (ABCM), 2006.
3. Gharib M.,[2] & Dabiri D.,[5] "An Overview of Digital Particle Image Velocimetry" in *Flow Visualization: Techniques and Examples*, Ed. Smits, A. & Lim, T. T. London, Imperial College Press, March, 2000.
4. Dabiri D.,[5] Zhang X.,[3] & Gharib M.,[2] "Quantitative Visualization of Three-Dimensional Free Surface Slopes and Elevations" in *Atlas of Visualization III*, Ed.: The Visualization Society of Japan, New York, CRC Press, 1997.

**PATENTS SUBMITTED AND/OR AWARDED:**

1. Provisional: Record of Invention title " Method and Apparatus for Three-Dimensional Digital Particle Image Velocimetry Using A Single Lens System", UW Ref#7691D
2. Provisional: Record of Invention title "Method and Apparatus for Three-Dimensional Digital Particle Image Thermometry and Velocimetry ", UW Ref#7690D
3. "Aperture-Coded Camera System for Three Dimensional Imaging", Patent No. US 7,006,132 B2, 2006
4. "Aperture-Coded Camera System for Three Dimensional Imaging," Patent No. US 6,278,847 B1, Gharib M., Dabiri D., Modares D., 2001.

**ABSTRACTS, LETTERS, NON-REFEREED PAPERS, TECHNICAL REPORTS:**

- ***Abstracts***
  1. Paul M[1], Dabiri D[1] "A Postprocessing Method for finding Flow Derivatives on a Unstructured Grid Using PTV Data" *Bull. Am. Phys. Soc.* **56** (18) 48, *American Physical Society Division of Fluid Dynamics, 61th Annual Meeting*, Baltimore, Maryland, November 20-22, 2011.
  2. Tien W[1], Dabiri D[1], Hove J[3] "Color-Coded Three-Dimensional Particle Tracking Velocimetry for Micro-Flow Applications" *Bull. Am. Phys. Soc.* **56** (18) 49, *American Physical Society Division of Fluid Dynamics, 61th Annual Meeting*, Baltimore, Maryland, November 20-22, 2011.
  3. Perez A[1], Zhu C[3], Xia Y[3], Khalil Y[3], Dabiri D[1] "Selection and Testing of Pressure and Temperature Sensitive Dyes for 2-D Flow Characterization via Synthesized Microbeads" *Bull. Am. Phys. Soc.* **56** (18) 321, *American Physical Society Division of Fluid Dynamics, 61th Annual Meeting*, Baltimore, Maryland, November 20-22, 2011.
  4. West T[1], Zhu C[3], Xia Y[3], Khalil Y[3], Dabiri D[1] "Development and Testing of Temperature Sensitive Particles" *Bull. Am. Phys. Soc.* **56** (18) 320, *American Physical Society Division of Fluid Dynamics, 61th Annual Meeting*, Baltimore, Maryland, November 20-22, 2011.
  5. Tien W-H[1], Lei Y-C[1], Duncan J. [1], Dabiri D., Rösgen T.[3], Hove J.[3], Gharib M. [3] "A Vision-Based Hybrid Particle Tracking Velocimetry (PTV) Technique using a Modified Cascade-Correlation Peak-Finding Method" *Bull. Am. Phys. Soc.* 55 (16) 342, *American Physical Society Division of Fluid Dynamics, 61th Annual Meeting*, Long Beach, California, November 21-23, 2010.

6. Pantigoso A.,[1] Tien W-H.,[1] McCann J.,[4] Dabiri D., "Application of a 3D Defocusing Particle Image Velocimetry System to a Virtual Impactor for Microscopic Aerosol Particles" *Bull. Am. Phys. Soc.* 53 (15) 254, *American Physical Society Division of Fluid Dynamics, 61th Annual Meeting*, San Antonio, Texas, November 23-25, 2008.

7. Tien W-H.,[1] Dabiri D., "Development of a Backlighted Color-coded Micro-DDPIV System and its Application to a Backward Facing Step Micro-channel Flow" *Bull. Am. Phys. Soc.* 53 (15) 88, *American Physical Society Division of Fluid Dynamics, 61th Annual Meeting*, San Antonio, Texas, November 23-25, 2008.

8. Duncan J.,[1] Dabiri D., "The Development of a Feature Comparison Based Technique to Analyze PTV Results" *Bull. Am. Phys. Soc.* 53 (15) 51, *American Physical Society Division of Fluid Dynamics, 61th Annual Meeting*, San Antonio, Texas, November 23-25, 2008.

9. Kimura F.,[1] Rodriguez M.,[1] McCann J.,[4] Dabiri D., Khalil G.,[2] Callis J.,[2] Xia Y.,[2] Gouterman M.,[2] & Carlson B.,[2] "Simultaneous Measurements of Pressure and Velocity in Gas Phase Flows via Pressure-Sensitive Microspheres" *Bull. Am. Phys. Soc.* 53 (15) 165, *American Physical Society Division of Fluid Dynamics, 61th Annual Meeting*, San Antonio, Texas, November 23-25, 2008.

10. Kimura F.,[1] Rodriguez M.,[1] McCann J.,[4] Dabiri D., Khalil G.,[2] Callis J.,[2] Xia Y.,[2] Gouterman M.,[2] Carlson B.[2] "Development of Pressure Sensitive MicroBeads for the Simultaneous Measurements of Pressure and Velocity" *Bull. Am. Phys. Soc.* 52 (17) 246, *American Physical Society Division of Fluid Dynamics, 60th Annual Meeting*, Salt Lake City, Utah, November 18-20, 2007.

11. Susanto A.,[1] Pun C.S.,[1] Dabiri D. "Bootstrapping Dip Test for PIV Outlier Identification and Correction" *Bull. Am. Phys. Soc.* 52 (17) 163, *American Physical Society Division of Fluid Dynamics, 60th Annual Meeting*, Salt Lake City, Utah, November 18-20, 2007.

12. Tien W.H.,[1] Dabiri D. "A Color-Coded Single Camera Three-Dimensional Defocusing Particle Image Velocimetry" *Bull. Am. Phys. Soc.* 52 (17) 162, *American Physical Society Division of Fluid Dynamics, 60th Annual Meeting,* Salt Lake City, Utah, November 18-20, 2007.

13. Grothe R.,[1] Rixon G.,[1] Dabiri D. "Design of a 3D Digital Liquid Crystal Particle Thermometry and Velocimetry (3DDLCPT/V) System" *Bull. Am. Phys. Soc.* 52 (17) 161, *American Physical Society Division of Fluid Dynamics, 60th Annual Meeting*, Salt Lake City, Utah, November 18-20, 2007.

14. Schmitt D.,[1] Rixon G.,[1] Dabiri D. "Development of a 3D Digital Particle Image Thermometry and Velocimetry (3DDPITV) System," *Bull. Am. Phys. Soc.* 51 (9) 35, *American Physical Society Division of Fluid Dynamics, 59th Annual Meeting*, Tampa Bay, Florida, November 19-21, 2006.

15. Tien W.H.,[1] Dabiri D. "Development and Application of a Modified Single-Camera 3DDPIV System," *Bull. Am. Phys. Soc.* 51 (9) 36, *American Physical Society Division of Fluid Dynamics, 59th Annual Meeting*, Tampa Bay, Florida, November 19-21, 2006.

16. Pun C.S.,[1] Susanto A.,[1] Dabiri D. "Statistical Methods for Post-Correlation PIV Outlier Detection," *Bull. Am. Phys. Soc.* 51(9) 36, *American Physical Society Division of Fluid Dynamics, 59th Annual Meeting*, Tampa Bay, Florida, November 19-21, 2006.

17. Amin M.,[1] Dabiri D., Navaz H.[3] "Effect of Various Parameters on Evolution of 2D Free Jets and their Associated Entrainment Rates," *Bull. Am. Phys. Soc.* 51 (9) 245, *American Physical Society Division of Fluid Dynamics, 59th Annual Meeting*, Tampa Bay, Florida, November 19-21, 2006.

18. Thompson B.,[1] Dabiri D., Kurosaka M.[2] "PIV Measurements for Validation of Self-induction Theory of Vortex Breakdown," *Bull. Am. Phys. Soc.* 50 (9) 285, *American Physical Society Division of Fluid Dynamics, 58th Annual Meeting*, Chicago, IL, 20-22 November 2005.

19. Kajitani L.[1] & Dabiri D., "A Full Three-Dimensional Characterization Of Defocusing Digital Particle Image Velocimetry," *Bull. Am. Phys. Soc.* 49 (9) 80, *American Physical Society Division of Fluid Dynamics, 57th Annual Meeting*, Seattle, WA, 21-23 November 2004.

20. Graff E.C.,[3] Pereira F.,[3] Dabiri D., & Gharib M.,[3] "Applications of Defocused Digital Particle Image Velocimetry to Simultaneous Dynamic Three-Dimensional Mapping of Solid Surfaces and Their

Induced Flow," *Bull. Am. Phys. Soc.*49 (9) 80, *American Physical Society Division of Fluid Dynamics, 57th Annual Meeting*, Seattle, WA, 21-23 November 2004.

21. Salehuddin A.[1] & Dabiri D., "Use of Variable Thresholds in Post-Correlation PIV Outlier Correction," *Bull. Am. Phys. Soc.* 49 (9) 64, *American Physical Society Division of Fluid Dynamics, 57th Annual Meeting*, Seattle, WA, 21-23 November 2004.
22. Massey B.,[1] Morgansen K.,[2] & Dabiri D., "Control Theoretic Modeling and Generated Flow Patterns of a Fish-Tail Robot," *Bull. Am. Phys. Soc.*48 (10) 60, *American Physical Society Division of Fluid Dynamics, 56th Annual Meeting*, East Rutherford, New Jersey, November 23-25, 2003.
23. Zarandi M.,[1] Dabiri D.[5] & Gharib M.,[2] "Application of Digital Ultrasound Speckle Image Velocimetry (DUSIV) for Quantitative Flow Measurements in Aortic Vessel: An In Vitro Study," *Bull. Am. Phys. Soc.* 46 (10) 99, *American Physical Society Division of Fluid Dynamics, 54th Annual Meeting*, San Diego, CA, 18-20 November 2001.
24. Dabiri D.,[5] Gharib M.,[2] Jeon D.,[1] & Dooley B.,[1] "Comparison of Defocusing DPIV with Stereo DPIV," *Bull. Am. Phys. Soc.* 46 (10) 87, *American Physical Society Division of Fluid Dynamics, 54th Annual Meeting*, San Diego, CA, 18-20 November 2001.
25. Dabiri D.,[5] & Gharib M.,[2] "Free-Surface Roughness Correlation with the Near-Surface Turbulence," *Bull. Am. Phys. Soc.* 44 (8) 39, *American Physical Society Division of Fluid Dynamics, 52th Annual Meeting*, New Orleans, Louisiana, 21-23 November 1999.
26. Pereira F.,[4] Gharib M.,[2] & Dabiri D.,[5] & Modarress D.[2] "Introductory Application of Defocusing DPIV to the Study of Bubbly Shear Flows," *Bull. Am. Phys. Soc.* 44 (8) 96, *American Physical Society Division of Fluid Dynamics, 52th Annual Meeting*, New Orleans, Louisiana, 21-23 November 1999.
27. Dabiri D.,[5] & Gharib M.,[2] "Three-Dimensional Mapping of Bubbly Flows In Tow Tanks," *Proceedings of the Twenty-Fifth American Towing Tank Conference*, Iowa City, IA September 24-25, 1998.
28. Dabiri D.,[5] "Free-Surface Roughness Correlation with the Near-Surface Turbulence," *Bull. Am. Phys. Soc.* 43 (9) 2017, *American Physical Society Division of Fluid Dynamics, 51th Annual Meeting*, Philadelphia, Pennsylvania, 22-24 November 1998.
29. Johari H.,[3] Gharib M.,[2] & Dabiri D.,[5] "Near Field of Starting Plumes," *Bull. Am. Phys. Soc.* 42 (11) 2181, *American Physical Society Division of Fluid Dynamics, 50th Annual Meeting*, San Francisco, CA, 23-25 November 1997.
30. Dabiri D.,[5] "On the Correlation of the Free-Surface Roughness with the Near-Surface Turbulence," *Bull. Am. Phys. Soc.* 42 (11) 2162, *American Physical Society Division of Fluid Dynamics, 50th Annual Meeting*, San Francisco, CA, 23-25 November 1997.
31. Park H.,[1] Dabiri D.,[5] & Gharib M.,[2] "Experimental Study of Turbulent Heat Transfer in Wake of Circular Cylinder," *Bull. Am. Phys. Soc.* 41 (9) 1816, *American Physical Society Division of Fluid Dynamics, 49th Annual Meeting*, Syracuse, New York, 24-26 November 1996.
32. Dabiri D.,[5] Westerweel J.,[3] & Gharib M.,[2] "On the Effects of Window Shifting and Image Windowing for Improved Accuracy of Velocity Measurements for DPIV," *Bull. Am. Phys. Soc.* 40 (12) 2045, *American Physical Society Division of Fluid Dynamics, 48th Annual Meeting*, Irvine, California, 19-21 November 1995.
33. Cardell G.,[4] & Dabiri D.,[5] "The Flow over Delta Wings at Low Reynolds Number," *Bull. Am. Phys. Soc.* 40 (12) 2007, *American Physical Society Division of Fluid Dynamics, 48th Annual Meeting*, Irvine, California, 19-21 November 1995.
34. Dabiri D.,[5] "Experimental Investigation of the Vorticity Generation within a Spilling Water Wave," *Bull. Am. Phys. Soc.* 39 (9) 1904, *American Physical Society Division of Fluid Dynamics, 47th Annual Meeting*, Atlanta, Georgia, 20-22 November 1994.

35. Zhang X.,[3] Dabiri D.,[5] & Gharib M.,[2] "A Novel technique for Free-Surface Elevation Mapping," *Bull. Am. Phys. Soc.* 38 (12) 2287, *American Physical Society Division of Fluid Dynamics, 46th Annual Meeting*, Albuquerque, New Mexico, 21-23 November 1993.

36. Dabiri D.,[1] & Gharib M.,[2] "A Method for Simultaneous Measurement of Temperature and Velocity," *Bull. Am. Phys. Soc.* 36 (10) 2663, *American Physical Society Division of Fluid Dynamics, 44th Annual Meeting*, Scottsdale, Arizona, 24-26 November 1991.

37. Dabiri D.,[1] & Gharib M.,[2] "Particle Image Thermometry and its Application to a Heated Vortex-Ring," *Bull. Am. Phys. Soc.* 34 (10) 2337, *American Physical Society Division of Fluid Dynamics, 42th Annual Meeting*, Moffett Field, California, 19-21 November 1989.

- ***Technical Reports***

1. Dabiri, D.,[1] "The Effect of Forced Boundary Conditions on the Flow Field of a Square Convection Cell," *Ph.D. Thesis*, UC San Diego, 1992.

2. Dabiri, D.,[1] "Application of a 5-hole Pressure Probe to Measure Flow Behind Bluff Bodies," *M.S. Thesis*, UC Berkeley, 1987.

## OTHER SCHOLARLY ACTIVITY

**INVITED LECTURES AND SEMINARS:**

1. Mechanical Engineering Seminar, University of Houston, Houston, TX, "*The development of new global quantitative techniques for use in fluid mechanics*," April 2010
2. Hydralab III, Toulouse, France, "*New Developments in PIV: Defocusing PIV*," May 2008
3. DOE/SCE Project Advisory Committee, New York, NY, "*Air Curtain Design Optimization in Refrigerated Open Vertical Display Cases*," January 2008.
4. DOE/SCE Project Advisory Committee, Dallas, TX, "*Infiltration Rate Measurement of Vertical Open Refrigerated Display Cases*," January 2007.
5. Escola de Primavera de Transiçao e Turbulencia, Rio De Janeiro, Brazil, "*Cross-Correlation Digital Particle Image Velocimetry – A Review*," September 2006.
6. DOE/SCE Project Advisory Committee, Quebec City, Canada, "*Fundamental Research towards Optimization of Air Curtains of Vertical Open Refrigerated Display Cases*," June 2006.
7. DOE/SCE Project Advisory Committee, Chicago, IL, "*Fundamental Research towards Optimization of Air Curtains of Vertical Open Refrigerated Display Cases*," January 2006.
8. Mechanical Engineering Seminar, Washington State University, Pullman, WA, "*The Development of Global Quantitative Optical Techniques in Fluid Mechanics*," September 2004.
9. Aeronautics & Astronautics Seminar, UW, Seattle, WA, "*Interaction of a Vertical Shear Layer with a Free Surface*," March 2001.
10. Aeronautics & Astronautics Seminar, UW, Seattle, WA, "*The Development of New Measurement Techniques to Meet New Challenges in Fluid Mechanics*," March 2001.
11. Department of Mechanical Engineering Seminar, Oregon State University, Oregon, OR, "*The Development of New Measurement Techniques to Meet New Challenges in Fluid Mechanics*," April 2001.
12. Department of Mechanical and Aerospace Engineering Seminar, Utah State University, Logan, UT "*Development and Implementation of a Defocusing Three Dimensional DPIV Technique*" April 2000.

13. American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Annual Meeting, Minneapolis, MN, June 24-28, "*Application of DPIV to the Study of the Air Curtain Performance in a Refrigerated Display Case*," June 2000.
14. Parks College of Engineering & Aviation, St. Louis University, "*Digital Particle Image Velocimetry*," May 1998.
15. American Society of Mechanical Engineers (ASME) tutorial, Washington, DC, "*PIV and Applications*," June 1998.
16. Interdisciplinary colloquium of the IWR (Interdisziplinäre Zentrum für Wissenschaftliches Rechnen: Interdisciplinary Center for Scientific Computing) over Digital image processing, Heidelberg, Germany, "*Sources of Vorticity within a Spilling Breaking Wave*," June 1997.
17. 10th Liepmann-Ludwieg Seminar, DLR Research Center, Gottingen, Germany, June 23-27, "*Sources of Vorticity within a Spilling Breaking Wave*," June 1997. '

**PRESENTATIONS GIVEN AT CONFERENCES (PRESENTER IS THE FIRST AUTHOR IN ALL CASES):**

1. Paul M[1], Dabiri D[1] "A Postprocessing Method for finding Flow Derivatives on a Unstructured Grid Using PTV Data" *Bull. Am. Phys. Soc.* **56** (18) 48, *American Physical Society Division of Fluid Dynamics, 61th Annual Meeting*, Baltimore, Maryland, November 20-22, 2011.
2. Tien W[1], Dabiri D[1], Hove J[3] "Color-Coded Three-Dimensional Particle Tracking Velocimetry for Micro-Flow Applications" *Bull. Am. Phys. Soc.* **56** (18) 49, *American Physical Society Division of Fluid Dynamics, 61th Annual Meeting*, Baltimore, Maryland, November 20-22, 2011.
3. Perez A[1], Zhu C[3], Xia Y[3], Khalil Y[3], Dabiri D[1] "Selection and Testing of Pressure and Temperature Sensitive Dyes for 2-D Flow Characterization via Synthesized Microbeads" *Bull. Am. Phys. Soc.* **56** (18) 321, *American Physical Society Division of Fluid Dynamics, 61th Annual Meeting*, Baltimore, Maryland, November 20-22, 2011.
4. West T[1], Zhu C[3], Xia Y[3], Khalil Y[3], Dabiri D[1] "Development and Testing of Temperature Sensitive Particles" *Bull. Am. Phys. Soc.* **56** (18) 320, *American Physical Society Division of Fluid Dynamics, 61th Annual Meeting*, Baltimore, Maryland, November 20-22, 2011.
5. Tien W-H[1], Lei Y-C[1], Duncan J. [1], Dabiri D., Rösgen T.[3], Hove J.[3], Gharib M. [3] "A Vision-Based Hybrid Particle Tracking Velocimetry (PTV) Technique using a Modified Cascade-Correlation Peak-Finding Method" *Bull. Am. Phys. Soc.* **55** (16) 342, *American Physical Society Division of Fluid Dynamics, 61th Annual Meeting*, Long Beach, California, November 21-23, 2010.
6. Kimura F.,[1] Rodriguez M.,[1] McCann J.,[4] Dabiri D., Khalil G.,[2] Callis J.,[2] Xia Y.,[2] Gouterman M.,[2] & Carlson B.,[2] "Development of Pressure Sensitive MicroBeads for the Simultaneous Measurements of Pressure and Velocity" *Bull. Am. Phys. Soc.* 52 (17) 246, *American Physical Society Division of Fluid Dynamics, 60th Annual Meeting*, Salt Lake City, Utah, November 18-20, 2007.
7. Susanto A.,[1] Pun C.S.,[1] & Dabiri D., "Bootstrapping Dip Test for PIV Outlier Identification and Correction" *Bull. Am. Phys. Soc.* 52 (17) 163, *American Physical Society Division of Fluid Dynamics, 60th Annual Meeting*, Salt Lake City, Utah, November 18-20, 2007.
8. Tien W.H.,[1] & Dabiri D., "A Color-Coded Single Camera Three-Dimensional Defocusing Particle Image Velocimetry" *Bull. Am. Phys. Soc.* 52 (17) 162, *American Physical Society Division of Fluid Dynamics, 60th Annual Meeting*, Salt Lake City, Utah, November 18-20, 2007.
9. Grothe R.,[1] Rixon G.,[1] & Dabiri D., "Design of a 3D Digital Liquid Crystal Particle Thermometry and Velocimetry (3DDLCPT/V) System" *Bull. Am. Phys. Soc.* 52 (17) 161, *American Physical Society Division of Fluid Dynamics, 60th Annual Meeting*, Salt Lake City, Utah, November 18-20, 2007.
10. Schmitt D.,[1] Rixon G.,[1] & Dabiri D., "Development of a 3D Digital Particle Image Thermometry and Velocimetry (3DDPITV) System," *Bull. Am. Phys. Soc.* 51 (9) 35, *American Physical Society Division of Fluid Dynamics, 59th Annual Meeting*, Tampa Bay, Florida, November 19-21, 2006.

11. Tien W.H.,[1] & Dabiri D., "Development and Application of a Modified Single-Camera 3DDPIV System," *Bull. Am. Phys. Soc.* 51 (9) 36, *American Physical Society Division of Fluid Dynamics, 59th Annual Meeting*, Tampa Bay, Florida, November 19-21, 2006.
12. Pun C.S.,[1] Susanto A.,[1] & Dabiri D., "Statistical Methods for Post-Correlation PIV Outlier Detection," *Bull. Am. Phys. Soc.* 51(9) 36, *American Physical Society Division of Fluid Dynamics, 59th Annual Meeting*, Tampa Bay, Florida, November 19-21, 2006.
13. Amin M.,[1] Dabiri D., & Navaz H.,[3] "Effect of Various Parameters on Evolution of 2D Free Jets and their Associated Entrainment Rates," *Bull. Am. Phys. Soc.* 51 (9) 245, *American Physical Society Division of Fluid Dynamics, 59th Annual Meeting*, Tampa Bay, Florida, November 19-21, 2006.
14. Navaz H. K.,[3] Amin M.,[1] Dabiri D., & Faramarzi R.,[3] "Past, Present, and Future Research Towards Air Curtain Performance Optimization," *ASHRAE technical Meeting: Advances in Supermarket Display Case Technology*, Symposium No. OR-05-16, Orlando, Florida, 6-9 February 2005.
15. Dabiri D. & Riley J.,[2] "3D Modeling of Flow Behind a Heated Backward-Facing Step using 3D Digital Particle Image Velocimetry & Thermometry," *NSF/Sandia Workshop*, Albuquerque, NM, February 10-11, 2005
16. Thompson B.,[1] Dabiri D., & Kurosaka M.,[2] "PIV Measurements for Validation of Self-induction Theory of Vortex Breakdown," *Bull. Am. Phys. Soc.* 50 (9) 285, *American Physical Society Division of Fluid Dynamics, 58th Annual Meeting*, Chicago, IL, 20-22 November 2005.
17. Navaz H. K.,[3] Amin M.,[1] Dabiri D., & Faramarzi R.,[3] "Past, Present, and Future Research Towards Air Curtain Performance Optimization," *ASHRAE technical Meeting: Advances in Supermarket Display Case Technology*, Symposium No. OR-05-16, Orlando, Florida, 6-9 February 2005.
18. Kajitani L.,[1] & Dabiri D., "A Full Three-Dimensional Characterization Of Defocusing Digital Particle Image Velocimetry," *Bull. Am. Phys. Soc. 49 (9) 80, American Physical Society Division of Fluid Dynamics, 57th Annual Meeting*, Seattle, WA, 21-23 November 2004.
19. Dabiri D., & Riley J.,[2] "3D Modeling of Flow Behind a Heated Backward-Facing Step using 3D Digital Particle Image Velocimetry & Thermometry," *NSF/Sandia Workshop*, Albuquerque, NM, January 28-29, 2004.
20. Graff E.C.,[3] Pereira F.,[3] Dabiri D., & Gharib M.,[3] "Applications of Defocused Digital Particle Image Velocimetry to Simultaneous Dynamic Three-Dimensional Mapping of Solid Surfaces and Their Induced Flow," *Bull. Am. Phys. Soc.49 (9) 80, American Physical Society Division of Fluid Dynamics, 57th Annual Meeting*, Seattle, WA, 21-23 November 2004.
21. Salehuddin A.,[1] & Dabiri D., "Use of Variable Thresholds in Post-Correlation PIV Outlier Correction," *Bull. Am. Phys. Soc. 49 (9) 64, American Physical Society Division of Fluid Dynamics, 57th Annual Meeting*, Seattle, WA, 21-23 November 2004.
22. Massey B.,[1] Morgansen K.,[2] & Dabiri D., "Control Theoretic Modeling and Generated Flow Patterns of a Fish-Tail Robot," *Bull. Am. Phys. Soc.*48 (10) 60, *American Physical Society Division of Fluid Dynamics, 56th Annual Meeting*, East Rutherford, New Jersey, November 23-25, 2003.
23. Zarandi M.,[1] Dabiri D.,[5] & Gharib M.,[2] "Application of Digital Ultrasound Speckle Image Velocimetry (DUSIV) for Quantitative Flow Measurements in Aortic Vessel: An In Vitro Study," *Bull. Am. Phys. Soc.* 46 (10) 99, *American Physical Society Division of Fluid Dynamics, 54th Annual Meeting*, San Diego, CA, 18-20 November 2001.
24. Dabiri D.[5] Gharib M.,[2] Jeon D.,[1] & Dooley B.,[1] "Comparison of Defocusing DPIV with Stereo DPIV," *Bull. Am. Phys. Soc.* 46 (10) 87, *American Physical Society Division of Fluid Dynamics, 54th Annual Meeting*, San Diego, CA, 18-20 November 2001.
25. Pereira F.,[4] Gharib M.,[2] Modarress D.,[2] & Dabiri D.,[5] "Implementation of Defocusing DPIV and Application to the Bubbly Flow Around A Propeller," *9TH. International Symposium on Flow Visualization*, Edinburgh, Scotland, UK, August 22-25, 2000.

26. Dabiri D.,[5] "Interaction of A Shear Layer with A Free Surface," *9TH. International Symposium on Flow Visualization*, Edinburgh, Scotland, UK, August 22-25, 2000.

27. Dabiri D.,[5] & Gharib M.,[2] "Free-Surface Roughness Correlation with the Near-Surface Turbulence," *Bull. Am. Phys. Soc.* 44 (8) 39, *American Physical Society Division of Fluid Dynamics, 52th Annual Meeting*, New Orleans, Louisiana, 21-23 November 1999.

28. Pereira F.,[4] Gharib M.,[2] Dabiri D.,[5] & Modarress D.,[2] "Introductory Application of Defocusing DPIV to the Study of Bubbly Shear Flows," *Bull. Am. Phys. Soc.* 44 (8) 96, *American Physical Society Division of Fluid Dynamics, 52th Annual Meeting*, New Orleans, Louisiana, 21-23 November 1999.

29. Gharib M.,[2] Modares D., Dabiri D.[5], Pereira F.[4], & Taugwalder F.,[5] "Development and Application of a Defocusing Three Dimensional DPIV Technique for the Mapping of Two-Phase Bubbly Flows," *Ninth International Symposium on Application of Laser Techniques to Fluid Mechanics*, Lisbon, Portugal, 13-16 July, 1998.

30. Dabiri D.,[5] "Free-Surface Roughness Correlation with the Near-Surface Turbulence," *Bull. Am. Phys. Soc.* 43 (9) 2017, *American Physical Society Division of Fluid Dynamics, 51th Annual Meeting*, Philadelphia, Pennsylvania, 22-24 November 1998.

31. Dabiri D.,[5] & Gharib M.,[2] "Three-Dimensional Mapping Of Bubbly Flows In Tow Tanks," *Proceedings of the Twenty-Fifth American Towing Tank Conference*, Iowa City, IA September 24-25, 1998.

32. Johari H.,[3] Gharib M.,[2] & Dabiri D.,[5] "Near Field of Starting Plumes," *Bull. Am. Phys. Soc.* 42 (11) 2181, *American Physical Society Division of Fluid Dynamics, 50th Annual Meeting*, San Francisco, CA, 23-25 November 1997.

33. Dabiri D.,[5] "Generation Mechanisms and Sources of Vorticity within a Spilling Breaking Wave," *21st Symposium on Naval Hydrodynamics*, Trondheim, Norway, 24-28 June, 1996.

34. Dabiri D.,[5] "On the Correlation of the Free-Surface Roughness with the Near-Surface Turbulence," *Bull. Am. Phys. Soc.* 42 (11) 2162, *American Physical Society Division of Fluid Dynamics, 50th Annual Meeting*, San Francisco, CA, 23-25 November 1997.

35. Park H.,[1] Dabiri D.,[5] & Gharib M.,[2] "Experimental Study of Turbulent Heat Transfer in Wake of Circular Cylinder," *Bull. Am. Phys. Soc.* 41 (9) 1816, *American Physical Society Division of Fluid Dynamics, 49th Annual Meeting*, Syracuse, New York, 24-26 November 1996.

36. Dabiri D.,[5] Westerweel J.,[3] & Gharib M.,[2] "On the Effects of Window Shifting and Image Windowing for Improved Accuracy of Velocity Measurements for DPIV," *Bull. Am. Phys. Soc.* 40 (12) 2045, *American Physical Society Division of Fluid Dynamics, 48th Annual Meeting*, Irvine, California, 19-21 November 1995.

37. Dabiri D.,[5] Zhang X.,[3] & Gharib M.,[2] "A Real-Time Free Surface Slope Mapping Technique," *7th International Symposium on Flow Visualization*, Seattle, Washington, 11-14 September, 290, 1995.

38. Dabiri D.,[5] & Gharib M.[2], "Digital Particle Image Thermometry and Velocimetry," *7th International Symposium on Flow Visualization*, Seattle, Washington, 11-14 September, 558, 1995.

39. Westerweel J.,[3] Dabiri D.[5], & Gharib M.,[2] "Noise Reduction By Discrete Image Shifting In DPIV," *7th International Symposium on Flow Visualization*, Seattle, Washington, 11-14 September, 688, 1995.

40. Cardell G.,[4] & Dabiri D.,[5] "The Flow over Delta Wings at Low Reynolds Number," *Bull. Am. Phys. Soc.* 40 (12) 2007, *American Physical Society Division of Fluid Dynamics, 48th Annual Meeting*, Irvine, California, 19-21 November 1995.

41. Dabiri D.,[5] "Experimental Investigation of the Vorticity Generation within a Spilling Water Wave," *Bull. Am. Phys. Soc.* 39 (9) 1904, *American Physical Society Division of Fluid Dynamics, 47th Annual Meeting*, Atlanta, Georgia, 20-22 November 1994.

42. Dabiri D.,[5] "Experimental Investigation of the Vorticity Generation within a Spilling Water Wave," *Bull. Am. Phys. Soc. 39 (9) 1904, American Physical Society Division of Fluid Dynamics, 47th Annual Meeting*, Atlanta, Georgia, 20-22 November 1994.

43. Dabiri D.,[5] Zhang X.,[3] & Gharib M.,[2] "A Real-Time Free-Surface Elevation Mapping Technique," *Seventh International Symposium on Application of Laser Techniques to Fluid Mechanics*, Lisbon, Portugal, 11-14 July, 1994.

44. Zhang X.,[3] Dabiri D.,[5] & Gharib M.,[2] "A Novel technique for Free-Surface Elevation Mapping," *Bull. Am. Phys. Soc.* 38 (12) 2287, *American Physical Society Division of Fluid Dynamics, 46th Annual Meeting*, Albuquerque, New Mexico, 21-23 November 1993.

45. Dabiri D.,[4] & Gharib M.,[2] "Application of a Simultaneous Temperature and Velocity Measurement Technique to a Buoyancy-driven Convection Cell," *Sixth International Symposium on Application of Laser Techniques to Fluid Mechanics*, Lisbon, Portugal, 14-19 July, 1992.

46. Dabiri D.,[4] & Gharib M.,[2] "Application of a Simultaneous Temperature and Velocity Measurement Technique to a Buoyancy-Driven Convection Cell," *ASME Fluid Engineering Conference*, Los Angeles, California, 21-26 June 1992.

47. Dabiri D.,[1] & Gharib M.,[2] "A Method for Simultaneous Measurement of Temperature and Velocity," *Bull. Am. Phys. Soc. 36 (10) 2663, American Physical Society Division of Fluid Dynamics, 44th Annual Meeting*, Scottsdale, Arizona, 24-26 November 1991.

48. Dabiri D.,[1] & Gharib M.,[2] "Digital Particle Image Thermometry and its Application to a Heated Vortex-Ring," *Fifth International Symposium on Application of Laser Techniques to Fluid Mechanics*, Lisbon, Portugal, 9-12 July, 1990.

49. Dabiri D.,[1] & Gharib M.,[2] "Particle Image Thermometry and its Application to a Heated Vortex-Ring," *Bull. Am. Phys. Soc. 34 (10) 2337, American Physical Society Division of Fluid Dynamics, 42th Annual Meeting*, Moffett Field, California, 19-21 November 1989.

## SERVICE

**PROFESSIONAL ACTIVITIES:**

- Member, American Physical Society
- Member, American Society of Mechanical Engineering
- Member, American Institute of Aeronautics and Astronautics
- Member, American Society of Engineering Education
- Member of the organizational committee for the 57th Annual Meeting of the American Physical Society Division of Fluid Dynamics, Seattle, WA, November 2004
- Member of the organizational committee for the 6th International Symposium on Particle Image Velocimetry held at the California Institute of Technology, Pasadena, CA, September 2005

**REVIEWER FOR:**

- Experiments in Fluids
- Journal of Fluid Mechanics
- Measurement Science and Technology
- National Science Foundation
- Journal of Visualization
- Journal of Fluid Engineering
- Journal of Visualization
- International Journal of Thermal Sciences
- International Journal of Heat and Fluid Flow
- The University of Washington Royalty Research Fund
- The University of Washington Mary Gates Scholarship Fund
- AIAA
- Canada Foundation for Innovation (CFI) and the Quebec Government

**COURSES TAUGHT:**

AA301: Compressible Aerodynamics
AA302: Incompressible Aerodynamics
AA402: Fluid Mechanics
AA419: Heat Transfer
AA504: Fluid Mechanics
AA503: Continuum Mechanics
AA506: Vortex Dynamics
AA499: Undergraduate Research

**INSTITUTIONAL & PROFESSIONAL SERVICE:**

- ACI Committee 2010-present
- AIAA Student Advisor 2009-present
- UAEU/UW Educational Collaboration Committee 2010-present
- Chair Replacement Committee 2010
- Department Strategic Planning Committee 2008-present
- Department Undergraduate Committee 2002-present
- Department UWAL Committee 2004-present
- Faculty Advisor, Sigma Gamma Tau Student Section 2006-2010
- COE Council on Educational Policy Committee 2005-2008

**LIST OF OTHER TEACHING CONTRIBUTIONS:**

- National Effective Teaching Institute, American Society for Engineering Education, Honolulu, HW, 6/2007
- Active Learning in the Engineering Classroom, Center for Engineering Learning and Teaching, UW, 4/5/05
- ADVANCE/Leadership Workshop, UW, 11/2/04
- Ninth Annual Faculty Workshops on Teaching and Learning, UW, 9/8/04
- COE-NIH Workshop on how to best get funding from NIH, UW, 06/02/04

**PROFESSIONAL DEVELOPMENT: 2002-PRESENT:**

- National Effective Teaching Institute, American Society for Engineering Education, Honolulu, HW, 6/2007
- Active Learning in the Engineering Classroom, Center for Engineering Learning and Teaching, UW, 4/5/05
- ADVANCE/Leadership Workshop, UW, 11/2/04
- Ninth Annual Faculty Workshops on Teaching and Learning, UW, 9/8/04
- COE-NIH Workshop on how to best get funding from NIH, UW, 06/02/04
- ADVANCE/New Initiatives: Time Management, UW, 11/21/03
- Eighth Annual Faculty Workshops on Teaching and Learning, UW, 8/22/03
- Cooperative and Service Learning Workshop, UW, 05/07/03
- "Interface Between Engineering and Biology and its Impact on the Human Condition", Symposium/Regional Meeting of the National Academy of Engineering, 2/12/2003
- Assistant Professor Grant Writing Workshop, UW, 2/27/02
- Faculty Fellows, UW faculty development seminar, Autumn 2002

**COMMUNITY SERVICE:**

- UW Engineering Open House 2008-2010

**INTERNATIONAL, NATIONAL OR GOVERNMENTAL SERVICE:**

- Review Panelist, National Science Foundation, Chemical, Bioengineering, Environmental, and Transport Systems (CBET) Organization 2009
- Review Panelist, National Science Foundation, Chemical, Bioengineering, Environmental, and Transport Systems (CBET) Organization 2008

**ALL OTHER SERVICE:**

- Associate Editor of Journal of Visualization 3/2009-Present