

## Curriculum Vita

### JOSEPH KATZ

Department of Mechanical Engineering  
The Johns Hopkins University  
Baltimore, MD 21218, USA  
Telephone: (410) 516-5470; Fax: (410) 516-7254  
Email: katz@jhu.edu

### Education

Ph.D.	Mechanical Engineering	California Institute of Technology	1982
M.S.	Mechanical Engineering	California Institute of Technology	1978
B.S.	Mechanical Engineering	Tel-Aviv University	1977

### Experience/Appointments

William F. Ward Sr. Distinguished Professor	Endowed Professorship, Johns Hopkins University	2005-
Whiting School Mechanical Engineering Professor	Endowed Professorship, Johns Hopkins University	2000-
Visiting Scientist	Weizmann Institute of Science	1999
Professor	The Johns Hopkins University	1994-
Associate Professor	The Johns Hopkins University	1990-1993
Assistant Professor	The Johns Hopkins University	1987-1990
Assistant Professor	Purdue University	1983-1987
Visiting Associate	California Inst. of Technology	1983-1985
Research Fellow (post doc)	California Inst. of Technology	1982

### Honors and Awards (Major)

- National Science Foundation: Research Initiation Award, 1984.
- National Science Foundation: Presidential Young Investigator Award, 1985.
- ASME: ASME Fellow, 1999.
- ASME: Fluids Engineering Award, 2004.
- American Physical Society: APS Fellow, 2009
- Johns Hopkins University: Gilman Scholar, 2011
- Elected to the National Academy of Engineering, 2019

### Professional Service: Scientific community (major)

- Center for Environmental and Applied Fluid Mechanics, JHU: Co-Founder 1996, Co-Director - 1996-2001, Director 2012 - .
- Chair – ASME Board of Journal Editors, 1/2010 – 12/2017
- Technical Editor - ASME Journal of Fluids Engineering, 1/2000 – 12/2009
- Associate Editor – ASME J. Fluids Engineering, 1995-1999
- vice Chair and Chair – ASME, Fluids Engineering Division, Multiphase Flow Technical Committee, 2016 - 2018
- Member of ASME (Fellow), APS (Fellow), AIAA, AGU

### Personal

Married to Rona W. Katz, with three children: Michael (b. 1991), Eli, (b. 1993), & Oren (b. 1993).

**Total Number of PhD students advised (and completed their PhD): 38 (as of 1/1/2020)**  
**Total Number post docs advised: 36 (as of 1/1/2020)**

### Patents

- Patent No. 5,124,071 (US), Microscopic Particles Containing Fluorescent Dyes and Use Thereof in Particle Image Velocimetry.
- Patent No. 95305634.8-2313 (European) Mulching Lawnmower Having Volute Deck.
- Patent No. 5808737 (US) – Pre-Analysis Chamber For A Flow Particle Analyzer.
- Patent No. 5921846 (US) – Lubricated High Speed Fluid Cutting Jet,
- Patent No. 6,688,947 (US) - Porous Lubricated Nozzle for Abrasive Fluid Suspension Jet, Inventors: Anand, U. and Katz, J.
- Patent No. 6,837,775 (US) - Porous Lubricated Mixing Tube for Abrasive Fluid Jets, Inventors: Anand, U., Katz, J.
- Patent No. 8,398,296 B2 (US) Magnetically Coupled System for Mixing, Miller, H., Meichel, D., Legere, E., Malkiel, E., Woods, P., Katz, J., Ward, J., Peterson, P..

### Journal Publications

1. Katz, J., Acosta, A.J., (1982), "Observations of Nuclei in Cavitating Flows", IUTAM Symposium on Mechanics and Physics of Bubbles in Liquids, Pasadena, California. Also *Journal of Applied Scientific Research*, Vol. 38, pp. 123-132.
2. Katz, J., (1984), "Cavitation Phenomena within Regions of Flow Separation", *Journal of Fluid Mechanics*, Vol. 140, pp. 397-436.
3. Katz, J., O'Hern, T., (1986), "Cavitation in the Shear Layer Behind a Two Dimensional Sharp-Edge Plate", *Journal of Fluids Engineering*, Vol. 108, No. 3, pp. 373-376.
4. Francis, T. B., J. Katz, (1988), "Observations on the Development of a Tip Vortex on a Rectangular Hydrofoil", *Journal of Fluids Engineering*, Vol. 110, No. 2 pp. 208-215.
5. Ward, K. C., J. Katz, (1989) "Development of Flow Structures in the Lee on an Inclined Body of Revolution", *The Journal of Aircraft (AIAA)*, Vol. 26, No. 3, pp. 198-206.
6. Katz, J., Bueno-Galdo, J., (1989), "Effect of Roughness On Rollup Of Tip Vortices On a Rectangular Hydrofoil", *The Journal of Aircraft*, Vol. 26, No. 3, pp. 247-253.
7. Ward, K.C., Katz, J., (1989), "Topology of the Flow Structures Behind an Inclined Projectile: Part A", *The Journal of Aircraft*, Vol. 26, No. 11, pp. 1016-1022.
8. Ward, K.C., Katz, J., (1989), "Topology of the Flow Structures Behind An Inclined Projectile: Part B", *The Journal of Aircraft*, Vol. 26, No. 11, pp. 1023-1031.
9. Ran, B., Katz, J., (1991), "The Response of Microscopic Bubbles to Sudden Changes in The Ambient Pressure", *Journal of Fluid Mechanics*, Vol. 224, pp. 91-115.
10. Shekarriz, A., Fu, T.C., Katz, J., Liu, H.L., Huang, T.T., (1992), "Study of Junction and Tip Vortices Using Particle Displacement Velocimetry", *AIAA Journal*, Vol. 30, No. 1, pp. 145-152.
11. Dong, R., Chu, S., Katz, J., (1992), "Quantitative Visualization of The Flow Structure Within The Volute of a Centrifugal Pump, Part A: Technique", *Journal of Fluids Engineering*, Vol. 114, No. 3, pp. 390-395.
12. Dong, R., Chu, S., Katz, J., (1992), "Quantitative Visualization of The Flow Structure Within The Volute of a Centrifugal Pump, Part B: Results", *Journal of Fluids Engineering*, Vol. 114, No. 3, pp. 396-403.
13. Shekarriz A., Fu, T.C., Katz, J., Huang, T.T., (1993), "Near Field Behavior of a Tip Vortex", *AIAA Journal*, Vol. 31, No. 1, pp. 112-118.
14. Ran, B., Katz, B., (1994), "Pressure Fluctuations and Their Effect on Cavitation Inception Within Water Jets", *Journal of Fluid Mechanics*, Vol. 262, pp. 223-263.
15. Fu, T., Shekarriz, R., Katz, J., Huang, T.T., (1994), "The Flow Structure in The Lee Side of An Inclined Prolate Spheroid", *Journal of Fluid Mechanics*, Vol. 269, pp. 79-106.
16. Liu, S., Meneveau, C., Katz, J., (1994), "On The Properties of Similarity Subgrid-Scale Models as Deduced From Measurements in A Turbulent Jet", *Journal of Fluid Mechanics*, Vol. 275, pp. 83-119.
17. Chu, S., Dong, S., Katz, J., (1995), "Relationship Between Unsteady Flow, Pressure Fluctuations and Noise In A Centrifugal Pump. Parts A: Use of PDV Data to Compute The Pressure Field", *Journal of Fluids Engineering*, Vol. 117, pp. 24-29.

18. Chu, S., Dong, S., Katz, J., (1995), "Relationship Between Unsteady Flow, Pressure Fluctuations and Noise In A Centrifugal Pump. Parts B: Effects of Blade-Tongue Interactions", *Journal of Fluids Engineering*, Vol. 117, pp. 30-35.
19. Sridhar, G., Katz, J., (1995), "Lift and Drag Forces on Microscopic Bubbles Entrained by a Vortex", *Physics of Fluids*, Vol. 7, No. 2, pp. 389-399.
20. Liu, S., Meneveau, C., Katz, J., (1995), "Experimental Study of Similarity Subgrid-Scales Models of Turbulence in The Far Field of a Jet", *Journal of Applied Scientific Research*, Vol. 54, pp. 177-190.
21. Katz, J., Meneveau, C., (1996), "Wake Induced Relative Motion of Bubbles Rising In Line", *International Journal of Multiphase Flow*, Vol. 22, No. 2, pp. 239-258.
22. Bertuccioli, L., Gopalan, S., Katz, J., (1996), "Image Shifting For PIV Using Birefringent and Ferroelectric Liquid Crystals", *Experiments in Fluids Journal*, Vol. 21, pp. 341-346.
23. Dong, R., Chu, S., Katz, J., (1997), "Effect of Modification to Tongue And Impeller Geometry on Unsteady Flow, Pressure Fluctuations and Noise in A Centrifugal Pump", *ASME Journal of Turbomachinery*, Vol. 119, pp. 506-515.
24. Dong, R., Katz, J., Huang, T.T., (1997), "On The Structure of Bow Waves on A Ship Model," *Journal of Fluid Mechanics*, Vol. 346, pp. 77-115.
25. Pogozelski, E.M., Katz, J., Huang, T.T., (1997), "The Flow Structure Around A Surface Piercing Strut," *Physics of Fluids*, Vol. 9, No. 5, pp. 1387-1399.
26. Zhang, J., Tao, B., Katz, J., (1997), "Turbulent Flow Measurement in a Square Duct With Hybrid Holographic PIV", *Experiments in Fluids Journal*, Vol. 23, pp. 373-381.
27. Shi, X., Knio, O.M., Katz, J., (1998), "Numerical Study of Shear-Induced Heating in High-Speed Nozzle Flow of Liquid Monopropellant," *Journal of Heat Transfer* Vol. 120, pp. 58-64.
28. Liu, S., Katz, J., Meneveau, C., (1999), "Evolution And Modeling of Subgrid Scales During Rapid Straining of turbulence", *Journal of Fluid Mechanics*, Vol. 387, pp. 281 – 320.
29. Meneveau, C., Katz, J., (1999), "Dynamic Testing of Subgrid Models in LES Based on The Germano Identity," *Physics of Fluids Journal*, volume 11, No. 2 pp. 245-247.
30. Sridhar, G., Katz, J., (1999), "Effect of Entrained Bubbles on The Structure of Vortex Rings", *Journal of Fluid Mechanics*, Vol. 397, pp. 171-202.
31. Bertuccioli, L., Roth, G.I., Katz, J., Osborn, T.R., (1999), "Turbulence Measurements In The Bottom Boundary Layer Using Particle Image Velocimetry", *Journal of Atmospheric and Oceanographic Technology*, Vol. 16, No. 11, Part 1, pp. 1635-1646.
32. Katz, J., Donaghay, P. L., Zhang, J., King, S. Russell, K., (1999) "Submersible Holocamera for Detection of Particle Characteristics and Motions in the Ocean," *Deep Sea Research I Journal*, Vol. 46, pp. 1455-1481.
33. Friedman, P.D., Katz, J., (1999), "The Flow And Mixing Mechanisms Caused by the Impingement of an Immiscible Interface with a Vertical Jet," *Physics of Fluids Journal*, Vol. 11, No. 9, pp. 2598-2606.
34. Meneveau, C., Katz, J., (1999), "Conditional Subgrid Force and dissipation In Locally Isotropic and Rapidly Strained Turbulence," *Physics of Fluids Journal*, Vol. 11, No. 8, pp. 2317-2329.
35. Gopalan, S., Katz, J., Knio, O., (1999) "The Flow Structure in The Near Field of Jets And Its Effect on Cavitation Inception," *Journal of Fluid Mechanics*, Vol. 398, pp. 1-43.
36. Roth, G., Mascenik, D.T., Katz, J. (1999), "Measurements of The Flow Structure And Turbulence Within A Ship Bow Wave," *Physics of Fluids Journal*, Vol. 11, No. 11, pp. 3512-3523.
37. Malkiel, E., Alquaddoomi, O., Katz, J., (1999), "Measurements Of Plankton Distribution In The Ocean Using Submersible Holography," *Measurement Science and Technology Journal*, Vol. 10, Issue 12, pp. 1142-1152.
38. Gopalan, S., Katz, J., (2000), "Flow Structure and modeling Issues in The Closure Region of Attached Cavitation," *Physics of Fluids Journal*, Vol. 12, No. 4, pp. 895-911.
39. Meneveau, C., Katz, J., (2000) "Scale-invariance and turbulence models for large-eddy simulation", *Annu. Rev. Fluid Mech.* Vol. 32, pp. 1-32.
40. Sinha, M., Katz, J., (2000), "Quantitative Visualization of The Flow in A Centrifugal Pump with Diffuser Vanes, Part A: On Flow Structure and Turbulence," *Journal of Fluids Engineering*, Vol. 122, No. 1, pp. 97-107.
41. Sinha, M., Katz, J., Meneveau, C., (2000), "Quantitative Visualization of The Flow in A Centrifugal Pump with Diffuser Vanes, Part B: Addressing Passage Averaged and LES Modeling Issues in Turbomachinery Flows," *Journal of Fluids Engineering*, Vol. 122, No. 1, pp. 108-116.
42. Tao, B., Katz, J., Meneveau, C., (2000), "Geometry and Scale Relationships in High Reynolds Number Turbulence Determined From 3-D Holographic Velocimetry," *Physics of Fluids Journal*, Vol. 12, No. 5, pp. 941-944.

43. Cerutti, S., Knio, O.M., Katz, J., (2000), "Numerical Study of Cavitation Inception in the Near Field of an Axisymmetric Jet at High Reynolds Number." *Physics of Fluids Journal*, volume 12, No. 10, pp. 2444-2460.
44. Friedman, P.D., Katz, J., (2000), "Rise Height for Relatively Buoyant Fountain and Depth of Penetration for Negatively Buoyant Jet Impinging an Interface," *Journal of Fluids Engineering*, Vol. 122, pp. 779-782.
45. Roth, G., Katz, J., (2001), "Five Techniques for Increasing the Speed and Accuracy of PIV Interrogation," *Measurement Science and Technology Journal*, Vol. 12, pp. 238-245.
46. Sinha, M., Pinarbasi, A., Katz, J., (2001), "The Flow Structure During Onset and Developed States of Rotating Stall Within a Vaned Diffuser of a Centrifugal Pump," *Journal of Fluids Engineering*, Vol. 123, No. 3, pp. 490-499.
47. Friedman, P.D., Winthorp, A.L., Katz, J., (2001), "Droplet Formation and size Distributions From an Immiscible Interface Impinged With a Vertical Negatively Buoyant Jet," *Atomization and Sprays Journal*, Vol. 11, pp. 269-290.
48. Doron, P., Bertuccioli, L., Katz, J., Osborn, T.R., (2001), "Turbulence Characteristics and Dissipation Estimates in The Coastal Ocean Bottom boundary Layer from PIV Data," *Journal of Physical Oceanography*, Vol. 31, No. 8, Part 1, pp. 2108-2134.
49. Tao, B., Katz, J., Meneveau, C., (2002), "Statistical Geometry of Subgrid-Scale Stresses Determined from Holographic Particle Image Velocimetry Measurements," *Journal of Fluid Mechanics*, Vol. 457, pp. 35-78.
50. Meneveau, C., Katz, J., (2002), "A Deterministic Stress Model for Rotor-Stator Interactions in Simulations of Passage-Averaged Flow." *Journal of Fluids Engineering*, Vol. 124, No. 2, pp. 550-554.
51. van der Bos, F., Tao, B., Meneveau, C., Katz, J., (2002), Effects of Small Scale Turbulent Motions on the Filtered Velocity Gradient tensor as Deduced from Holographic PIV Measurements, *Physics of Fluids*, Vol. 14 No. 7, pp. 2456-2474.
52. Gopalan, S., Katz, J., Liu, H.L., (2002), Effect of Gap Size in Tip Leakage Cavitation Inception, Associated Noise and Flow Structure, *J. Fluids Engineering*, Vol. 124, No. 4, pp. 994-1004.
53. Nimmo Smith, W.A.M., Atsavaprani, P., Katz, J., Osborn, (2002), "PIV Measurements in the Bottom Boundary Layer of the Coastal Ocean," *Experiments in Fluids*, Vol. 33, pp. 962-971.
54. Uzol, O., Chow, Y.C., Katz, J., Meneveau, C., (2002), "Unobstructed PIV measurements within an axial turbo-pump using liquid and blades with matched refractive indices," *Experiments in Fluids*, Vol. 33, pp. 909-919.
55. Friedman, P.D., Katz, J., (2002), "Mean Rise-Rate of Droplets in Isotropic Turbulence," *Physics of Fluids*, Vol. 14, No. 9, pp. 3059-3073.
56. Uzol, O., Chow, Y.C., Katz, J., Meneveau, C., (2002), Experimental Investigation of Unsteady Flow Field Within a Two Stage Axial Turbomachine Using Particle Image Velocimetry, *J. of Turbomachinery*, Vol. 124, pp. 542-552.
57. Chow, Y.C., Uzol, O., Katz, J., (2002), "Flow Non-Uniformities and Turbulent "Hot Spots" Due To Wake-Blade And Wake-Wake Interactions in a Multistage Turbomachine," *J. of Turbomachinery*, Vol. 124, pp. 553-563.
58. Anand, U., Katz, J., (2003), "Prevention of Nozzle Wear in Abrasive suspension Jets (AWSJ) Using Porous Lubricated Nozzles," *J. of Tribology*, Vol. 125, pp. 168-180.
59. Sheng, J., Malkiel, E., Katz, J., (2003), "Single Beam Two-Views Holographic Particle Image Velocimetry," *Applied Optics-IP*, Vol. 42 Issue 2, pp. 235-250.
60. Malkiel, E., Sheng, J., Katz, J., Strickler, J.R., (2003), "Digital Holography of the Flow Field Generated by a Feeding Calanoid Copepod, *Diaptomus minutus*," *Journal of Experimental Biology*, Vol. 206, pp. 3657-3666.
61. Uzol, O., Chow, Y.C., Katz, J., Meneveau, C., (2003), "Average Passage Flow Field and Deterministic Stresses in The Tip and Hub Regions of A Multi-Stage Turbomachine," *J. of Turbomachinery*, Vol. 125, pp. 714-725.
62. Gopalan, S., Abraham, B., Katz, J., (2004), "The Structure of a Jet in Cross Flow at Low Velocity Ratios," *Physics of Fluids*, Vol. 16, No. 6, pp. 2067 – 2087.
63. Malkiel, E., Abras, J.N., Katz, J., (2004), "Automated Scanning and Measurements of Particle Distributions within a Holographic Reconstructed Volume, *Measurement Science and Technology*, Vol. 15, pp. 601-612.
64. van Hout, R., Katz, J., (2004), "A method for measuring the density of irregularly shaped biological aerosols such as pollen," *Journal of Aerosol Science*, Vol. 35, No. 11, pp. 1369-1384.
65. Strickler, J.R., Hwang, J.S., Malkiel, E., Katz, J., Arnodin, A., (2004), "Observing Zooplankters in situ using Optical Signal Processors," *J. Sea Technology (Taiwan)*, Vol. 13, No. 4, pp. 31-44. (in Chinese).

66. Nimmo Smith, W. A. M., Katz, J., Osborn, T. R., (2005), "On the Structure of Turbulence in the Bottom Boundary Layer of the Coastal Ocean," *J. of Physical Oceanography*, Vol. 35, No. 1, pp. 72-93.
67. Chen, J., Katz, J., Meneveau, C., (2005), "The Implication of Mismatch between Stress and Strain-Rate in Turbulence Subjected to Rapid Straining and Destraining on Dynamic LES Models," *Journal of Fluids Engineering*, Vol. 127, pp. 840-850.
68. Chow, Y., Uzol, O., Katz, J., Meneveau, C., (2005), "Decomposition of the Spatially Filtered and Ensemble Averaged Kinetic Energy, the Associated Fluxes and Scaling Trends in a Rotor Wake," *Physics of Fluids*, Vol. 17, No. 085102.
69. Chen, J., Katz, J., (2005), "Elimination of Peak-locking Error in PIV Analysis Using the Correlation Mapping Method," *Measurement Science and Technology Journal*, Vol. 16, pp. 1605-1618.
70. Soranna, F., Chow, Y.C., Uzol, O., Katz, J., (2006) "On The Effect Of IGV Wake Impingement on The Flow Around The Leading Edge of A Rotor Blade," *Journal of Turbomachinery*, Vol., 128, pp. 82-95.
71. Malkiel, E., Arbas, J.N., Widder, E.A., Katz, J., (2006), "On the Spatial Distribution and NND Between Particles in the Water Column Determined From *in-Situ* Holographic Measurements," *Journal Of Plankton Research*, Vol. 28, No. 2, pp. 149-170.
72. Sheng, J., Malkiel, E., Katz, J., (2006), "A Digital Holographic Microscope for Measuring Three Dimensional Particle Distributions and Motions," *Applied Optics*, Vol. 45, No. 16, pp. 3893-3901.
73. Chen, J., Meneveau, C., Katz, J., (2006), "Scale Interactions of Turbulence Subjected to a Straining-Relaxation-Destraining Cycle," *Journal of Fluid Mechanics*, Vol. 562, pp. 123-150 (doi: 10.1017/S0022112006000905).
74. Zhu, W., van Hout, R., Luznik, L., Kang, H. S., Katz, J., Meneveau, C., (2006), "A Comparison of PIV Measurements of Canopy Turbulence Performed in the Field and in a Wind Tunnel Model," *Experiments in Fluids*, Vol. 41, No. 2, pp. 309-318.
75. Liu, X., Katz, J., (2006), "Instantaneous Pressure and Material Acceleration Measurements using a Four Exposure PIV System," *Experiments in Fluids*, Vol. 41, No. 2, pp. 227-240.
76. van Hout, R., Zhu, W., Luznik, L., Katz, J., Kleissl, J., Parlange, M., (2007), "PIV Measurements in the Atmospheric Boundary Layer Within and Above a Mature Corn Canopy. Part A: Statistics and Small Scale Isotropy," *Journal of The Atmospheric Sciences*, Vol. 64, No. 8, pp. 2805-2824.
77. Zhu, W., van Hout, R., Katz, J., (2007), "PIV Measurements in the Atmospheric Boundary Layer Within and Above a Mature Corn Canopy. Part B: Quadrant-Hole analysis," *Journal of Atmospheric Sciences*, Vol. 64, No. 8, pp. 2825-2838.
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80. Nimmo Smith, W. A. M., Katz, J., Osborn, T. R., (2007), "The Effect of Waves on Subgrid-Scale Stresses, Dissipation and Model Coefficients in the Coastal Ocean Bottom Boundary Layer," *Journal of Fluid Mechanics*, Vol. 583, pp. 133-160.
81. Yue, W., Meneveau, C., Parlange, M. B., Zhu, W., van Hout, R., Katz, J., (2007), "A Comparative Quadrant Analysis of Turbulence in A Plant Canopy," *Water Resources Research Journal*, VOL. 43, No. 5, W05422, doi:10.1029/2006WR005583.
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85. Sheng, J., Malkiel, E., Katz, J., Adolf, J., Belas, R., Place, A., (2007), "Digital Holographic Microscopy Reveals Prey-Induced Changes in Swimming Behavior of Predatory Dinoflagellates," *PNAS*, vol. 104, No. 44, pp. 17512-17517.
86. van Hout, R., Chamecki, M., Brush, G., Katz, J., Parlange, M.P., (2008), "The influence of local meteorological conditions on the circadian rhythm of corn (*Zea mays* L.) pollen dispersal into the atmosphere," *Agricultural and Forest Meteorology*, Vol. 148/6-7 pp. 1078-1092.

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88. Sheng, J., Malkiel, E., Katz, J., (2008), "Using Digital Holographic Microscopy for Simultaneous Measurements of 3-dimensional Near Wall Velocity and Wall Shear Stress in a Turbulent Boundary Layer," *Experiments in Fluids Journal*, Vol. 45, pp. 1023–1035, DOI 10.1007/s00348-008-0524-2.
89. Yue, W., Meneveau, C., Parlange, M. B., Zhu, W., Van Hout, R., Katz, J., (2008), "Turbulent Kinetic Energy Budgets in a Wind Tunnel Model Canopy: LES And Comparison With Experiment," *Environmental Fluid Mechanics*, Vol. 8, pp. 73-95.
90. Snyder, M., Knio, O.M., Katz, J., Le Maître, O.P., (2008), "Numerical study on the motion of microscopic oil droplets in high intensity isotropic turbulence," *Physics of Fluids*, Vol. 20, paper No. 073301.
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92. Liu, X., Katz, J., (2008), "Cavitation phenomena occurring due to interaction of shear layer vortices with the trailing corner of a 2D open cavity," *Physics of Fluids*, Vol. 20, paper No. 041702.
93. Hackett, E.E., Luznik, L., Katz, J., Osborn, T., (2009), "Effect of Finite Spatial Resolution on the Turbulent Energy Spectrum Measured in the Coastal Ocean Bottom-Boundary Layer," *Journal of Atmospheric and Oceanic Technology*, Vol. 26, pp. 2610-2625.
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100. Lu, Y., Gopalan, B., Celik, E., Katz, J., Van Wie, D.M., (2010), "Stretching of turbulent eddies generates cavitation near a stagnation point," *Physics of Fluids*, Vol. 22, paper No. 041702.
101. Borazjani, I., Sotiropoulos, F., Malkiel, E., Katz, J., (2010), On the role of copepod antennae in the production of hydrodynamic force during hopping, *Journal of Experimental Biology*, Vol. 213, pp. 3019–3035, doi:10.1242/jeb.043588.
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  178. Talapatra, S., Sullivan, J. M., Katz, J., Twardowski, M.S., Donaghay, P.L., Hong, J., Rines, J., McFarland, M.N., Nayak, A., Zhang, C., (2012), "In-situ Digital Holography and Adaptive Sampling Enable the Study of the Interactions of Particles, Organisms and Bubbles Within their Natural Environment," # 8372-04, SPIE Defense Security+Sensing Conference, April 24-27, Baltimore, MD.

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187. Miorini, R., Zhang, C., Katz, J., (2013), Time Resolved Tomographic PIV Measurements of Rough-Wall Turbulent Channel Flow, PIV 2013 Conference, July 1-3, Delft, Netherlands.
188. Nayak, A.R., Li, C., Kiani, B., Katz, J., (2013), "Wave, current and bottom topographical interactions in the coastal ocean bottom boundary layer," PIV 2013 Conference, July 1-3, Delft, Netherlands.
189. Miorini, R., Zhang, C., Katz, J., (2013), "Time Resolved Tomographic PIV Measurements of Rough-Wall Turbulent Channel Flow, Paper No. FEDSM2013-16238, ASME 2013 Fluids Engineering Division Summer Meeting, Incline Village, NV, July 7-11.
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202. Liu, X., Siddle-Mitchel, S., Rybarczyk, R., Katz, J., (2015), "Investigation of the Influence of the Subgrid-Scale Stress on Non-Intrusive Spatial Pressure Measurement Using an Isotropic Turbulence Database," 11th International Symposium on Particle Image Velocimetry, September 14-16, Santa Barbara, CA.
203. Wei, Z., Shi, H., Li, C., Katz, J., Dalrymple, R.A., Bilotta, G., (2016), "Behavior of Oil under Breaking Waves by a Two-phase SPH Model," 1th International SPHERIC Workshop, June 14-16, Munich, Germany.
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211. Pillutla, V., Abhijeet, H., Ling, H., Rodriguez, D., Rodrigues, D., Katz, J., Choi, W., (2016), Robust Drag Reducing Superhydrophobic Surfaces with Large Slip Length," 31st Symposium on Naval Hydrodynamics, Monterey, California, September 11-16.
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213. Katz, J., Li, Y., Chen, H., Hah, C., (2016) "Unobstructed Measurements of Flow Structure and Reynolds Stresses in the Tip Region of Axial Turbomachines Aimed at Validation of Numerical Simulations," Paper No. STO-MP-AVT-211, NATO OTAN Science and Technology Organization, Advanced Vehicle Technology (AVT-246), Avila Spain, Sept. 26-28.
214. Liu, X., Katz, J. (2017) "Pressure Rate of Strain, Pressure Diffusion and Velocity Pressure Gradient Tensor Measurements in a Cavity Shear Layer Flow," Paper no. AIAA-2017-1478, AIAA Science and Technology Forum and Exposition (AIAA SciTech Forum), January 9-13, Grapevine, TX.
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- Compressor by Axial Casing Grooves," Paper No. GT2017-65099, Proceedings of ASME Turbo Expo, June 26-30, Charlotte, NC.
216. Li, Y., Chen, H., Katz, J., (2017), "Measurements and Characterization of Turbulence in the Tip Region of an Axial Compressor Rotor," Paper No. GT2017-65114, Proceedings of ASME Turbo Expo, June 26-30, Charlotte, NC.
  217. Chen, H., Doeller, N., Li, Y., Katz, J., (2017), "Stereoscopic PIV Measurements of the Flow along the Blade Pressure Side of an Axial Waterjet Pump during Cavitation Breakdown," 17th International Symposium on Transport Phenomena and Dynamics of Rotating Machinery (ISROMAC), December 16-21, Maui, Hawaii.
  218. Chen, H., Li, Y., Katz, J., (2018), "On the Interactions of a Rotor Blade Tip Flow with Axial Casing Grooves in an Axial Compressor Near Best Efficiency Point," Paper No. GT2018-77071, ASME Turbo Expo, June 11-15, 2018, Oslo, Norway.
  219. Wang, J., Zhang, C., Katz, J., (2018), "GPU-Based, Parallel-Line, Omni-Directional Integration of the Acceleration Field to Obtain The 3D Pressure Distribution, 10th International Cavitation Symposium (Cav2018), May 14-16, Baltimore, MD.
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  223. Gao, J., Agarwal, K., Katz, J., (2018), "Elucidating the Flow around a Pair of Roughness Cubes Embedded in a Turbulent Boundary Layer by Microscopic Dual-view Tomographic Holography," 32<sup>nd</sup> Symposium on Naval Hydrodynamics, August 5 - 10, Hamburg, Germany.
  224. Chen, H., Koley, S.S., Li, Y., Katz, J., (2019), "Systematic Experimental Evaluations Aimed at Optimizing the Geometry of Axial Casing Groove in a Compressor," Paper No. GT2019-91050, ASME Turbo Expo, June 17-21, Phoenix, Arizona.
  225. Chen, H., Drešar, P., Lynch, B., Sharma, P., Williams, C., Katz, J., (2019), "Experimental Investigation of the Flow inside the Rotor Passage of an Axial Ventricular Assist Device," Proceedings of ASME-JSME-KSME Joint Fluids Engineering Conference, Paper no. AJKFUIDS2019-5660, July 29-August 1, San Francisco, CA.
  226. Gao, J., Agarwal, K., Katz, J., (2019), "The Effect of Spacing on the Flow Around a Pair of Roughness Cubes Resolved by Microscopic Dual-View Tomographic Holography," 13<sup>th</sup> International Symposium on Particle Image Velocimetry, July 22-24, Munich, Germany.
  227. Agarwal, K., Ram, O., Wang, J., Katz, J., (2019), "Velocity and Pressure Reconstruction from Sparse Particle Fields," 13<sup>th</sup> International Symposium on Particle Image Velocimetry, July 22-24, Munich, Germany.
  228. Zhang, Z., Katz, J., Zhou, X., Pierre, A.S., Lui, C., Kearney, S., Yeung, E., Young, J., Choi, D., (2019), In Vivo Time-Resolved Echo-PIV Measurement of Cardiovascular Flows With Extracorporeal Membrane Oxygenation," 13<sup>th</sup> International Symposium on Particle Image Velocimetry, July 22-24, Munich, Germany.
  229. (invited) Katz, J., (2019), "Experimental Characterization of turbulent Separated Flows – Recent Advances, Challenges and Opportunities," AVT-307, symposium on Separated Flows: Prediction, Measurement and Assessment for Air and Sea Vehicles, Trondheim, Norway, October 7-9.
  230. Chen, H., Li, Y., Koley, S.S., Katz, J., (2020), "Effects of Axial Casing Grooves on the Structure of Turbulence in the Tip Region of an Axial Turbomachine Rotor," Submitted for Turbo Expo 2020, June 22-36, London, England.
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