HUI MENG, PHD

UB Distinguished Professor
Mechanical, Aerospace & Biomedical Engineering
University at Buffalo, The State University of New York

ADDRESS

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EDUCATION

NIH K25 Training	Neurovascular Biology	University at Buffalo and UCSF	2004-09
Ph.D.	Mechanical Engineering	University of Houston	1990-94
DAAD Scholar	Applied Physics	Technische Universität Berlin	1987-90
M.S.	Optical Engineering	Zhejiang University	1984-87
B.S.	Optical Engineering	Zhejiang University	1980-84

POSITIONS

08.2004 - Present	Professor of Mechanical & Aerospace Engineering, University at Buffalo
02.2010 - Present	Adjunct Professor of Biomedical Engineering, University at Buffalo
08.2004 - Present	Research Professor of Neurosurgery, University at Buffalo
10.2010 - 03.2011	Visiting Professor, Institute of Fluid Sciences, Tohoku Univ., Sendai, Japan
08.1999 - 08.2004	Associate Professor of Mechanical & Aerospace Eng., University at Buffalo
01.1995 - 08.1999	Assistant Professor of Mechanical Engineering, Kansas State University
05.1996 - 08.1996	Visiting Professor, Wright Lab, Wright-Patterson Air Force Base

AWARDS AND HONORS

UB Distinguished Professor, 2018
Fellow, American Society of Mechanical Engineers (ASME), 2018
SUNY Chancellor's Award for Excellence in Scholarship and Creative Activities, 2016
William L. Young/Allison Raaen Lectureship, Center for Cerebrovascular Research, UCSF, 2015
Fellow, American Institute for Medical and Biological Engineering (AIMBE), 2014
Invited Plenary Speaker, 10th International IntraCranial Stent Meeting, Buenos Aries, Argentina, 2013
Invited Speaker, 8th International Symposium on Biomechanics in Vascular Biology and Cardiovascular Disease, Rotterdam, The Netherlands, 2013
Invited Speaker, 9th International IntraCranial Stent Meeting, Madison, WI, 2012
Best Presentation Award, 7th International Conference in Biomechanics in Vascular Biology and Cardiovascular Disease, Atlanta, GA, 2012
Invited Speaker, 8th International IntraCranial Stent Meeting, Shanghai, China, 2011
UB Exceptional Scholar—Sustained Achievement Award, University at Buffalo, 2011
Best Presentation Award, Live Interventional Neuroradiology Conference/7th International Intracranial Stent Meeting, Houston, 2010
Invited Speaker, First International Symposium on Biorehology, Wako, Japan, 2010
Invited Speaker, 6th International IntraCranial Stent Meeting, Sendai, Japan, 2009

Journal Covers of Stroke (June 2007; August 2010), Neurosurgery (November 2006) and J NeuroIntervent Surg (August 2012)
Invited Speaker, US-Japan Symposium on Biofluids, American Physical Society-DFD, 2005
National Institutes of Health Quantitative Research Career Award, 2004-2008
Keynote Speaker, International Symposium on Holographic Metrology in Fluid Mechanics, 2003
AIAA Best Paper Award, 2000
Invited Speaker, 30th AIAA Fluid Dynamics Conference, 1999
National Science Foundation CAREER (Presidential Young Investigator) Award, 1996
AFOSR Summer Faculty Research Award, 1996
Keynote Speaker, Sixth Asian Congress of Fluid Mechanics, Singapore, 1995
Sloan Fellow, 1995
German Academic Exchange Agency (DAAD) Fellowship, 1987-1990

RESEARCH INTEREST

Turbulence and complex flows, particle flow dynamics, Holographic particle image velocimetry, Hemodynamics, Fluid-structure interaction, Biofluids and biomechanics in vascular diseases, Image-based computational fluid dynamics, Cerebral aneurysm pathophysiology

PROFESSIONAL SOCIETIES

American Society of Mechanical Engineering (ASME, Fellow), American Institute for Medical and Biological Engineering (AIMBE, Fellow), American Association for the Advancement of Science (AAAS), Biomedical Engineering Society (BMES), American Heart Association (AHA), American Physical Society (APS), Society for Women Engineers (SWE)

PROFESSIONAL ACTIVITIES

National Institute of Health (NIH) scientific review boards (study sections)

- NIH Catalyze: Enabling Technologies Research Review Panel ZHL1 CSR-O (J1) 2 for *National Heart, Lung, and Blood Institute*, 12/2022
- NIH Special Emphasis Panel/Scientific Review Group – *Small Business: Cardiovascular and Surgical Devices* 2022/08 ZRG1 SBIB-W (12) B, 6/2022
- NIH Special Emphasis Panel/Scientific Review Group 2021/10 HLBP (4) 1 for *National Heart, Lung, and Blood Institute*, 05/2021
- NIH Study Section – *Bioengineering, Technology, and Surgical Sciences (BTSS)*, 10/2019
- NIH Study Section – *Small Business: Clinical Neurophysiology, Devices, Neuroprosthetics, and Biosensors,* ZRG1 ETTN-C (10), 03/2018
- NIH Study Section – *Neuroscience and Ophthalmic Imaging Technologies (NOIT)*, 02/2016
- NIH Special Emphasis Review Panel – ZRG1 ETTN-L 53 R, PAR13-137: Bioengineering Research, 02/2016
- NIH Special Emphasis Review Panel – ZHL1 CSR-I (O1) for *National Heart, Lung, and Blood Institute*, 08/2014
- NIH Special Review Panels –ZEB1 OSR-B (M2) S, ZEB1 OSR-B (J2) S for *Mentored Research Career Award*, 05/2012, 01/2013
- NIH Study Section – *Surgical Sciences, Biomedical Imaging and Bioengineering (SBIB)*, ZRG1 SBIB-X (02) M, 06/2013
- NIH Special Review Panel – *Bioengineering*, IMST-13, 10/2011
- NIH Study Section – *Modeling and Analysis of Biological Systems (MABS*), 7/2007 - 6/2011 (standing member for 4 years)
- NIH Study Section – *Modeling and Analysis of Biological Systems (MABS*), 3/2006, 2/2007
- NIH Special Emphasis Review Panel – ZEB1 OSR-D(A1) for *National Institute of Biomedical Imaging and Bioengineering*, 5/2010

Review panels for the National Science Foundation

ASME Bioengineering Division Fluids Committee and Solids Committee
Proposal Reviewer, NSF, NASA, Institute for Petroleum Research, Foundation for Fundamental Research on Matter, etc.
Associate Editor, *Journal of Applied Fluid Mechanics*

Journal Reviewer for

Mechanical Engineering Discipline: *Journal of Fluid Mechanics, Physics of Fluids, Experiments in Fluids, ASME Journal of Fluids Engineering, ASME Journal of Biomechanical Engineering, ASME Journal of Medical Devices, International Journal of Computational Fluid Dynamics, Computer Methods in Applied Mechanics and Engineering, Journal of Fluids and Structures, Journal of Turbulence, Measurement Science and Technology*

Biomedical Engineering Discipline: *Annals of Biomedical Engineering, Journal of Biomechanics, Biomechanics and Modeling in Mechanobiology, Biorheology, IEEE Transactions on Biomedical Engineering, IEEE Transactions on Medical Imaging, IEEE J Translational Engineering in Health and Medicine, Physics in Medicine and Biology, Medical Engineering & Physics, Medical & Biological Engineering & Computing, Computers in Biology and Medicine, Computer Methods in Biomechanics and Biomedical Engineering, International Journal for Numerical Methods in Biomedical Engineering*

Optical Engineering Discipline: *Applied Optics, Optics Letters, Optics Express, Optical Engineering, Optics Communications, Advances in Optics and Photonics*

Clinical Disciplines: *Circulation, Stroke, Arteriosclerosis Thrombosis and Vascular Biology, AJNR American Journal of Neuroradiology, Neuroradiology, Neurology, Neurosurgery, J Neurosurgery, J NeuroInterventional Surgery, World Neurosurgery*, *Acta Neuropathologica Communication, Clinical Neurology and Neurosurgery, Expert Review of Neurotherapeutics, Heart and Vessels, Technology and Health Care, J of Neuropathology and Experimental Neurology*

Multidisciplinary: *Scientific Reports, PLOS ONE*

SERVICES

Department: Career Development Committee (2019-), Marshal (2006, 2007, 2008, 2009, 2011, 2012, 2013, 2015, 2016, 2017, 2018, 2020, 2021), PhD Qualifying Exam (yearly since 2007), Faculty Graduate Committee (2012), Coordinator of Biomechanical Engineering (2002-2009), Undergraduate Committee, Graduate Committee, Scholarship Committee, Chair Search Committees, Faculty Search Committees

School: SEAS Tenure Committee (August 2020-), SEAS Awards Committee (August 2018-March 2022), Hosting Women in Science and Engineering (WISE) camp for incoming freshmen (a program for females in STEM (Aug 21-22, 2014), Senior Faculty Panel for Future Faculty Workshop (May 13 2013), Dean's Search Committee (2012), Biomedical Engineering Faculty Search Committee (2009-2010), Faculty Personnel Committee (2008-2010), Dean's Research Advisory Committee (2002-2006), Bioengineering program development core group (2005-2007), Department Head Search Committee, Dean's Ambassador to Zhejiang University, Dean's Delegation to PNNL

University: UB Award Selection Committee (August 2021-), Women in Science and Engineering participating (WiSE) faculty, President's Review Board (2013-2015), Steering Committee of the Association of Women Full Professors (2008-), Planning/design team for creating biomedical engineering department (2007-2008), UB2020 Scholar Fund Review Panel (2007), J.D. Watson Award Review Panel (2004), Science Coalition UB delegation (2001), Co-founder, Kansas Program for Complex Fluid Flows (1998)

Community: Fluids Committee, Bioengineering Division, ASME, Fund Usage Committee, Division of Fluid Dynamics, American Physical Society; Scientific Advisory Committee, International Workshop on PIV, '97, '99, '01, '03, '05, '07, '09, '11; Advisory Committee of the 14th Int'l Symposium on Applications of Laser Techniques to Fluid Mechanics, 2008
Co-organizer, Aneurysm Joint Sessions, ASME Summer Bioengineering Conferences, 2011
Session Co-Chair, Cerebral Aneurysms, ASME Summer Bioengineering Conferences, 2013
Session Chair, 9th International Symposium on Biomechanics in Vascular Biology and Cardiovascular Disease, 2014
Co-organizer, Symposium on Cerebral Aneurysm, World Congress of Biomechanics, 2014

ENTREPRENEURSHIP ACTIVITIES

Co-founded **Neurovascular Diagnostics (NVD), Inc**. in May 2016
The startup company is developing a blood test for detecting unruptured brain aneurysms. This advance could save lives by enabling doctors to identify and provide preventative treatment to patients who have such aneurysms but exhibit no symptoms.

Participated in NSF I-Corps Short Course, UB and the UNY I-Corps Node Program, May 2017

NDV received grants from Brain Aneurysm Foundation*:*
Feasibility of Detecting Brain Aneurysm Biomarkers in Whole Blood on a Diagnostic Platform
09/2017-09/2018, $45,000
Prototype Blood Test for Detecting Unruptured Brain Aneurysms
09/2018-09/2019, $50,000

NDV received Small Business Innovation Research (SBIR) awards:
NSF Small Business Innovation Research (SBIR) Grants
Phase I*: A Blood-Based Test to Identify Patients with Intracranial Aneurysm*
01/2018-01/2019, $225,000
Phase II*:* $750,000
NIH SBIR Grant (1R43NS115314-01):
Phase I: *Molecular Biomarkers of Dangerous Intracranial Aneurysms*
09/30/2019 -03/31/2020, $224,975

COURSES TAUGHT

Undergraduate: MAE204 Thermodynamics, MAE400 Intermediate Biofluid Mechanics, MAE409 Introduction to Biofluids, MAE400ST Intermediate Biofluid Mechanics, MAE 338 Fluids and Heat Transfer Lab, MAE 431 Energy Systems, MAE 478 Cardiovascular Biomechanics, ME 513 (KSU) Thermodynamics I, ME 571 (KSU) Fluid Mechanics

Graduate: MAE 519 Turbulent Flows, MAE 578 Cardiovascular Biomechanics, NRS520 Neuroscience 1, MAE 513 Advanced Diagnostics, ME 720 (KSU) Intermediate Fluid Mechanics, ME 773 (at KSU) Intermediate Heat Transfer, ME 831 (KSU) Boundary Layer Theory, ME 815 (KSU) Gas Dynamics, ME 920 (KSU) Laser Techniques for Thermo-Fluids Diagnostics

RESEARCH TRAINING

Postdoctoral Fellows Mentored
Jianping Xiang, PhD (2012-2016), Jennifer Dolan, PhD (2013-2014), Markus Tremmel, PhD (2006-2009), Eleni Metaxa, PhD (2008-2009), Ling Gao, PhD (2005-2009), Xiangqun Song, PhD (1999-2001), Ram Elavarasan, PhD (1997-1999)

Medical Fellows Mentored
Hoon Choi, MD, MS, SUNY Upstate Medical University Fellowship (2012)
Ken Snyder, MD, PhD, Congress of Neurological Surgeons Fellowship (2010)
J Mocco, MD, Brain Aneurysm Foundation Award (2009)

Omar Tanweer, MD, American Association of Neurological Surgeons (AANS) Scholarship (2008)

*Graduate Students Mentored (*Students published in peer-reviewed journals)*

Doctorate Students

Adam Hammond*	PhD 2021, Particle Tracking Reveals Extreme Clustering of Particles in Isotropic Turbulence at Small Separations
Hamid Rajabzadeh*	PhD 2020, Application of Computational Modeling Tools in Management of Intracranial Aneurysms
Robert Damiano*	PhD 2020, Predicting Treatment Outcomes of Coiled Intracranial Aneurysms using Finite Element Modeling and Machine Learning
Kerry Poppenberg*	PhD 2020, Investigation of Blood-Based Biomarkers and Epigenetic Mechanisms of Intracranial Aneurysms
Nikhil Paliwal*	PhD 2019, Predicting Long-term Outcome of Intracranial Aneurysms Treated with Flow Diverters using CFD and Machine Learning
Nicole Varble*	PhD 2018, Application of Patient Image-based CFD to Intracranial Aneurysm Rupture Risk Analysis
Vincent Tutino*	PhD 2018, Development of Blood-Based Biomarkers to Detect Brain Aneurysm
Zhongwang Dou*	PhD 2017, Experimental Study of Inertial Particle-Pair Relative Velocity in Isotropic Turbulence
Nicholas Liaw*	MD/PhD 2015, Hemodynamics Induced Intracranial Aneurysm Initiation: Mechanism Exploration and Model Optimization
Max Mandelbaum*	MD/PhD 2013, The Role of Smooth Muscle Cells in a Model of Hemodynamic Intracranial Aneurysm Initiation
Ding Ma*	PhD 2013, Computer Modeling of Neurovascular Flow Diverter
Jennifer Dolan*	PhD 2012, Endothelial Cells under High Wall Shear Stress and Spatial Gradients
Jianping Xiang*	PhD 2012, Intracranial Aneurysm Rupture Risk Prediction and Endovascular Virtual Intervention
Eleni Metaxa*	PhD 2008, Endothelial Cells under High Flow
Yiemeng Hoi*	PhD 2008, Correlating In Vivo Hemodynamics with Vascular Responses
Zhijie Wang*	PhD 2008, Flow-induced Aneurysm-Type Remodeling near an Arterial Bifurcation Apex
Jeremy de Jong*	PhD 2008, Dynamic Particle Field Experiments with Holographic Imaging
Minsouk Kim*	PhD 2007, Computational Fluid Dynamic Studies of Endovascular Stents for Treating Cerebral Aneurysms
Lujie Cao*	PhD 2007, Experimental Study of Aerosol Clustering in Isotropic Turbulence by Holographic Imaging
Gang Pan*	PhD 2004, Digital Holographic Imaging for 3D Particle and Flow Measurements
Ye Pu*	PhD 2002, Holographic Particle Image Velocimetry: Theory to Practice
Suchuan Dong*	PhD 2001, Direct Numerical Simulation of Mixing Tab Flow

Master Students

Danielle Johnson	MS 2022, Extreme clustering of inertial particles in isotropic turbulence

Palak Patel*	MS 2019, Virtual Coiling for Intracranial Aneurysm Based on Geometric Path Planning using Coil Pre-Shape
Adam Hammond*	MS 2018, Measuring Electric Charge on Individual Aerosol Particles Using In-line Holography
Tushar Kailu	MS2018, Experimental investigation of triboelectric charge on particles in helical gas/solids pipe flow systems
Sricharan Veeturi*	MS 2017, Evaluation of two CFD solvers for potential clinical use
Rahul Sanal	MS 2016, A Fast Spring-based Geometric Constraint Algorithm for Simulating Endovascular Coil Treatment of Cerebral Aneurysms
Anjun Tripathy	MS 2015, Improved non-invasive method for aerosol particle charge measurement employing in-line digital holography
Chris Martensen	MS 2015, A Particle Image Velocimetry Study for Verification and Validation of a Computational Fluid Dynamics Tool
Jessica Utzig	MS 2015, Coculture Flow System for Study Endothelial and Smooth Muscle Cell Interactions under High Wall Shear Stress
Robert Damiano*	MS 2015, Finite Element Modeling of Endovascular Intervention Enables Hemodynamic Characterization of Intracranial Aneurysm Treatment Strategies
Vincent Tutino*	MS 2014, Analysis of Vascular Remodeling in the Circle of Willis after Hemodynamic Insult due to Carotid Occlusion
Fan Yang	MS 2014, Measurement and Application of Charge on Aerosols Using Inline Holographic Particle Tracking Velocimetry
Gabriel Trylesinski*	MS 2014, Vortex Dynamics in Ruptured and Unruptured Intracranial Aneurysms
Jaclyn Alfano*	MS 2011, Identification of Critical Hemodynamic Parameters that Correlate to Bifurcation Sites with High Rates of Intracranial Aneurysm Occurrence
V. C. Madhu	MS 2010, Image-Based CFD Analysis of Intracranial Aneurysms
Jun Zha	MS 2010, Experiments of Particle Dispersion in Isotropic Turbulence Using Hybrid Digital Holographic Imaging System
Shashi Kaluvala	MS 2010, Endothelial Cell Apoptosis at High Wall Shear Stress and Wall Shear Stress Gradient Environment
Sukhjinder Singh*	MS 2009, An In Vitro Flow System to Study Endothelial Cell Response to Positive and Negative Wall shear Stress Gradients
Dayle Hodge	MS 2008, Ex Vivo Model for Studying Vascular Remodeling
Sujan Dhar*	MS 2008, Rupture Risk Assessment of Human Intracranial Aneurysms: Morphological and Hemodynamic characterization
Michael Szymanski*	MS 2007, Endothelial Cell Layer Subjected to Flow Mimicking the Apex of an Arterial Bifurcation
Andrew Jennings	MS 2007, Blood Flow Measurement from Digital Angiography
Ling Ye	MS 2006, Three-dimensional Measurement of Bubble Growth Using Digital HPIV with Statistical Analysis
Suxian Huang	MS 2005, Four-Dimensional Holographic Microscopy
Yiemeng Hoi*	MS 2003, Correlation of Hemodynamics Forces and Aneurysm Geometry: Results of Computational Fluid Dynamics study
Stephanie Harvey	MS 2003, Transcatheter Delivery of Fibrin Gel for Treatment of Intracranial Aneurysms: An In Vitro Study

Zhijie Wang*	MS 2003, Stenting Effectiveness Assessment on Curved Vessel Aneurysm
Gaelle Campagne	MS 2003, Three-dimensional Measurement of Benchmark Flows Using Digital Holographic Particle Image Velocimetry
Jonathan Dudley	MS 2003, A Biomechanical Study of Intracranial Aneurysm
Amol Mulay	MS 2003, Computational Modeling of Cerebral Aneurysm Hemodynamics: Effect of Stenting
Yixiang Feng*	MS 2003, A Biomechanical Model of Rupture of Intracranial Aneurysms
Dib Mukherjee	MS 2001, Fluid-Phase Characterization in Particle-Laden Isotropic Turbulence
Matthieu Delahaye	MS 2000, Application of PIV to Studying Particulate Flows
Weiwei Jia*	MS 1999, Development of PIV for Large Area Air Flow Measurement
Mike Richardson	MS 1999, PIV Measurements of Interaction of Air Motion and the Human Body in Confined Spaces
Vishal Khosla	MS 1999, Flow Visualization Study of High Efficiency Vortab Mixer
Jian Sheng*	MS 1998, Development of Data Processing Systems, Algorithms, and Application for PIV and Holographic PIV
Ye Pu*	MS 1998, An Advanced Holographic PIV System
Wei Jin	MS 1998, Laser Doppler Velocimetry Calibration of a Water Tunnel
Wenming Yang*	MS 1997, A Study of Coherent Structures in the Wake of a Passive Mixing Tab Using Particle Image Velocimetry

GRANTS RECEIVED (TOTAL $22,353,733)

Project Title, Funding Agency, Period, Collaborators	*Amount*
Qualcomm University Innovation Center for Research in Medical Imaging and Sensing Technology, Qualcomm Inc., 09/01/2022-08/31-2025, PI: Jun Xia, **Co-I: H. Meng**	$990,000
Virtual Intervention of Intracranial Aneurysms, National Institutes of Health/National Institute of Neurological Disorder and Stroke (R01 NS091075), 04/01/2015 – 03/31/2022, **PI: H. Meng**	$1,696,730
Acquisition of High Performance Data and Computing Infrastructure to Advance Biomedical Research, National Institutes of Health (1S10OD024973-01A1), 07/01/2019 – 06/30/2020, PI: T. Furlani, **Co-I: H. Meng** et al.	$1,000,000
MRI: Acquisition of a High-Speed 3D Velocimetry System to Study Complex Flows, NSF (CBET-1828544), 09/01/2018– 08/31/2020, PI: M. Ringuette, **Co-PI: H. Meng**, S.J. Bennett, F. Atkinson	$413,082
UB CAT: Development of Whole Blood RNA Expression-Based Assay for Detecting Unruptured Brain Aneurysms, Neurovascular Diagnostics Inc., 9/30/2019-3/31/2020	$44,150
UB Center for Advanced Technology in Big Data and Health Sciences, NYS Department of Economic Development, PI: N. Nowak, **Co-PIs: H. Meng** et al.	$43,250
Image-based CFD Analysis Tools: Clinical Utility and Virtual Intervention, Canon (Toshiba) Medical System, 11/1/2015-10/31/2020, **PI: H. Meng**	$334,000

Biomarkers for Ischemic Stroke Origin, Clinical and Translational Science Institute (CTSI) Translational Pilot Program, UB, 4/1/2018-3/31/2019, PI: A. Siddiqui, **Co-PIs: H. Meng**, V. Tutino	$50,000
UB CAT: Blood-Based Biomarkers for Cerebral Aneurysms, UB Center for Advanced Technology (UB CAT), 01/01/2018-06/30/2018, **PI: H. Meng**	$58,300
Development of Blood-Based Biomarkers for Brain Aneurysm Detection, The Brain Aneurysm Foundation, 10/01/2014-9/30/2017, **PI: H. Meng**	$107,100
AView: A Bedside Simulation Tool for Neurovascular Intervention, National Institutes of Health/National Institute of Neurological Disorder and Stroke (1R03NS090193-01A1), 09/01/2015 – 08/31/2017, **PI: H. Meng**, Co-I: A. Siddiqui.	$157,318
Development of Virtual Expansion of Enterprise Stent in Cerebral Aneurysms, Zhongbei Tianyi Science and Technology, 11/01/2013-5/31/2014, **PI: H. Meng**, Co-I: Adnan Siddiqui	$25,000
Rapid Assessment of Patient-Specific Hemodynamics from Angiographic and CTA Images, Toshiba Medical Systems, 11/01/2009-10/31/2015, **PI: H. Meng,** LN Hopkins	$600,000
Hemodynamic Induction of Pathologic Remodeling Leading to Intracranial Aneurysms, National Institutes of Health/National Institute of Neurological Disorder and Stroke (5R01 NS064592), 02/15/2009- 02/14/2015, **PI: H. Meng**, Co-Is: J. Kolega, D. Swartz, A. Siddiqui	$1,733,595
Collaborative Research: Integrated investigation of inertial particle pair dynamics in turbulence (CBET-0967407), National Science Foundation, 07/15/2010-06/30/2015, **PI: H. Meng** (in collaboration with CBET- 0967349, Lance Collins of Cornell U.)	$203,685
A New Parameter for Prediction of Intracranial Aneurysm Hemodynamics and Risk of Rupture, National Institutes of Health/National Institute of Biomedical Imaging and Bioengineering (1 R03 EB014860-01), 09/01/13-08/31/16, PI: I. Borazjan, **Co-I: H. Meng**	$152,863
Evaluation of Pipeline Embolization Device Using Virtual Deployment in Patient-Specific Aneurysms, Covidien (VTGCC053012-009), 9/1/2012-8/31/2013, **PI: H. Meng**, Co-Is: A. Siddiqui, E. Levy	$90,295
Computing Infrastructure to Advance Biomedical Research, National Institutes of Health /NCRR (1S10RR028863), 06/24/2010-06/23/2011, PI: Thomas Furlani, **Co-Is: H. Meng** et al. (10 total)	$2,566,410
Computational Fluid Dynamics Analysis of Neuro-endovascular Flow Diverters, Micrus Endovascular Corporation, 12/01/09-4/30/10, **PI: H. Meng**	$40,000
Mechanical forces exerted on an ex vivo vascular bifurcation, American Society of Quality, in support of mentoring research by Dayle Hodge, Jennifer Dolan, Jianping Xiang, 04/01/2008-12/31/2010 **PI: H. Meng**,	$26,401
Investigation of Particle Clustering Using 3D Digital Holographic Imaging and Direct Numerical Simulation, NASA (NRA 02 OBPR 03C), 6/2005-9/2009, **PI: H. Meng**	$157,607

Hemodynamic Intervention of Intracranial Aneurysm, NIH/NINDS (5K25 NS047242), 02/01/2004-01/31/2009, **PI: H. Meng**	$766,555
Intracranial Aneurysm Model for Neurointervention, UB2020 Inter-disciplinary Research Development Fund, 02/01/2007-01/31/2008, **PI: H. Meng,** Co-Is: John Kolega, Adnan Siddiqui	$36,500
Radiographic Guidance of New Cerebral Aneurysm Stent, NIH/NINDS (R01 NS043924), 4/15/2004-3/31/2008, PI: Stephen Rudin, Co-I's: **H. Meng**, D. Bednarek, K. Hoffmann, L. N. Hopkins, L. Guterman	$2,589,418
Microradidographic Guidance of Flow Modifying Stents, NIH/NIBIB (R01 EB002873), 09/20/2003-07/31/2008, PI: Stephen Rudin, Co-I's: **H. Meng**, D. Bednarek, K. Hoffmann, L. N. Hopkins, L. Guterman	$3,199,913
Understanding and Characterization of Hemodynamics in Non-stented and Stented Cerebral Aneurysms, National Science Foundation (BES-0302389), 07/01/2003-6/30/2006, **PI: H. Meng**, Co-PI's: Dale Taulbee, L.N. Hopkins	$333,363
Holographic Measurement of Particle-Turbulence Interaction in Isotropic Turbulence, NSF, 12/12/2001-11/30/2004, **PI: H. Meng**	$200,000
Dynamics of Aerosol particles in Stationary, Isotropic Turbulence, NASA Microgravity Fluid Physics Program, 2000-2004. PI: Lance Collins, Co-PI: **H. Meng**	$350,000
New York Environmental Quality Systems Center, NYSTAR, 2002-2003 (Lead Institution: Syracuse University, total funding $15.9M), UB Co-PIs: Bob Baier, **H. Meng**, Lisa Stephan	$1,273,000
Hemodynamics of Cerebral Aneurysms, The Cummings Foundation, 2002-2003, **PI: H. Meng**	$100,000
Hemodynamics Laboratory for Intracranial Aneurysm Study, Western New York Foundation, 2002-2003, **PI: H. Meng**	$100,000
Nonequilibrium Turbulence Study using Holographic PIV, AFOSR (DEPSCoR), 1998-2001, **PI: H. Meng**	$213,000
Industrial Match for CAREER Award, The Dow Chemical Company. 1996-2001, **PI: H. Meng**	$125,000
New Approaches of Holographic Particle Velocimetry for Studying Turbulence, National Science Foundation CAREER Award, 1996-2001, **PI: H. Meng**	$385,000
Non-Contact Diagnostics in Manufacturing: A New Precision Measurement Lab, NSF–EPSCoR, 1998-2000, PI: S. Madanshetty, Co-PIs: **H. Meng** and 4 others	$499,541
CAREER Supplement: Stereo PIV Measurement for Stirred Tank, National Science Foundation, 1998-1999, **PI: H. Meng**	$23,100
Equipment Upgrade for Development of Holographic PIV, National Science Foundation–REG, 1997-1998, **PI: H. Meng**	$98,613
Acquisition of Major Research Equipment (PIV) for Kansas Universities, National Science Foundation –EPSCoR, 1998. PI: M. Hosni, Co-PIs: **H. Meng**, BW Jones	$150,000

Interaction of Air Motion and Human Body in Confined Spaces, ASHRAE, 1997-1999. PI: B. W. Jones, Co-PIs: **H. Meng**, M. Hosni	$97,331
Kansas Program for Complex Fluid Flows, National Science Foundation –EPSCoR: 1997-1998, PI: C. Sorensen, Co-PIs: **H. Meng** and 8 others	$902,000
Development of a Comprehensive Research Initiative in Complex Fluid Flows, KSU, 1996-1998. PI: R. O. Fox, Co-PIs: **H. Meng** and 3 others	$243,200
Non-Contact On-Line Surface Measurement Using OptoStylus, Advanced Manufacturing Institute, 1995-1998, **PI: H. Meng**	$75,000
Holographic Visualization and Velocimetry Techniques for Combustion Studies, AFOSR, 1997. **PI: H. Meng**	$25,000
Development of HPIV for Studying Vortex-Flame Interaction, AFOSR – Summer Faculty, 1996, **PI: H. Meng**	$10,000
New Approaches of Holographic Particle Velocimetry for Studying Turbulence, K*STAR – First Award, 1996. **PI: H. Meng**	$48,313
Investigation of PIV Application in Wright Lab, Chemineer, Inc., Ford Research Laboratory, K*STAR – RSI, 1995-1996, **PI: H. Meng**	$10,500
Development of Holographic Particle Image Velocimetry for Environmental Research, Sloan Foundation, 1995-1996, **PI: H. Meng**	$9,600
TOTAL	$22,353,733

PEER-REVIEWED JOURNAL PUBLICATIONS

Google Scholar: https://scholar.google.com/citations?user=lv6GTSUAAAAJ&hl=en
Web of Science: https://www.webofscience.com/wos/author/record/1254474

Total Peer-Reviewed Journal Publications: 155

Google Scholar: h-Index 60, Total Citation 13,449
Web of Science: h-Index 46, Total Citation 7,783

Journal Articles – Separated into two categories:

A. Turbulence, Particulate Flow, Holography

1. Bragg AD, Hammond AL, Dhariwal R, **Meng H**: Hydrodynamic interactions and extreme particle clustering in turbulence. *J Fluid Mech* (2022) 933:A31. https://doi.org/10.1017/jfm.2021.1099
2. Hammond AL, **Meng H**: Particle Radial Distribution Function and Relative Velocity Measurement in Turbulence at Small Particle-Pair Separations. *J Fluid Mech* (2021) 921:25. https://doi.org/10.1017/jfm.2021.486
3. Hammond AL, Liang Z, **Meng H**: Holographic deflection imaging measurement of electric charge on aerosol particles. *Exp Fluids* (2019) 60:103. http://doi.org/10.1007/s00348-019-2744-z
4. Dou Z, Bragg AD, Hammond AL, Liang Z, Collins L, **Meng H**: Effects of Reynolds Number and Stokes Number on Particle-pair Relative Velocity in Isotropic Turbulence: A Systematic Experimental Study, *J Fluid Mech* (2018) 839: 271–292. http://doi.org/10.1017/jfm.2017.813

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