2009 Summer Bioengineering Conference Student Paper Awards

B.S. Level Competition

Category	Place	Award Winner	Title	Institution
Biotransport, Tissue Engineering, & Cellular Biomechanics	1	Ashwin Nathan	Cytoskeletal Control of Mesenchymal Stem Cell Nuclear Deformation on Nanofibrous Scaffolds	U of Pennsylvania
	2	Victoria Yeh	A Longitudinal Study of Migration Forces on a Patient-Specific Abdominal Aortic Endograft Model	Stanford U
	3	Timothy Gundert	Visualization of CFD Results in a Virtual Reality Environment	Marquette U
	HM	Hyun Kyu Han	Microdialysis Technique for Quantifying Drug Concentration in Human Intervertebral Discs	U of California - San Francisco
	HM	Carmen Zirlott	Surface Temperature Response to Millimeter Wave Exposure as an Indicator of Skin Blood Flow	U of South Alabama
Solids, Design, & Rehabilitiation	1	Justin Scheer	Optimal Fusion Configuration Following C2 Corpectomy	U of California - San Francisco
	2	Susan Mischinski	The Effect of Cement Line Properties and Crack Orientation on Crack Propagation in Cortical Bone	Villanova U
	3T	Kiersten Craig	Force at Damage and Failure Decreases with Age in the Human Cadaveric Facet Capsular Ligament During Tension	U pf Pennsylvania
	HM	Alexander Christakis	Comparison of Cortical and Cancellous Screws for Sternal Fixation	Worcester Polytechnic Inst
	HM	Douglas Doud	An Experimental Study of Metallic Transfer on Ceramic Femoral Heads	Mercer U

2009 Summer Bioengineering Conference Student Paper Awards

M.S. Level Competition

Category	Place	Award Winner	Title	Institution
Solids, Design, & Rehabilitiation	1	Louis DiBerardino	Quantifying Complexity and Variability of Gait Phase Portraits	U of Illinois - Urbana Champaign
	2	Michael Rehorn	Finite Element Modeling Of The Biceps Femoris Muscl	U of Virginia
	3	Lindsey Westover	Quantification Of In Vivo Knee Joint Laxity	U of Calgary
	HM	Yasha Dwivedi	Protein State Affects Wear Of UHMWPE	Rush U Medical Center
	HM	Mark Komosa	Analysis of Natural Knee Rollback Using Lowest Point Method	U of Kansas
Biomechanics and Engineering of Cells and Tissues	1	Abdul Sheikh	Electromagnetic Field Mediates Capillary-Like Network Formation Via MAPK/ERK Signaling Cascade	U of Cincinnati
	2	Lara Ionescu	A Composite Microsphere/Nanofiber Controlled Release System for Fibrous Tissue Engineering	U of Pennsylvania
	3	Michael Dishowitz	Strength Retention Of A New Microbial Cellulose Scaffold And Existing Collagen-Based Scaffolds After In Vivo Implantation in a Rabbit Model	U of Pennsylvania
	HM	Steven Kemeny	High Glucose Alters Endothelial Cell Response to Shear Stress	Drexel U
	HM	Sanket Patel	Characterization of Isolated Urethral Smooth Muscle Cells and Their Incorporation Into A Tissue Engineered Urethral Wrap	U of Pittsburgh
Biotransport, Imaging, & Others	1	Ronan Finn	Deformation During And Post Stenting Of A Diseased Coronary Artery Phantom: An In Vitro Study	Galway-Mayo Inst Technology
	2	Andrew Baik	A Semi-3D Real-Time Imaging Technique for Measuring Bone Cell Deformation Under Fluid Flow	Columbia U
	3	Stacey Lynn Meadley	Multiphoton Microscopy of Healthy and Aneurismal Human Ascending Aorta	McGill U
	HM	Jeremy Skorinko	Short Term Cardiac Memory Results in Altered Regional Mechanical Function	Worcester Polytechnic Inst
	HM	Bin Hu	The Effect Of Surface Tension On The Epithelial Spreading Of Non-Newtonian Drug Delivery Vehicles: Numerical Simulations	U of Kansas

2009 Summer Bioengineering Conference Student Paper Awards

Doctoral Level Competition - Podium

Category	Place	Award Winner	Title	Institution
Biofluids and Heat Transport	1	Nick Willett	Redox Signaling in an In Vivo Murine Model of Tailored Wall Shear Stress	Georgia Inst of Technology
	2	Michael Albro	Direct Validation of Active Solute Transport Induced by Dynamic Loading of Porous Hydrated Media	Columbia U
	3	Ga-Young Suh	Hemodynamics in Abdominal Aortic Aneurysms at Rest and Graded Levels of Exercise	Stanford U
	HM	Guanglei Xiong	Simulation of Blood Flow in Deformable Arteries using Subject-Specific Geometry andVariable Vessel Wall Properties	Stanford U
	HM	Juan Mejia	Transient & Non-Newtonian Effects on the Wall Shear Stress Distribution of a Stented Artery	McGill U
	HM	Michael Early	Why are Rates of Restenosis Higher in Peripheral Arteries Than Coronary Arteries? A Computational Study	Trinity College - Dublin
Solids, Design, & Rehabilitation	1	Kartik Varardarajan	Changes In Tibiofemoral Joint Space Following Total Knee Arthroplasty During Weight-Bearing Knee Motion	Massachusetts Inst of Technology
	2	Louis Ferreira	Motion-Derived Joint Coordinate Systems Reduce Inter-Subject Variability of Elbow Flexion Kinematics	U of Western Ontario
	3	Arthur Michalek	Measurement of Local Strains in Intervertebral Disc Anulus Fibrosus Tissue Under Dynamic Shear: Contributions of Matrix Fiber Orientation and Elastin Content	U of Vermont
	HM	Darwesh Kaderbatcha	Correlation Between The Nano-Structure And The Macro-Mechanics Of The Human Intervertebral Discs	U of Hong Kong
	HM	Ali Kiapour	Posterior Total Joint Replacement, A Novel Alternative to Lumbar Anterior Disc Arthroplasty: A Computational and In Vitro Study	U of Toledo
	HM	Thibaut Prevost	Large Strain Behavior Of Brain Tissue: Mechanical Testing And Preliminary Modeling	Massachusetts Inst of Technology
Tissue and Cellular Biomechanics & Imaging	1	Gregory Fomovsky	Collagen Fiber Structure Correlates With Mechanical Environment In Healing Myocardial Infact	Columbia U
	2	Suzanne Ferreri	Dynamic Mechanical Signals Delivered by Ultrasound Generate Site Specific Mediation of Bone Loss	State U of New York - Stony Brook
	3	Cindy Chung	Tailoring The Crosslinking And Degradation Of Hyaluronic Acid Hydrogels to Enhance Neocartilage Formation by Mesenchymal Stem Cells	U of Pennsylvania
	HM	Nandan Nerurkar	Mesenchymal Stem Cell Seeded Nanofibrous Laminates Mimic the Multi-scale Form and Function of the Annulus Fibrosus	U of Pennsylvania
	HM	Vittoria Flamini	An Anisotropic Structural Model Of The Aortic Wall Based On Tensile Tests And Non-Invasive 3D Fibre Analysis Using Diffusion Tensor Imaging	Dublin City U
	HM	Jennifer Hurley	Endothelial-Fibroblast Interactions In Angiogenesis And Matrix Remodeling	U of Cincinnati

2009 Summer Bioengineering Conference Student Paper Awards

Doctoral Level Competition - Poster

Category	Place	Award Winner	Title	Institution
Biofluids & Biotransport	1	Rouzbeh Amini	The Effect Of The Posterior Location Of The Dilator On The Iris Concavity	U of Minnesota
	2	Dina Halwani	Corrosion of Metallic Endovascular Stents and Analyses of Wear Debris in Tissues	U of Alabama - Birmingham
	3	Andrea Les	Volumetric Flow At The Supraceliac And Infrarenal Levels In Patients With Abdominal Aortic Aneurysm: Waveforms And Allometric Scaling Relationships	Stanford U
	HM	Ryan Spilker	Tuning a Multiscale Model of Abdominal Aortic Hemodynamics to Incorporate Patient-Specific Features of Flow and Pressure Waveforms	Stanford U
	HM	Marco Cantini	CFD-Aided Design Of A Dynamic Culture System for the Co-Culture Of Adherent and Non-Adherent Cells	Instituto Politecnico di Milano
Solids, Design, & Rehabilitation	1	Amitkumar Mane	Identifying The Effects Of Knee Anatomy Variation On The Envelope Of Knee Motion (Varus-Valgus) Using Principal Components	U of Kansas
	2	Meghan McGee-Lawrence	Grizzly Bears (Ursus Arctos Horribilis) And Black Bears (Ursus Americanus) Prevent Trabecular Bone Loss During Disuse (Hibernation)	Michigan Technological U
	3	Choon Hwai Yap	Structural Deformation of Native Aortic Valve Leaflet Under Hypertension: an In Vitro Study	Georgia Inst of Technology
	HM	Katherine Steele	Crouch Gait Represents A Simplified Muscular Support Strategy During Single-Limb Stance Compared to Unimpaired Gait	Stanford U
	HM	Megan Killian	Traumatic Anterior Cruciate Ligament Tear and its Implications on Meniscal Degradation: A Preliminary Novel Lapine Osteoarthritis Model	Michigan Technological U
Tissue and Cellular Biomechanics & Imaging	1	Ryan Koppes	Passive Mechanical Analysis of Engineered Myotube Fibers	Rensellaer Polytechnic Inst
	2	Jonathan Bourne	Collagen Molecular Conformation Exhibits Strain-Rate Dependent Response To Axial Deformation In Silico	Cornell U
	3	Craig Goergen	Correlation Between Aortic Motion and Vessel Bulging in a Murine Aneurysm Model Using Small Animal Magnetic Resonance Imaging	Stanford U
	HM	Subhashish Dasgupta	Determination Of Lesion Size As Function Of HIFU Sonication Time Using MRI Monitored HIFU Ablations	U of Cincinnati
	HM	Sameer Kalghatgi	Non-Thermal Atmospheric Pressure Dielectric Barrier Discharge Plasma Enhances Endothelial Cell Proliferation Via Fibroblast Growth Factor-2 Release	Drexel U