MADHAVAN L. RAGHAVAN, Ph.D.

OFFICE: 1136 SEAMANS CENTER UNIVERSITY OF IOWA IOWA CITY, IA 52242 PH. (319) 335 5704 (OFF) FAX. (319) 335 5631 (OFF) EMAIL: ML-RAGHAVAN@UIOWA.EDU

EDUCATION

- July 1998: Doctor of Philosophy in Bioengineering, University of Pittsburgh, Pittsburgh, PA Major: Cardiovascular Biomechanics
 Ph.D. Dissertation: Mechanical wall stress in human abdominal aortic aneurysm: towards the development of a biomechanical tool to predict aneurysm rupture
- April 1992: Bachelor of Engineering, Coimbatore Institute of Technology, India. Major: Mechanical Engineering Senior Project: Finite element transient thermal analysis of an internal combustion engine

PROFESSIONAL EXPERIENCE

- Aug 2006 Present: Associate Professor, Dept. of Biomedical Engineering, University of Iowa, IA
- Aug 2000– Aug 2006: Assistant Professor, Dept. of Biomedical Engineering, University of Iowa, IA
- Apr 2000 Aug 2000: Research Assistant Professor, Thayer School of Engr, Dartmouth College
- Sep. 1998 April 2000: Post-doctoral fellow, Thayer School of Engineering and Section of Vascular Surgery, Dartmouth College

TEACHING EXPERIENCE (@ University of Iowa)

- Fall 07, 51:050, Biomechanics
- Fall 07, 51:154, Cardiac and Vascular mechanics
- Sp 07, 57:019 Mechanics of Deformable Bodies
- Sp 07, 51:050 Biomechanics: theory and design
- Fall 06, 51:154 Cardiac and Vascular Mechanics
- Sp 06, 51:083, Biomechanical Design
- Fall 05, 51:050, Biomechanics
- Fall 05, 51:154, Cardiac and Vascular mechanics
- Sp 05, 51:030, BME Fundamentals
- Sp 05, 51:254, Advanced Vascular Mechanics
- Sp 05, 51:130, Genetics and Quantitative Physiology
- Fall 04, 51:050, Biomechanics
- Fall 04, 51:154, Cardiac and Vascular mechanics
- Sp 04, 57:010, Dynamics
- Fall 03, 51:154, Cardiac and Vascular Mechanics, New course developed in Fall 2002
- Fall 03, 51:050, Biomechanics, (taught 1/3rd of this course)
- Sp03, 51:091, Professional Seminar
- Sp 03, 51:155, Cardiovascular Biomechanics
- Sp 03, 57:010, Dynamics
- Fall 02, 51:154, Cardiac and Vascular Mechanics, New course developed in Fall 2002

{Updated Dec 2007}

- Fall 02, 51:050, Biomechanics, (taught 1/3rd of this course)
- Sp02, 51:091, Professional Seminar
- Sp 02, 51:155, Cardiovascular Biomechanics
- Sp 02, 57:010, Dynamics
- Fall 01, 57:007, Statics
- Fall 01, 51:050, Biomechanics (taught 1/3rd of this course)
- Sp 01, 57:090, BME Fundamentals (taught 2 lectures for this course)
- Sp 01, 51:155, Cardiovascular Biomechanics
- Sp 01, 57:010, Dynamics
- Fall 00, 51:050, Biomechanics (taught 1/4th of this course)

AWARDS

- Basic Science award in neurovascular disease and endovascular therapeutics, American Association of Neurological Surgeons and Cordis Endovascular, 2004 (\$25,000)
- Nominated for the 2005 collegiate teaching award
- Mentor Recognition Award by the University of California San Diego in "recognition of commitment and dedication to mentoring students in their preparation for graduate study", 2005
- Finalist (one of three finalists) and invited speaker, "International Young Investigator Competition", Association for the Advancement of Medical Instrumentation, AAMI Annual meeting, San Jose, June 3-7 2000

PROFESSIONAL SOCIETIES

- Member, Biomedical Engineering Society (BMES), 2001 present
- Member, American Society for Mechanical Engineers (ASME), 2001 present
- Member, American Society of Biomechanics (ASB), 2001 2003

JOURNAL PUBLICATIONS

- Lu J, Zhou X, Raghavan ML, "Inverse method of stress analysis for cerebral aneurysms", Biomech Model Mechanobiol. 2007, in press
- Zhang J, Fletcher JG, Vrtiska TJ, Manduca A, Thompson JL, Raghavan ML, Wentz RJ, McCollough CH, "Large-vessel distensibility measurement with electrocardiographically gated multidetector CT: phantom study and initial experience", Radiology. 2007 Oct;245(1):258-66.
- Lu J, Zhou X, Raghavan ML, "Inverse Elastostatic Stress Analysis in Pre-deformed Biological Structures: Demonstration Using Abdominal Aortic Aneurysms", Journal of Biomechanics, 40(3):693-6, 2007
- Ma, B, Lu J, Harbaugh RE, Raghavan ML, "Nonlinear Anisotropic Stress Analysis of Anatomically Realistic Cerebral Aneurysms", Journal of Biomechanical Engineering, 129(1):88-96, 2007
- Lu J, Zhou X, Raghavan ML, "Computational Method for Inverse Elastostatics in Anisotropic Hyperelastic Solids", Journal for Numerical Methods in Engineering, 69: 1239-61, 2007

- Raghavan, M.L., J. Kratzberg, E.M. Castro de Tolosa, M.M. Hanaoka, P. Walker, and E.S. da Silva, "Regional distribution of wall thickness and failure properties of human abdominal aortic aneurysm", Journal of Biomechanics, 39(16):3010-6, 2006.
- Raghavan ML, Ma B, Fillinger MF, "Non-invasive determination of zero-pressure geometry of arterial aneurysms", Annals of Biomedical Engineering, 34(9):1414-9, 2006
- Raghavan, M.L., M.F. Fillinger, S.P. Marra, B.P. Naegelein, and F.E. Kennedy, "Automated methodology for determination of stress distribution in human abdominal aortic aneurysm", ASME Journal of Biomechanical Engineering, 127(5):868-71, 2005 Oct
- Raghavan ML, Kratzberg JA, Golzarian J., "Introduction to biomechanics related to endovascular repair of abdominal aortic aneurysm", Techniques in Vascular Interventional Radiology, 8(1):50-5, 2005 Mar.
- Raghavan, M.L., B. Ma, and R.E. Harbaugh, "Quantified Aneurysm Shape and Rupture Risk", Journal of Neurosurgery, 102(2): p. 355-62, 2005.
- Kratzberg JL, S. Greifzu, K. Larson, J. Dittman, M. McCormick, M. Keller, M.L. Raghavan, "Fabrication of a patient-specific replica of abdominal aortic aneurysm with realistic compliance and translucency", International Journal of Cardiovascular Medicine, 5(1), 33-38, 2005.
- Ma B, Harbaugh RE, and Raghavan ML, "Three-dimensional Geometric characterization of cerebral aneurysms", Annals of Biomedical Engineering, 3(2): 264-73, 2004 Feb.
- Raghavan ML, Trivedi S, Nagaraj A, McPherson DD, Chandran KB, "Three-Dimensional Finite Element Analysis of Residual Stress in Arteries", Annals of Biomedical Engineering, 3(2): 257-63, 2004 Feb.
- Fillinger MF. Marra SP. Raghavan ML. Kennedy FE, "Prediction of rupture risk in abdominal aortic aneurysm during observation: wall stress versus diameter", Journal of Vascular Surgery. 37(4):724-32, 2003
- Fillinger, MF, Raghavan ML, Marra SP, Cronenwett JL, Kennedy FE, "In Vivo Analysis of Mechanical Wall Stress and AAA Rupture Risk", Journal of Vascular Surgery, 36(3): 589-597, 2002
- Raghavan ML, Vorp DA. Toward a biomechanical tool to evaluate rupture potential of abdominal aortic aneurysm: identification of a finite strain constitutive model and evaluation of its applicability. Journal of Biomechanics. 33(4): 475-82, Apr 2000
- Raghavan ML, Vorp DA, Federle MP, Makaroun MS, Webster MW. Wall stress distribution on three-dimensionally reconstructed models of human abdominal aortic aneurysm. Journal of Vascular Surgery. 31(4): 760-9, Apr 2000
- Sacks MS, Vorp DA, Raghavan ML, Federle MP, Webster MW. In vivo three-dimensional surface geometry of abdominal aortic aneurysms. Annals of Biomedical Engineering. 27(4): 469-79, 1999
- Vorp DA, Raghavan ML, Webster MW. Mechanical wall stress in abdominal aortic aneurysm: influence of diameter and asymmetry. Journal of Vascular Surgery. 27(4): 632-9, Apr 1998
- Raghavan ML, Webster MW, Vorp DA. Ex vivo biomechanical behavior of abdominal aortic aneurysm: assessment using a new mathematical model. Annals of Biomedical Engineering. 24(5): 573-82, 1996
- Vorp DA, Raghavan ML, Muluk SC, Makaroun MS, Steed DL, Shapiro R, Webster MW. Wall strength and stiffness of aneurysmal and nonaneurysmal abdominal aorta. Annals of the New York Academy of Sciences. 800: 274-6, Nov 1996

• Vorp DA, Raghavan ML, Borovetz HS, Greisler HP, Webster MW. Modeling the transmural stress distribution during healing of bioresorbable vascular prostheses. Annals of Biomedical Engineering. 23(2): 178-88, 1995

CONFERENCE PRESENTATIONS AND ABSTRACTS

- Trivedi S, Golzarian J, and Raghavan ML, "Study of the effect of type-II endoleak following endovascular repair of aortic aneurysm", 2006 Annual Meeting, Biomedical Engineering Society, Chicago, 2006
- Kratzberg JA, Raghavan ML, "Modification Of Endovascular Graft Parameters To Decrease The Incidence Of Distal Graft Migration", 2006 Annual Meeting, Biomedical Engineering Society, Chicago, 2006
- J Zhang, J G Fletcher, M Raghavan, P A Araoz, T J Vrtiska, C H McCollough, "Validation of Vessel Distensibility Measurement Using ECG-gated MDCT", Radiological Society of North America's 91st Scientific Assembly and Annual Meeting, Chicago, Illinois, Abtsract ID 4419084, November 27 – December 2, 2005
- Madhavan L Raghavan, Jarin A Kratzberg, Roshni Parikh, Setu Trivedi, "Role Of Interaction Between Elastin And Collagen In Arterial Elasticity", ASME Summer Bioengineering Conference, 2005 Jun
- Jia Lu, Xianlian Zhou, Madhavan L Raghavan, Wenyi Hou, Weixuan Yang, "Prediction Of Aneurysm Stress Based On Deformed Geometry Using Inverse Finite Element Formulation", ASME Summer Bioengineering Conference, 2005 Jun
- Steven P Marra, Madhavan L Raghavan, David R Whittaker, Mark F Fillinger, David T Chen, Jeffrey M Dwyer, Michael J Tsapakos, Francis E Kennedy, "Estimation Of The Zero-Pressure Geometry Of Abdominal Aortic Aneurysms From Dynamic Magnetic Resonance Imaging", ASME Summer Bioengineering Conference, 2005 Jun
- Jia Lu, Xianlian Zhou and Madhavan L. Raghavan, "Stress analysis in biological structures based on deformed configuration", US National Congress on Computational Mechanics, Bioengineering Symposium, 2005
- Raghavan ML, Kratzberg J, da Silva ES: Heterogeneous, variable wall-thickness modeling of a ruptured abdominal aortc aneurysm, in 2004 ASME International Mechanical Engineering Congress and Exposition. Anaheim, CA, 2004, Vol BED-60018
- Ma B, Harbaugh RE, Lu J, and Raghavan ML, "Modeling the geometry, hemodynamics and tissue mechanics of cerebral aneurysms", Proc. of IMECE: 2004 ASME International Mechanical Engineering Congress and Exposition, Advances in Bioengineering, 2004 Nov.
- Kratzberg JA, Walker PA, Rikkers E, Trivedi S, Parikh R, Raghavan ML, "The effect of proteolytic enzymatic treatment on plastic deformation of porcine aortic tissue", Proc. of IMECE: 2004 ASME International Mechanical Engineering Congress and Exposition, Advances in Bioengineering, 2004 Nov.
- Lu J, Peterson T, and Raghavan ML, "Computational modeling of finite volumetric growth in blood vessels", 41st Annual Technical Meeting of the Society of Engineering Science, Lincoln, NE, 2004 Oct

- Raghavan ML, Ma B, Lu J, "Orthotropic modeling of arbitrarily shaped arterial structures: choosing material fiber directions", 41st Annual Technical Meeting of the Society of Engineering Science, Lincoln, NE, 2004 Oct
- Raghavan ML, Kratzberg JA, Trivedi S, Parikh R, Lu J, "Passive mechanical plasticity of porcine aorta", Annual fall meeting, Biomedical Engineering Society, Philadelphia, PA, 2004 Oct
- Ma B, Harbaugh RE, and Raghavan ML, "Identification of Hemodynamic Indices for Cerebral Aneurysms", Annual fall meeting, Biomedical Engineering Society, Philadelphia, PA, 2004 Oct
- Kratzberg JA, Raghavan ML, Mauro, da Silva ES, "Comparison of Mechanical Properties of the Infrarenal vs Suprarenal Human Aorta", Annual fall meeting, Biomedical Engineering Society, Philadelphia, PA, 2004 Oct
- Raghavan ML, Kratzberg JL, da Silva ES, "Heterogeneous, variable wall-thickness modeling of a ruptured abdominal aortc aneurysm", Proc. of IMECE: 2004 ASME International Mechanical Engineering Congress and Exposition, Advances in Bioengineering, 2004 Nov.
- Ma B, Harbaugh RE, Lu J, and Raghavan ML, "Modeling the geometry, hemodynamics and tissue mechanics of cerebral aneurysms", Proc. of IMECE: 2004 ASME International Mechanical Engineering Congress and Exposition, Advances in Bioengineering, 2004 Nov.
- Kratzberg JA, Walker PA, Rikkers E, Trivedi S, Parikh R, Raghavan ML, "The effect of proteolytic enzymatic treatment on plastic deformation of porcine aortic tissue", Proc. of IMECE: 2004 ASME International Mechanical Engineering Congress and Exposition, Advances in Bioengineering, 2004 Nov.
- Lu J, Raghavan ML, "Fully 3D continuum and computational formulations for stress-modulated soft tissue growth", US National Congress on Computational Mechanics, Bioengineering Symposium, Albequerque, NM, 2003
- Raghavan ML, Trivedi S, Nagaraj A, McPherson DD, and Chandran KB, "Three-dimensional Finite Element Analysis of Residual Stress distribution in Arteries", US National Congress on Computational Mechanics, Bioengineering Symposium, Albequerque, NM, 2003 Sep Symposium Organizer
- Raghavan ML, Kratzberg JL, and da Silva ES, "Comprehensive study of a ruptured abdominal aortic aneurysm", Annual Meeting of the Southern Biomedical Engineering Society, Charlotte, NC, 2003 Oct Symposium Organizer
- Raghavan ML, Ma B, Kennedy FE, and Harbaugh R, "Cerebral aneurysm shape may be a better predictor than size", Annual Meeting of the American Association of Neurological Surgeons, San Diego, CA, 2003 April.
- Raghavan ML, Ikeda MH, da Silva ES, "Failure strength of abdominal aortic aneurysm: a necropsy study", Proc. of ASME International Mechanical Engineering Congress and Exposition, Advances in Bioengineering, BED-Vol. 53, 2002 Nov.
- Raghavan ML, Ma B, Fillinger MF, Kennedy FE, da Silva ES," Determination of the zero-pressure configuration of cardiovascular structures from in-vivo configuration", Proc. of the 2nd Joint Conference of EMBS and BMES, 1327-1328, 2002 Oct.
- Kratzberg JL, S. Greifzu, K. Larson, J. Dittman, M. McCormick, M. Keller, M.L. Raghavan, "Fabrication of a patient-specific compliant, translucent, synthetic abdominal aortic aneurysm model with thrombus", 21st Southern Biomedical Engineering Conference, Washington DC, Sep 2002

- Raghavan ML, Kratzberg J, da Silva ES, "Experimental investigation of the role of thrombus on the pressure-strain relationship in human abdominal aortic aneurysm", Proc. of the IV World Congress of Biomechanics, Calgary, Alberta, 2002 Aug
- Fillinger MF, Marra SP, Raghavan ML, Kennedy FE, "In Vivo Wall Stress Analysis and Observation of Abdominal Aortic Aneurysms", Proc. of 56th Annual Meeting of Society of Vascular Surgery and the 50th Annual Meeting of the American Association for Vascular Surgery, Boston, MA, 2002 June.
- Raghavan ML., Fillinger MF, Marra SP, Kennedy FE, "An automated methodology for investigating the correlation between abdominal aortic aneurysm wall stress and risk of rupture", Proc. of ASME International Mechanical Engineering Congress and Exposition, New York, NY, BED-Vol. 51:23119, 2001
- Raghavan ML, Naegelein BP, Fillinger MF, Pieper SD, Kennedy FE, "A finite element mesh improvement algorithm for stress analysis of human abdominal aortic aneurysms". Trans. of the 3rd Symposium on Trends in Unstructured Mesh Generation, 6th U. S. National Congress on Computational Mechanics, pp 307, 2001
- Fillinger M.F., M.L. Raghavan, S.M. Marra, F.E. Kennedy. "The correlation of mechanical stress to rupture of aortic aneurysm". Proc. of 56th Annual Meeting of the Society for Vascular Surgery and the 49th Annual Meeting of the American Association for Vascular Surgery, Baltimore, MD, Jun 2001
- Raghavan, ML., F.E. Kennedy, S.D. Pieper, M.F. Fillinger. "Mechanical stress is indicative of risk of rupture of an abdominal aortic aneurysm", 2000 Annual Meeting, Association for the advancement of Medical Instrumentation, San Jose, CA, Jun 2000 (also received the International Young Investigator finalist recognition)
- Purighalla, V.S., M. L. Raghavan, R. E. Harbaugh. Evaluation of the Aspect Ratio of Cerebral Aneurysms as a Predictor of Rupture. 2000 Annual Meeting, American Association of Neuro Surgeons, San Francisco, CA, April 2000.
- Raghavan, M.L., D.A. Vorp, M.P. Federle, M.S. Makaroun, M.W. Webster. Mechanical Wall Stresses on Three-Dimensionally Reconstructed Models of Abdominal Aortic Aneurysm, Annual fall meeting, Biomedical Engineering Society, Atlanta, GA, Oct. 1999.
- Raghavan, M.L., M.P. Federle, D.A. M.W. Webster, D.A. Vorp. Non-invasive estimation of wall stress distribution in abdominal aortic aneurysm. Bioengineering Symposium, American Society of Mechanical Engineers, Anaheim, CA, Nov. 1998.
- David A. Vorp, M.L. Raghavan, Marshall W. Webster. Finite element analysis of the effect of diameter and asymmetry on the wall stress distribution in abdominal aortic aneurysm. Annual meeting, American Society of Mechanical Engineers, Sun River, OR, June 1997
- M.S. Sacks, D.A. Vorp, M.L. Raghavan, M.P. Federle and M.W. Webster. A non-invasive surface geometric analysis of in-vivo abdominal aortic aneurysms. Annual meeting, American Society of Mechanical Engineers, Sun River, OR, June 1997
- D.A. Vorp, M.L. Raghavan, K.R. Rajagopal, M.W. Webster. A nonlinear hyperelastic constitutive model for abdominal aortic aneurysm. Annual fall meeting, Biomedical Engineering Society, Oct. 1996.
- M.L. Raghavan, M.W. Webster, D.L. Steed, M.S. Makaroun, S.C. Muluk, R. Shapiro, D.A. Vorp. Ex-vivo mechanical properties of normal and aneurysmal abdominal aorta. Annual fall meeting, Biomedical Engineering Society, College Park, PA, Oct. 1995.

- David. A. Vorp, M.L. Raghavan, Donald A. Severyn, Simon C. Watkins, David L. Steed, Michel S. Makaroun and Marshall W. Webster. Wall strength and stiffness of dilated and undilated abdominal aortic aneurysms. 47th annual meeting, The Society for Vascular Surgery, June 1994.
- D.A. Vorp, M.L. Raghavan, H.S. Borovetz, M.W. Webster and H.P. Greisler. Compressive wall stresses may affect healing of bioresorbable vascular prostheses. 40th anniversary meeting, American Society of Artificial Internal Organs, April 1994.
- David A. Vorp, K.R. Rajagopal, M.L. Raghavan, M.W. Webster. Application of a microstructural damage theory to model arterial aneurysm formation. Annual fall meeting, Biomedical Engineering Society, 1993.
- David. A. Vorp, M.L. Raghavan, Harvey S. Borovetz, Marshall W. Webster and Howard P. Greisler. Mechanical modeling of bioresorbable vascular prostheses. 206th National meeting, American Chemical Society, Aug. 1993.

GRANTS RECIEVED

- Principal Investigator, NIH, "Assessment of intracranial aneurysm shape as an indicator of rupture risk", Aug 2007 Aug 2012.
- Principal Investigator, NIH, "Study of design variables of endovascular graft", Jan 2007 Dec 2008.
- Co-investigator, Industry, "Testing of ultrasonic heart valves", Mar 2006 Aug 2006, \$15,000
- Principal Investigator, Industry, "Flow loop testing of prosthetic heart valves", June 2005 Aug 2005
- Principal Investigator, Industry, "Venogram contrast injection", Jan 2005 July 2005
- Principal Investigator, Failure strength distribution of abdominal aortic aneurysm, American Heart Association, July 2003 June 2005
- Principal Investigator, Graduate Student Summer Support, Year-end funds form graduate college, May – July 2003
- Principal Investigator, Understanding the mechanisms of aneurysm growth, Collaborative Interdisciplinary Proposal, Office of VPR, University of Iowa, Jan 1, 2003 Dec 31, 2003
- Principal Investigator, Cost-sharing towards purchase of a uniaxial extension testing machine for cardiovascular Lab, Discretionary funds from the Office of the Vice President for research, May 24, 2001
- Principal Investigator, Cost-sharing towards purchase of a uniaxial extension testing machine for cardiovascular Lab, BME Indirect Cost Recovery Fund, April 24, 2001
- Principal Investigator, Autopsy studies on the biomechanical properties of abdominal aortic aneurysm, NSF, Jul 01 Dec 01
- Co-Investigator (PI on subcontract), Role of biomechanics in abdominal aortic aneurysm growth and rupture, NIH, Oct 00-Aug 02 (Project PI: Fillinger)
- Principal Investigator, Evaluation of a biomechanical approach to predicting the rupture of abdominal aortic aneurysm, Hitchcock Foundation, Jul 99-Jun00

ADVISORY AND SUPERVISORY EXPERIENCE

- Ph.D. candidates (advisor)
 - Fall 00 Sp04, Baoshun Ma, Curvature distribution in cerebral aneurysm, Graduated Dec 2004
 - Fall 02 present, Jarin Kratzberg, Modeling aneurysm hetrogeneity, Research Assistant,

Anticipated completion in Aug 2006

- Ph.D. candidates (dissertation committee member)
 - 2003 2005, Gregory John Gerling, July 2005, Fingertip microstructures and tactile edge sensation, Defended Dissertation in July 2005
 - 2004-2005, Sushmita Bhattacharjya, May 2005, Investigation of the Influence of Curing Time and Temperature on the Properties of Acrylate Tablet Coating Systems, College of Pharmacy student. Defended Dissertation May 2005
 - 2004-2005, Maria Reus Medina, May 2005, Preparation, Characterization, and Tableting Properties of Cellulose II Powders, College of Pharmacy student. Defended Dissertation May 2005
 - Fall 2002 present, Hyungunn Kim, Dynamic FEA of bioprosthetic valves with nonlinear membrane and bending material properties, Comprehensive exam defended in Fall 2004
 - 2003 present, Sarah Vigmostad, Hemodynamics and wall thickness in relation to localized geometric changes in the coronary arteries,
 - Fall 2002 present, Karen Reed, Thermal finite element analysis of osteocyte kill zones achieved with a cryo-insult probe, Comprehensive exam on Oct 24, 2002. Dissertation defended in Aug 2003
 - Fall 2001 present, Sharan Ramaswamy, Three and four dimensional hemodynamics in human coronary artery segments, Comprehensive exam on 11/6/2001. Dissertation defended in Spring 2003.
 - Fall 2000 Present, Yutong Liu, Fluid Dynamic and Mass Transport Analysis on the Development and Growth of Atheroma in Large Arteries, Comprehensive exam on 3/6/2001. Dissertation defended in Spring 2002.
 - Spring 2001 present, Christina Beardsley, High density polyetherurethane foam as a fragmentation and radiographic surrogate for cortical bone, Comprehensive exam on 5/22/2001. Dissertation defended in Spring 2002
 - Fall 2000 Fall 2001, Jason K. Otto, Nov 26, 2001, Mobile bearing total knee replacements, Dissertation defended on Nov 26, 2001.
- M.S. candidates (advisor)
 - Spring 2004 present, Setu Trivedi, Vascular biomechanics, Expected graduation in Aug 2005
 - Fall 01 present, Karsten Temme, Neural networks models for Cryopreservation, B.S./M.S. Fast-track student, (secondary research advisor). Graduated Dec 2003.
 - Spring 01 present, Patricia Walker, Development of inivitro aneurysm, Research Assistant, Completed Aug 2002
- B.S. candidates (research advisor)
 - Jun 2005 Aug 2005, Lisandra Colon, Compliance and strength of arteries, Summer research opportunity internship award
 - Oct 2004 present, Ephraim I Ben-Abraham, Compliance test apparatus design
 - Fall 2004 present, Lisa Dorado, CAD modeling of brain aneurysms, IBA diversity scholarship
 - Fall 03 present, Roshni Parikh, Vascular plasticity
 - Spring 02- present, Setu Trivedi, Residual stress in arteries
 - Spring 02 Fall 03, Chiraag Dharia, Histochemical quantification of arteries,
 - Fall 02 Spring 03, Frank Bohnenkamp, Experimental evaluation of aneurysm sounds, Senior design project

- Fall 02 Spring 03, Bradford Conlan, Experimental evaluation of aneurysm sounds, Senior design project
- Fall 02 Spring 03, Jessica Keil, Experimental evaluation of aneurysm sounds, Senior design project
- Spring 2001 Fall 02, Elizabeth Rikkers, Aneurysm Biomechanics research, mechanical testing and programming,
- Fall 01 Spring 02, Kristina Larson, Senior design project: Fabrication of a synthetic replica of thrombus filled aneurysm prototype,
- Summer 01 Spring 02, Scott Greifzu, Senior design project: Fabrication of a synthetic replica of thrombus filled aneurysm prototype,
- Fall 00 Fall 01, Brooke Hingtgen, Thermal stress in cryopreserved tissues,
- Fall 00 Spring 01, Jay A. Dittman, Michael J. Keller, Mathew P. McCormick, Senior Design Project: Fabrication of realistic deformable synthetic aneurysm models, 2nd prize, Senior Design Project competition, May 2001