Stanford

John Eaton

Charles Lee Powell Foundation Professor in the School of Engineering

Mechanical Engineering

CONTACT INFORMATION

- **Alternate Contact**

  Susan Dorman - Administrative Assistant

  Email susand2@stanford.edu

Bio

BIO

Eaton uses experiments and computational simulations to study the flow and heat transfer in complex turbulent flows, especially those relevant to turbomachinery, particle-laden flows, and separated flows, and to develop new techniques for precise control of gas and surface temperature during manufacturing processes.

ACADEMIC APPOINTMENTS

- Professor, Mechanical Engineering
- Member, Maternal & Child Health Research Institute (MCHRI)

HONORS AND AWARDS

- Perin Award for Undergraduate Teaching, Stanford University (2013)
- Fellow, American Society of Mechanical Engineers (2013)
- Presidential Young Investigator Award, National Science Foundation (2013)
- Tau Beta Pi Award for Excellence in Undergraduate Teaching, Stanford University (2013)
- Three-Year Graduate Fellowship, National Science Foundation (2013)
- Silver Medal Award, Royal Society of the Arts (2013)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- member, Editorial Advisory Board of International Journal of Heat and Fluid Flow (2013 - present)
- member, Tau Beta Pi (2013 - present)
- member, Phi Beta Kappa (2013 - present)
- member, Sigma Xi (2013 - present)

PROFESSIONAL EDUCATION

- PhD, Stanford University , Mechanical Engineering (1980)

Teaching

COURSES

2018-19

- Heat Transfer: ME 131A (Aut)
- Introduction to Mechanical Engineering: ME 1 (Win, Spr)

2017-18

- Convective Heat Transfer: ME 352C (Spr)
- Heat Transfer: ME 131A (Aut)
- Introduction to Mechanical Engineering: ME 1 (Win)

2016-17

- Fluid Mechanics: ME 351B (Win)
- Fluid Mechanics: Compressible Flow and Turbomachinery: ME 131B (Spr)
- Heat Transfer: ME 131A (Aut)
- The Jet Engine: ME 12N (Sum)

2015-16

- Convective Heat Transfer: ME 352C (Spr)
- Fluid Mechanics: ME 351B (Win)
- Heat Transfer: ME 131A (Aut)
- The Jet Engine: ME 12N (Sum)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Noelia Grande Gutierrez, Indraneel Kasmalkar, Tanya Liu, Diego Oyarzun

Postdoctoral Faculty Sponsor

Andrew Banko

Doctoral Dissertation Advisor (AC)

David Ching, Davis Hoffman, Ji Hoon Kim, Pedro Montebello Milani

Orals Evaluator

Karen Wang

Master's Program Advisor

Gaurav Gude, Heidi Poppe, Nick Wilson

Doctoral Dissertation Co-Advisor (AC)

Nicole Schiavone

Publications

PUBLICATIONS

- **3D MRI measurements of the effects of wind direction on flow characteristics and contaminant dispersion in a model urban canopy** *ENVIRONMENTAL FLUID MECHANICS*

Shim, G., Prasad, D., Elkins, C. J., Eaton, J. K., Benson, M. J.
2019; 19 (4): 851–78

- **Effects of motion on MRI signal decay from micron-scale particles.** *Journal of magnetic resonance (San Diego, Calif. : 1997)*
Borup, D. D., Elkins, C. J., Eaton, J. K.
2019; 305: 152–61

- **Experimental Study of Periodic Free Stream Unsteadiness Effects on Discrete Hole Film Cooling in Two Geometries** *JOURNAL OF TURBOMACHINERY-TRANSACTIONS OF THE ASME*
Borup, D. D., Fan, D., Elkins, C. J., Eaton, J. K.
2019; 141 (6)

- **Stochastic modeling of direct radiation transmission in particle-laden turbulent flow** *JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER*
Banko, A. J., Villafane, L., Kim, J., Esmaily, M., Eaton, J. K.
2019; 226: 1–18

- **Physical Interpretation of Machine Learning Models Applied to Film Cooling Flows** *JOURNAL OF TURBOMACHINERY-TRANSACTIONS OF THE ASME*
Milani, P. M., Ling, J., Eaton, J. K.
2019; 141 (1)

- **Unsteady vortex structures in the wake of nonaxisymmetric bumps using spiral MRV** *EXPERIMENTS IN FLUIDS*
Ching, D. S., Elkins, C. J., Alley, M. T., Eaton, J. K.
2018; 59 (10)

- **Investigation of geometric sensitivity of a non-axisymmetric bump: 3D mean velocity measurements** *EXPERIMENTS IN FLUIDS*
Ching, D. S., Elkins, C. J., Eaton, J. K.
2018; 59 (9)

- **Development and validation of an MRI-based method for 3D particle concentration measurement**
Borup, D. D., Elkins, C. J., Eaton, J. K.
ELSEVIER SCIENCE INC.2018: 275–87

- **3D Measurements of coupled freestream turbulence and secondary flow effects on film cooling** *EXPERIMENTS IN FLUIDS*
Ching, D. S., Xu, H. A., Elkins, C. J., Eaton, J. K.
2018; 59 (6)

- **Measurements in discrete hole film cooling behavior with periodic freestream unsteadiness** *EXPERIMENTS IN FLUIDS*
Fan, D., Borup, D. D., Elkins, C. J., Eaton, J. K.
2018; 59 (3)

- **A Machine Learning Approach for Determining the Turbulent Diffusivity in Film Cooling Flows** *JOURNAL OF TURBOMACHINERY-TRANSACTIONS OF THE ASME*
Milani, P. M., Ling, J., Saez-Mischlich, G., Bodart, J., Eaton, J. K.
2018; 140 (2)

- **EXPERIMENTAL STUDY OF PERIODIC FREE STREAM UNSTEADINESS EFFECTS ON DISCRETE HOLE FILM COOLING IN TWO GEOMETRIES**
Borup, D. D., Fan, D., Elkins, C. J., Eaton, J. K., ASME
AMER SOC MECHANICAL ENGINEERS.2018: 327–41

- **PHYSICAL INTERPRETATION OF MACHINE LEARNING MODELS APPLIED TO FILM COOLING FLOWS**
Milani, P. M., Ling, J., Eaton, J. K., ASME
AMER SOC MECHANICAL ENGINEERS.2018

- **An Experimental Investigation of the Effects of Diffusers on Elutriation Rates from Fluidized Beds** *Gas-Solid Flows*
Kale, S., R., Eaton, J., K.
edited by Jurewicz, J.
ASME Pub. FED.: 107–114

- **Measurements Considerations in Non-Canonical Flows** *Handbook of Experimental Fluid Mechanics*

Marusic, I., Eaton, J., K.
edited by Tropea, C., Foss, J., Yarin, A., L.
Springer-Verlag.: 1

- **Turbulent Statistics of a Boundary Layer over Swept and Unswept Bumps** *AIAA 96-0658*
  Webster, D., R., DeGraaff, D., B., Eaton, J., K.

- **Turbulent Scalar Mixing in a Skewed Jet in Crossflow: Experiments and Modeling** *FLOW TURBULENCE AND COMBUSTION*
  Ryan, K. J., Bodart, J., Folkersma, M., Elkins, C. J., Eaton, J. K.
  2017; 98 (3): 781-801

- **TRANSPORT OF MICROPARTICLES IN A TURBULATED SERPENTINE PASSAGE**
  Borup, D. D., Elkins, C. J., Eaton, J. K., ASME
  AMER SOC MECHANICAL ENGINEERS.2017

- **MAGNETIC RESONANCE THERMOMETRY EXPERIMENTAL SETUP: A PORTABLE HEAT TRANSFER EXPERIMENT**
  Williams, E. T., Spirnak, J. R., Samland, M. C., Tremont, B. G., McQuirter, A. L., VerHulst, C. M., Van Poppel, B. P., Benson, M. J., Elkins, C. J., Burton, L. S., Eaton, J. K., ASME
  AMER SOC MECHANICAL ENGINEERS.2017

- **A MACHINE LEARNING APPROACH FOR DETERMINING THE TURBULENT DIFFUSIVITY IN FILM COOLING FLOWS**
  Milani, P. M., Ling, J., Saez-Mischlich, G., Bodart, J., Eaton, J. K., ASME
  AMER SOC MECHANICAL ENGINEERS.2017

- **Validation of magnetic resonance concentration measurements with adiabatic wall temperature measurements** *EXPERIMENTS IN FLUIDS*
  Sayles, E. L., Eaton, J. K.
  2016; 57 (12)

- **Oscillatory flow in the human airways from the mouth through several bronchial generations** *INTERNATIONAL JOURNAL OF HEAT AND FLUID FLOW*
  Banko, A. J., Coletti, F., Elkins, C. J., Eaton, J. K.
  2016; 61: 45-57

- **Film Cooling Effectiveness Improvements Using a Nondiffusing Oval Hole** *JOURNAL OF TURBOMACHINERY-TRANSACTIONS OF THE ASME*
  Issakhanian, E., Elkins, C. J., Eaton, J. K.
  2016; 138 (4)

- **Three-dimensional flow field around and downstream of a subscale model rotating vertical axis wind turbine** *EXPERIMENTS IN FLUIDS*
  Ryan, K. J., Coletti, F., Elkins, C. J., Dabiri, J. O., Eaton, J. K.
  2016; 57 (3)

- **Analysis of Turbulent Scalar Flux Models for a Discrete Hole Film Cooling Flow** *JOURNAL OF TURBOMACHINERY-TRANSACTIONS OF THE ASME*
  Ling, J., Ryan, K. J., Bodart, J., Eaton, J. K.
  2016; 138 (1)

- **The Effect of Land Taper Angle on Trailing Edge Slot Film Cooling** *JOURNAL OF TURBOMACHINERY-TRANSACTIONS OF THE ASME*
  Ling, J., Elkins, C. J., Eaton, J. K.
  2015; 137 (7)

- **Optimal Turbulent Schmidt Number for RANS Modeling of Trailing Edge Slot Film Cooling** *JOURNAL OF ENGINEERING FOR GAS TURBINES AND POWER-TRANSACTIONS OF THE ASME*
  Ling, J., Elkins, C. J., Eaton, J. K.
  2015; 137 (7)

- **Three-dimensional inspiratory flow in the upper and central human airways** *EXPERIMENTS IN FLUIDS*
  Banko, A. J., Coletti, F., Schiavazzi, D., Elkins, C. J., Eaton, J. K.
  2015; 56 (6)

- **Near Wall Modeling for Trailing Edge Slot Film Cooling** *JOURNAL OF FLUIDS ENGINEERING-TRANSACTIONS OF THE ASME*
  Ling, J., Rossi, R., Eaton, J. K.
  2015; 137 (2)

- **Shock boundary layer interactions in a low aspect ratio duct** *INTERNATIONAL JOURNAL OF HEAT AND FLUID FLOW*
  Campo, L. M., Eaton, J. K.
  2015; 51: 353-371
- **BUILDING BLOCK EXPERIMENTS IN DISCRETE HOLE FILM COOLING**
  Ryan, K. J., Coletti, F., Elkins, C. J., Eaton, J. K., ASME
  AMER SOC MECHANICAL ENGINEERS.2015
- **ANALYSIS OF TURBULENT SCALAR FLUX MODELS FOR A DISCRETE HOLE FILM COOLING FLOW**
  Ling, J., Ryan, K. J., Bodart, J., Eaton, J. K., ASME
  AMER SOC MECHANICAL ENGINEERS.2015
- **FILM COOLING EFFECTIVENESS IMPROVEMENTS USING A NON-DIFFUSING OVAL HOLE**
  Issakhanian, E., Elkins, C. J., Eaton, J. K., ASME
  AMER SOC MECHANICAL ENGINEERS.2015
- **QUANTITATIVE MRI MEASUREMENTS OF HOT STREAK DEVELOPMENT IN A TURBINE VANE CASCADE**
  Yapa, S. D., Elkins, C. J., Eaton, J. K., ASME
  AMER SOC MECHANICAL ENGINEERS.2015
- **Confinement effects in shock wave/turbulent boundary layer interactions through wall-modelled large-eddy simulations** *JOURNAL OF FLUID MECHANICS*
  Bermejo-Moreno, I., Campo, L., Larsson, J., Bodart, J., Helmer, D., Eaton, J. K.
  2014; 758: 5-62
- **Comparison of magnetic resonance concentration measurements in water to temperature measurements in compressible air flows** *EXPERIMENTS IN FLUIDS*
  Yapa, S. D., D'Atri, J. L., Schoech, J. M., Elkins, C. J., Eaton, J. K.
  2014; 55 (11)
- **Sensitivity of an asymmetric, three-dimensional diffuser to inlet condition perturbations** *INTERNATIONAL JOURNAL OF HEAT AND FLUID FLOW*
  Sayles, E. L., Eaton, J. K.
  2014; 49: 100-107
- **Three-Dimensional Mass Fraction Distribution of a Spray Measured by X-Ray Computed Tomography** *JOURNAL OF ENGINEERING FOR GAS TURBINES AND POWER-TRANSACTIONS OF THE ASME*
  Coletti, F., Benson, M. J., Sagues, A. L., Miller, B. H., Fahrig, R., Eaton, J. K.
  2014; 136 (5)
- **Fluid flow and scalar transport through porous fins** *PHYSICS OF FLUIDS*
  Coletti, F., Muramatsu, K., Schiavazzi, D., Elkins, C. J., Eaton, J. K.
  2014; 26 (5)
- **A matching pursuit approach to solenoidal filtering of three-dimensional velocity measurements** *JOURNAL OF COMPUTATIONAL PHYSICS*
  Schiavazzi, D., Coletti, F., Iaccarino, G., Eaton, J. K.
  2014; 263: 206-221
- **Analysis of Oxide (Al2O3, CuO, and ZnO) and CNT Nanoparticles Disaggregation Effect on the Thermal Conductivity and the Viscosity of Nanofluids** *INTERNATIONAL JOURNAL OF PRECISION ENGINEERING AND MANUFACTURING*
  Lee, J., Yoon, Y., Eaton, J. K., Goodson, K. E., Bai, S. J.
  2014; 15 (4): 703-710
- **A comprehensive model of magnetic particle motion during magnetic drug targeting** *INTERNATIONAL JOURNAL OF MULTIPHASE FLOW*
  Cherry, E. M., Eaton, J. K.
  2014; 59: 173-185
- **THE EFFECT OF LAND TAPER ANGLE ON TRAILING EDGE SLOT FILM COOLING**
  Ling, J., Elkins, C. J., Eaton, J. K., ASME
  AMER SOC MECHANICAL ENGINEERS.2014

- **THREE-DIMENSIONAL VELOCITY MEASUREMENTS AROUND AND DOWNSTREAM OF A ROTATING VERTICAL AXIS WIND TURBINE**
  Ryan, K. J., Coletti, F., Dabiri, J. O., Eaton, J. K., ASME
  AMER SOC MECHANICAL ENGINEERS.2014
- **ENDWALL VORTEX EFFECTS ON TURBULENT DISPERSION OF FILM COOLANT IN A TURBINE VANE CASCADE**
  Yapa, S. D., Elkins, C. J., Eaton, J. K., ASME
  AMER SOC MECHANICAL ENGINEERS.2014
- **OPTIMAL TURBULENT SCHMIDT NUMBER FOR RANS MODELING OF TRAILING EDGE SLOT FILM COOLING**
  Ling, J., Elkins, C. J., Eaton, J. K., ASME
  AMER SOC MECHANICAL ENGINEERS.2014
- **Experimentally informed optimization of turbulent diffusivity for a discrete hole film cooling geometry** *INTERNATIONAL JOURNAL OF HEAT AND FLUID FLOW*
  Ling, J., Coletti, F., Yapa, S. D., Eaton, J. K.
  2013; 44: 348-357
- **Heat Transfer Coefficient Measurements on the Film-Cooled Pressure Surface of a Transonic Airfoil** *JOURNAL OF TURBOMACHINERY-TRANSACTIONS OF THE ASME*
  Kodzwa, P. M., Eaton, J. K.
  2013; 135 (6)
- **Turbulent transport in an inclined jet in crossflow** *7th International Symposium on Turbulence Heat and Mass Transfer (THMT)*
  Coletti, F., Benson, M. J., Ling, J., Elkins, C. J., Eaton, J. K.
  ELSEVIER SCIENCE INC.2013: 149–160
- **An inclined jet in crossflow under the effect of streamwise pressure gradients** *EXPERIMENTS IN FLUIDS*
  Coletti, F., Elkins, C. J., Eaton, J. K.
  2013; 54 (9)
- **Local mass transfer measurements for corals and other complex geometries using gypsum dissolution** *EXPERIMENTS IN FLUIDS*
  Chang, S., Elkins, C., Eaton, J. K., Monismith, S.
  2013; 54 (7)
- **Heat Transfer and Pressure Drop of Lotus-Type Porous Metals** *JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME*
  Muramatsu, K., Ide, T., Nakajima, H., Eaton, J. K.
  2013; 135 (7)
- **Experimental-Based Redesigns for Trailing Edge Film Cooling of Gas Turbine Blades** *JOURNAL OF TURBOMACHINERY-TRANSACTIONS OF THE ASME*
  Benson, M., Yapa, S. D., Elkins, C., Eaton, J. K.
  2013; 135 (4)
- **Shear thinning effects on blood flow in straight and curved tubes** *PHYSICS OF FLUIDS*
  Cherry, E. M., Eaton, J. K.
  2013; 25 (7)
- **Three-Dimensional Velocity and Scalar Field Measurements of an Airfoil Trailing Edge With Slot Film Cooling: The Effect of an Internal Structure in the Slot** *JOURNAL OF TURBOMACHINERY-TRANSACTIONS OF THE ASME*
  Ling, J., Yapa, S. D., Benson, M. J., Elkins, C. J., Eaton, J. K.
  2013; 135 (3)
- **Flow Separation Control in an Annular to Conical Diffuser Using Two-Dimensional and Three-Dimensional Wall Steps** *JOURNAL OF FLUIDS ENGINEERING-TRANSACTIONS OF THE ASME*
  Lo, K. P., Elkins, C. J., Eaton, J. K.
  2013; 135 (4)
- **Film-Cooled Trailing Edge Measurements: 3D Velocity and Scalar Field** *JOURNAL OF TURBOMACHINERY-TRANSACTIONS OF THE ASME*
  Benson, M., Laskowski, G., Elkins, C., Eaton, J. K.
  2013; 135 (1)

- **THREE-DIMENSIONAL MASS FRACTION DISTRIBUTION OF A SPRAY MEASURED BY X-RAY COMPUTED TOMOGRAPHY**
  Coletti, F., Benson, M. J., Sagues, A. L., Miller, B. H., Fahrig, R., Eaton, J. K., ASME
  AMER SOC MECHANICAL ENGINEERS.2013

- **MEASUREMENTS OF A TRAILING EDGE SLOT FILM COOLING GEOMETRY DESIGNED FOR REDUCED COOLANT FLOWRATE AND HIGH SURFACE EFFECTIVENESS**
  Ling, J., Elkins, C. J., Benson, M. J., Yapa, S. D., Eaton, J. K., ASME
  AMER SOC MECHANICAL ENGINEERS.2013

- **Turbulent Transport in an Inclined Jet in Crossflow** *Int. J. Heat and Fluid Flow*
  Coletti, F., Benson, M., J., Ling, J., B., Elkins, C., J., Eaton, J., K.
  2013

- **3D Velocity and Scalar Field Measurements of an Airfoil Trailing Edge with Slot Film Cooling: The Effect of an Internal Structure in the Slot.** *ASME J. Turbomachinery*
  Ling, J., Yapa, S., D., Benson, M., J., Elkins, C., J., Eaton, J., K.
  2013; 135 (3): 0131018-1 -8

- **Experimentally Informed Optimization of Turbulent Diffusivity for a Discrete Hole Film Cooling Geometry** *Int. J. Heat and Fluid Flow*
  Ling, J., Coletti, F., Yapa, S., D., Eaton, J., K.
  2013

- **In-hole and mainflow velocity measurements of low-momentum jets in crossflow emanating from short holes** *EXPERIMENTS IN FLUIDS*
  Issakhanian, E., Elkins, C. J., Eaton, J. K.
  2012; 53 (6): 1765-1778

- **Three-dimensional features of a Mach 2.1 shock/boundary layer interaction** *EXPERIMENTS IN FLUIDS*
  Helmer, D. B., Campo, L. M., Eaton, J. K.
  2012; 53 (5): 1347-1368

- **Separation control in a conical diffuser with an annular inlet: center body wake separation** *EXPERIMENTS IN FLUIDS*
  Lo, K. P., Elkins, C. J., Eaton, J. K.
  2012; 53 (5): 1317-1326

- **HIV Treatment as Prevention: Systematic Comparison of Mathematical Models of the Potential Impact of Antiretroviral Therapy on HIV Incidence in South Africa** *PLOS MEDICINE*
  Eaton, J. W., Johnson, L. F., Salomon, J. A., Baernighausen, T., Bendavid, E., Bershteyn, A., Bloom, D. E., Cambiano, V., Fraser, C., Hontelez, J. A., Humair, S., Klein, D. J., Long, et al
  2012; 9 (7)

- **Effects of varying Reynolds number, blowing ratio, and internal geometry on trailing edge cutback film cooling** *EXPERIMENTS IN FLUIDS*
  Benson, M. J., Elkins, C. J., Yapa, S. D., Ling, J. B., Eaton, J. K.
  2012; 52 (6): 1415-1430

- **Sensitivity of an asymmetric 3D diffuser to vortex-generator induced inlet condition perturbations** *EXPERIMENTS IN FLUIDS*
  Grundmann, S., Sayles, E. L., Elkins, C. J., Eaton, J. K.
  2012; 52 (1): 11-21

- **EXPERIMENTAL-BASED REDESIGNS FOR TRAILING EDGE FILM COOLING OF GAS TURBINE BLADES**
  Benson, M., Yapa, S., Elkins, C., Eaton, J. K., ASME
  AMER SOC MECHANICAL ENGINEERS.2012: 1175-+

- **3D VELOCITY AND SCALAR FIELD MEASUREMENTS OF AN AIRFOIL TRAILING EDGE WITH SLOT FILM COOLING: THE EFFECT OF AN INTERNAL STRUCTURE IN THE SLOT** *ASME Turbo Expo 2012*
  Ling, J., Yapa, S. D., Benson, M. J., Elkins, C. J., Eaton, J. K.
  AMER SOC MECHANICAL ENGINEERS.2012: 1279–1288

- **THREE-DIMENSIONAL VELOCITY MEASUREMENTS OF FILM COOLING FLOW UNDER FAVORABLE PRESSURE GRADIENT** *ASME Turbo Expo 2012*
  Coletti, F., Elkins, C. J., Eaton, J. K.

AMER SOC MECHANICAL ENGINEERS.2012: 1627–1638

- **HEAT TRANSFER PERFORMANCE OF LOTUS TYPE POROUS METALS** *ASME Summer Heat Transfer Conference (SHTC)*
  Muramatsu, K., Ide, T., Nakajima, H., Eaton, J. K.
  AMER SOC MECHANICAL ENGINEERS.2012: 31–40
- **MAGNETIC RESONANCE IMAGING STUDIES OF FLOW AND MIXING FOR SINGLE-HOLE FILM COOLING** *ASME Turbo Expo 2011*
  Issakhanian, E., Elkins, C. J., Eaton, J. K.
  AMER SOC MECHANICAL ENGINEERS.2012: 57–64
- **FILM-COOLED TRAILING EDGE MEASUREMENTS: 3D VELOCITY AND SCALAR FIELD** *ASME Turbo Expo 2011*
  Benson, M., Laskowski, G., Elkins, C., Eaton, J. K.
  AMER SOC MECHANICAL ENGINEERS.2012: 1–10
- **Measurements of 3D velocity and scalar field for a film-cooled airfoil trailing edge** *EXPERIMENTS IN FLUIDS*
  Benson, M. J., Elkins, C. J., Eaton, J. K.
  2011; 51 (2): 443-455
- **Impact of channel geometry on two-phase flow in fuel cell microchannels** *JOURNAL OF POWER SOURCES*
  Steinbrenner, J. E., Lee, E. S., Hidrovo, C. H., Eaton, J. K., Goodson, K. E.
  2011; 196 (11): 5012-5020
- **Full-field measurements of flow through a scaled metal foam replica** *EXPERIMENTS IN FLUIDS*
  Onstad, A. J., Elkins, C. J., Medina, F., Wicker, R. B., Eaton, J. K.
  2011; 50 (6): 1571-1585
- **Sensitivity of an asymmetric 3D diffuser to plasma-actuator induced inlet condition perturbations** *EXPERIMENTS IN FLUIDS*
  Grundmann, S., Sayles, E. L., Eaton, J. K.
  2011; 50 (1): 217-231
- **MAGNETIC RESONANCE IMAGING TECHNIQUES FOR MEASURING FILM COOLING FLOW VELOCITY AND EFFECTIVENESS** *8th ASME/JSME Thermal Engineering Joint Conference*
  Elkins, C. J., Issakhanian, E., Eaton, J. K.
  AMER SOC MECHANICAL ENGINEERS.2011: 1299–1306
- **THERMAL DISPERSION IN METAL FOAMS** *8th ASME/JSME Thermal Engineering Joint Conference*
  Hoberg, T. B., Muramatsu, K., Cherry, E. M., Eaton, J. K.
  AMER SOC MECHANICAL ENGINEERS.2011: 883–889
- **Nanofluid Convection in Microtubes** *JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME*
  Lee, J., Gharagozloo, P. E., Kolade, B., Eaton, J. K., Goodson, K. E.
  2010; 132 (9)
- **Three-dimensional velocity measurements in annular diffuser segments including the effects of upstream strut wakes** *INTERNATIONAL JOURNAL OF HEAT AND FLUID FLOW*
  Cherry, E. M., Padilla, A. M., Elkins, C. J., Eaton, J. K.
  2010; 31 (4): 569-575
- **Film Effectiveness Measurements on the Pressure Surface of a Transonic Airfoil** *JOURNAL OF PROPULSION AND POWER*
  Kodzwa, P. M., Eaton, J. K.
  2010; 26 (4): 837-847
- **Three-dimensional concentration field measurements in a mixing layer using magnetic resonance imaging** *EXPERIMENTS IN FLUIDS*
  Benson, M. J., Elkins, C. J., Mobley, P. D., Alley, M. T., Eaton, J. K.
  2010; 49 (1): 43-55
- **An Experimental Study of the Flow Around a Formula One Racing Car Tire** *JOURNAL OF FLUIDS ENGINEERING-TRANSACTIONS OF THE ASME*
  Issakhanian, E., Elkins, C. J., Lo, K. P., Eaton, J. K.
  2010; 132 (7)
- **Heat transfer measurements for jet impingement arrays with local extraction** *INTERNATIONAL JOURNAL OF HEAT AND FLUID FLOW*

Hoberg, T. B., Onstad, A. J., Eaton, J. K.
2010; 31 (3): 460-467

- **Heat transfer coefficient measurements on the pressure surface of a transonic airfoil** *EXPERIMENTS IN FLUIDS*
  Kodzwa, P. M., Eaton, J. K.
  2010; 48 (2): 185-196
- **Sub-Kolmogorov resolution partical image velocimetry measurements of particle-laden forced turbulence** *JOURNAL OF FLUID MECHANICS*
  Tanaka, T., Eaton, J. K.
  2010; 643: 177-206
- **Particle size, magnetic field, and blood velocity effects on particle retention in magnetic drug targeting** *MEDICAL PHYSICS*
  Cherry, E. M., Maxim, P. G., Eaton, J. K.
  2010; 37 (1): 175-182
- **Turbulent Dispersed Multiphase Flow** *ANNUAL REVIEW OF FLUID MECHANICS*
  Balachandar, S., Eaton, J. K.
  2010; 42: 111-133
- **Two-way coupled turbulence simulations of gas-particle flows using point-particle tracking** *INTERNATIONAL JOURNAL OF MULTIPHASE FLOW*
  Eaton, J. K.
  2009; 35 (9): 792-800
- **Full-Field Flow Measurements and Heat Transfer of a Compact Jet Impingement Array With Local Extraction of Spent Fluid** *JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME*
  Onstad, A. J., Elkins, C. J., Moffat, R. J., Eaton, J. K.
  2009; 131 (8)
- **Evaluation of Alternatives for Two-Dimensional Linear Cascade Facilities** *JOURNAL OF TURBOMACHINERY-TRANSACTIONS OF THE ASME*
  Kodzwa, P. M., Vicharelli, A., Medic, G., Elkins, C. J., Eaton, J. K., Laskowski, G. M., Durbin, P. A.
  2009; 131 (3)
- **Convective Performance of Nanofluids in a Laminar Thermally Developing Tube Flow** *JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME*
  Kolade, B., Goodson, K. E., Eaton, J. K.
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