

2007 Summer Bioengineering Conference Student Paper Awards

B.S. Level Competition

Category	Place	Award Winner	Title	Institution
Biofluids, Imaging, & Cellular Biomechanics	1	Robert Metter	Enhanced Cellular Infiltration with Removal of Sacrificial Fibers from a Dual-Polymer Nanofibrous Scaffold	U of Pennsylvania
	2	Andrea Tan	Electrospinning of Photopolymerizable Poly(β -amino ester) Networks for Fibrous Tissue Engineering	U of Pennsylvania
	3	Adam Bernstein	Evaluation of Hemodynamic Efficiency in a New 'Y-Graft' Design for the Fontan Operation	Stanford U
	HM	Benjamin Cooper	A Fluid Dynamics Study Within the Penn State 12 CC Pulsatile Pediatric Ventricular Assist Device: A Comparison of Mechanical Heart Valve Types	Pennsylvania State U
	HM	Sayan Mondal	A New Hypothesis for Human Atherosclerotic Plaque Progression Based on Serial In Vivo MRI and Computational Modeling Method	Worcester Polytechnic Inst
Solids, Design, & Rehabilitation	1	Abigail Eldridge	Increased Biocompatibility of Common MEMS Substrates with Solution Phase Coupled Poly(ethylene glycol) Films	Cleveland Clinic Foundation
	2	Corrine Adams	Development of a Computational Model to Study effects of Rotator Cuff Tear Size and Location on Muscle Moment Arms	U of Denver
	3	Jenny Finkbiner	Fabrication and Properties of Collagen Fibers with Increased Surface Areas for Enhanced Fiber-Matrix Interactions	Rose-Hulman Inst of Technology
	HM	Benjamin Pruden	Measurement of Acoustic Emission Wave Attenuation by Bones and Muscles	Purdue U
	HM	Alvin Yew	Thermal Therapy Protocols for Benign Prostatic Hyperplasia	U of Maryland - College Park

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M.S. Level Competition

Category	Place	Award Winner	Title	Institution
Solids, Design, & Rehabilitation	1	Ingrid Fjeld	Knee Joint Motion Quantified Using the Finite Helical Axis Method	U of Calgary
	2	Justin Fisk	Validation of a Computational Musculoskeletal Model of the Elbow	Virginia Commonwealth U
	3	Shruti Pai	Characterization of the In Vivo Forces on the Sternum in Pigs	Worcester Polytechnic Inst
	HM	Jessica Kupper	A Novel Measure of In-Vivo Knee Joint Laxity	U of Calgary
	HM	Craig Goergen	Nonuniform Circumferential Deformation of the Abdominal Aorta: A Cross-Species Comparison	Stanford U
Tissue Engineering & Cellular Biomechanics	1	Karla Wyatt	Deformation-Dependant Enzyme Cleavage of Collagen	City College of New York
	2T	Kirsten Kinneberg	Combined Effects of Glycosaminoglycan and Mechanical Stimulation on the In Vitro Biomechanics of Tissue Engineered Tendon Constructs	U of Cincinnati
	2T	Brendon Baker	Autologous Human Fibrochondrocytes from Meniscectomy are a Potent Cell Source for Meniscus Tissue Engineering	U of Pennsylvania
	HM	Paul Dungal	Two Methods of Determining [3H]Dexamethasone Distribution in Rat Subcutaneous Tissue	U of South Florida
	HM	Sevan Oungoulian	Extended Two Compartmental Swelling Stress Models and Isotropic Cauchy Stress Equation for Articular Cartilage Proteoglycans	California Polytechnic State U - San Luis Obispo
Biofluids & Imaging	1	Bradford Smith	Airway Reopening: The Pulsatile Propagation of a Finger of Air Through a Cylindrical Tube	Tulane U
	2	Benjamin Filas	Surface Strains in the Looping Embryonic Chick Heart Measured Using Optical Coherence Tomography	Washington U - St. Louis
	3	Ga Young Suh	Quantification of Three-Dimensional Motion of the Renal Arteries Using Image-Based Modeling Technique	Stanford U
	HM	Helen Lentzakis	Biaxial Testing of the Human Pericardium: A Comparative Study of Fixed and Fresh Tissue	McGill U
	HM	David Bark	CFD Model of Dynamic Thrombus Growth With and Without Shear Rate Dependant Deposition	Georgia Inst of Technology

2007 Summer Bioengineering Conference Student Paper Awards

Doctoral Level Competition - Podium

Category	Place	Award Winner	Title	Institution
Biofluids & Imaging	1	Nanfeng Sun	Numerical Stimulation of Blood-Wall Albumin in a Realistic Human Right Coronary Artery	Imperial College of Science, Technology and Medicine, U of London
	2	Alex Barker	Use of Cardiac Phase-Contrast MRI to Examine Hemodynamics and Wall Deformation within the Aortic Root for Patients with Bicuspid Aortic Valves	U of Colorado - Boulder
	3	Gilwoo Choi	Methods for Quantifying Vessel Deformation Due To Pulsatile and Non-pulsatile Forces	Stanford U
	HM	Chantal van den Broek	Culture Medium with Blood Analog Mechanical Properties	Eindhoven U of Technology
	HM	Vernella Vickerman Kelley	Microfluidics Bioreactor: a Platform for Studying Capillary Morphogenesis in Response to Biochemical and Biophysical Cues	Massachusetts Inst of Technology
Solids, Design, & Rehabilitation	1	Bruce Wu	Consequences of Long-Term Cyclic Indentation on Initially Intact Cartilage	Massachusetts Inst of Technology
	2	Justin Deuerling	Specimen-Specific Multiscale Model for the Anisotropic Elastic Properties of Human Cortical bone Tissue	U of Notre Dame
	3	Gregory Fomovsky	Evolution of Scar Mechanical Properties During Myocardial Infarct Healing in Rat	Columbia U
	HM	Ling Dong	Dynamic Distraction of the Cervical Facet Joint Produces Higher Mechanical Allodynia than Quasistatic: Implications of Displacement Thresholds for Pain in Whiplash Loading	U of Pennsylvania
	HM	Eran Linder-Ganz	The Effects of Pressure and Shear on Capillary Closure in the Microstructure of Skeletal Muscles: Computational Studies	Tel-Aviv U
	HM	Jason Maikos	In Vivo Tissue-Level Thresholds for Spinal Cord Injury	Rutgers U
Tissue and Cellular Biomechanics & Imaging	1	Christopher Wilson	Chondrocytes and Fibrochondrocytes Differentially Process Aggrecan During De Novo Extracellular Matrix Assembly	Georgia Inst of Technology
	2	Niamh Nowlan	Mechanical Stimuli Resulting from Embryonic Muscle Contractions Promote Avian Periosteal Bone Collar Formation	U of Dublin, Trinity College
	3	Roman Natoli	Ameliorating Glycosaminoglycan (GAG) Loss and Cell Death in Articular Cartilage Following Single-Impact Loading	Rice U
	HM	Lachlan Smith	The Roles of Elastic Fibres and Glycosaminoglycans in the Radial Tensile Mechanics of the Human Lumbar Anulus Fibrosus	Inst of Medical and Veterinary Science
	HM	Rebecca Long	Strain Induced Bladder Smooth Muscle Remodeling	U of Pittsburgh
	HM	Harini Sundararaghavan	Directing Neurite Growth in 3D Collagen Scaffolds with Gradients of Mechanical Properties	Rutgers U

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Doctoral Level Competition - Poster

Category	Place	Award Winner	Title	Institution
Biofluids & Imaging	1	Yun Liang	Measurement of Coronary Artery Wall Strain In Situ Using IVUS	Duke U
	2	Matthew Ford	Geometry Anticipates Hemodynamic Phenotype of Basilar Tip Aneurysms	Robarts Research Inst
	3	Leonie Rouleau	Effects of Steady Spatial Wall Shear Stress Gradients on Endothelial Cell Morphology in Three-Dimensional Models	McGill U
	HM	Chander Sadasivan	Treatment of Cerebral Aneurysms with Flow Diverters: Long term Results in an In Vivo Model	U of Miami
	HM	Andrea Les	Hemodynamic in Human Abdominal Aortic Aneurysms During Rest and Stimulated Exercises	Stanford U
Solids, Design, & Rehabilitation	1	Kristin Myers	The Anisotropy and Tension/Compression Behavior of Human Cervical Tissue	Massachusetts Inst of Technology
	2	Oluseeni Komolafe	Nonlinear Elastic Behavior of Achilles Tendon at the Fascicle Scale	Drexel U
	3	Rachel Clipp	Toward Determining a Dynamic Independence Boundary Condition	North Carolina State U
	HM	Matthew Landrigan	Systematic Error in the Measure and Microdamage by Modulus Degradation During Four-Point Bending Fatigue	U of Notre Dame
	HM	Jeremy Suggs	In-Vivo Tibiofemoral Contact Stress in the Knee after TKA	Massachusetts Inst of Technology
	HM	Suzanne Ferreri	Improved Prediction of Local Trabecular Strain Enhances Non-Invasive Assessment of Micro Bone Strength using a Surface Smoothing Technique in Fea	State U of New York - Stony Brook
Tissue Engineering & Cellular Biomechanics	1	Najmuddin Gunja	Effects of Hydrostatic Pressure on Meniscus Cell-Seeded PLLA Scaffolds	Rice U
	2	Christopher Revell	Defined Medium for the Self-Assembling Process: Enhancing Functionality of Tissue Engineered Articular Cartilage	U of California - Davis
	3	Evren Azeloglu	The Role of Proteoglycans on Residual Stress on the Aorta	Columbia U
	HM	Paul Briant	Quantifying Variations in Collagen Matrix Deformation in Loaded Articular Cartilage	Stanford U
	HM	Eric Lima	Influence of Interleukin Treatment on Engineered and Native Articular Cartilage	Columbia U