To find the full text for a USF thesis or dissertation, please visit the **USF Library Theses and Dissertations page**. This will allow you to search the Scholar Commons @ USF and USF Library Catalog. As of 2004 theses and dissertations are available to download electronically. Prior to 2004, they are only available in hard copy at the USF Library. Please note: It can take up to a year for the USF Library to post the manuscript for download.

Archived Doctoral Dissertations **Spring 1995 – Fall 2014**

Fall 2014

Pseudo-Rigid-Body Models for Approximating Spatial Compliant Mechanisms of Rectangular Cross Section
STUDENT: Ramirez, Issa
ADVISOR(S): Lusk, Craig

Thermal Assessment of a Latent-Heat Energy Storage Module During Melting and Freezing for Solar Energy
STUDENT: Ramos Archibold, Antonio
ADVISOR(S): Rahman, Muhammad / Goswami, Yogi

Summer 2014

Analysis and Application of Passive Gait Rehabilitation Methods
STUDENT: Handzic, Ismet
ADVISOR(S): Reed, Kyle

Spring 2014

A 3-D Pseudo-Rigid-Body Model for Rectangular Cantilever Beams with an Arbitrary Force End-Load
STUDENT: Chimento, Jairo
ADVISOR(S): Lusk, Craig

Fall 2013

Development of Nanostructured Graphene/Conducting Polymer Composite Materials for Supercapacitor Applications
STUDENT: Basnayaka, Punya
ADVISOR(S): Kumar, Ashok / Stefanakos, E.K.

Human Intention Recognition Based Assisted Telerobotic Grasping of Objects in an Unstructured Environment
STUDENT: Khokar, Karan
ADVISOR(S): Dubey, Rajiv

Summer 2013

An Acoustic-based Microfluidic Platform for Active Separation and Mixing

STUDENT: Jo, Myeong Chan
ADVISOR(S): Guldiken, Rasim

Continuous Electrowetting in Passivating and Non-passivating Systems
STUDENT: Khodayari, Mehdi
ADVISOR(S): Crane, Nathan / Volinsky, Alex

Spring 2013
Hydrogen Storage in Hypercrosslinked Polystyrene and Li-Mg-N-H Complex Hydride
STUDENT: Demirocak, Dervis
ADVISOR(S): Kumar, Ashok / Stefanakos, E.K.

Analytical and Numerical Modeling of Assembly Procedures of Steel Fulcra of Bascule Bridges
STUDENT: Garapati, Sri Harsha
ADVISOR(S): Dubey, Rajiv / Kaw, Autar

Analytical Modeling, Perturbation Analysis and Experimental Characterization of Guided Surface Acoustic Wave Sensors
STUDENT: Onen, Onursal
ADVISOR(S): Guldiken, Rasim

Spring 2012
The Creation of a Robotics Based Human Upper Body Model for Predictive Simulation of Prostheses Performance
STUDENT: Lura, Derek
ADVISOR(S): Dubey, Rajiv

Fall 2011
Regulation of Cell Adhesion Strength by Spatial Organization of Focal Adhesions
STUDENT: Elineni, Kranthi Kumar
ADVISOR(S): Gallant, Nathan

Interface Engineered Diamond Coatings for Dry Machining Applications
STUDENT: Gomez, Humberto
ADVISOR(S): Kumar, Ashok

Thermophysical Characterization of Nanofluids through Molecular Dynamic Simulations
STUDENT: Shelton, John
ADVISOR(S): Pyrtle, Frank III

Summer 2011
Theoretical and Experimental Analysis of Power and Cooling Cogeneration Utilizing Low Temperature Heat Sources
STUDENT: Demirkaya, Gokmen
ADVISOR(S): Goswami, D. Yogi

Spring 2011
Thermo-Mechanical Beam Element for Analyzing Stresses in Functionally Graded Materials
STUDENT: Caraballo, Simon
ADVISOR(S): Kaw, Autar

Diamond Based-Materials: Synthesis, Characterization and Applications
STUDENT: Hu, Qiang
ADVISOR(S): Kumar, Ashok

Fall 2010
Consumable Process Development for Chemical Mechanical Planarization of Bit Patterned Media for Magnetic Storage Fabrication
STUDENT: Bonivel, Joseph
ADVISOR(S): Kumar, Ashok

Summer 2010
Functional Nanomaterials with an Electrochemistry-Based Approach to Sensing and Energy Applications
STUDENT: Weber, Jessica
ADVISOR(S): Kumar, Ashok

Summer 2009
Development and Investigation of Novel Nanostructures and Complex Hydrides for Hydrogen Storage
STUDENT: Niemann, Michael Ulrich
ADVISOR(S): Kumar, Ashok / Stefanakos, E.K.

Spring 2009
Numerical Heat Transfer During Partially-confined, Confined, and Free Liquid Jet Impingement with Rotation and Chemical Mechanical Planarization Process Modeling
STUDENT: Lallave-Cortes, Jorge
ADVISOR(S): Kumar, Ashok / Rahman, Muhammad

Fall 2008
Design and Implementation of a Hard Real-Time Telerobotic Control System Using Sensor-Based Assist Functions
STUDENT: Veras-Jorge, Eduardo
ADVISOR(S): Dubey, Rajiv

Summer 2008
Stress Analysis and Mechanical Characterization of Thin Films for Microelectronics and MEMS Applications
STUDENT: Waters, Patrick
ADVISOR(S): Volinsky, Alex

Spring 2008
The Study of Compensatory Motions While Using a Transradial Prosthesis
STUDENT: Carey, Stephanie
ADVISOR(S): Dubey, Rajiv

Fall 2007
Numerical Modeling and Simulation for Analysis of Convective Heat and Mass Transfer in Cryogenic Liquid Storage and HVAC&R Applications
STUDENT: Ho, Son
ADVISOR(S): Rahman, Muhammad

Process Optimization and Consumable Development for Chemical Mechanical Planarization (CMP) Processes
STUDENT: Mudhivarthi, Subrahmanya
ADVISOR(S): Kumar, Ashok

Summer 2007
Synthesis, Characterization, and Applications of CVD Micro- and Nanocrystalline Diamond Thin Films
STUDENT: Xu, Zhenqing
ADVISOR(S): Kumar, Ashok

Synthesis and Characterization of Interfaces Between Naturally Derived and Synthetic Nanostructures for Biomedical Applications
STUDENT: Zekri, Souheil
ADVISOR(S): Kumar, Ashok

Spring 2007
Maximizing Manipulation Capabilities of Persons With Disabilities Using a Smart 9-Degree-of-Freedom Wheelchair-Mounted Robotic Arm System
STUDENT: Alqasemi, Redwan
ADVISOR(S): Dubey, Rajiv

Summer 2006
Analysis of Conjugate Heat Transfer in Tube-in-Block Heat Exchangers for Some Engineering Applications
STUDENT: Gari, Abdullatif
ADVISOR(S): Rahman, Muhammad

Summer 2005
Processing, Reliability and Integration Issues In Chemical Mechanical Planarization
STUDENT: Zantye, Parshuram
ADVISOR(S): Kumar, Ashok

Fall 2004
Intelligent Telerobotic Assistance for Enhancing Manipulation Capabilities of Persons with Disabilities
STUDENT: Yu, Wentao
ADVISOR(S): Dubey, Rajiv

Fall 2002
Effect of Dimensional Conformance of Threaded Product on Yield and Tensile Strength
STUDENT: Leon, Fransisco
ADVISOR(S): Hess, Daniel

Summer 2002
Vibration Induced Loosening of Threaded Fasteners: Mechanisms, Modeling and Design Guidelines
STUDENT: Pai, Niranjan
ADVISOR(S): Hess, Daniel

Spring 2002
Analysis of a Thermal Contact Conductance Experiment
STUDENT: Hook, Randolph
ADVISOR(S): Crane, Roger

A Numerical and Experimental Investigation of Direct Acting, Differential Area Relief Valves
STUDENT: Pennington II, Robert E.
ADVISOR(S): Porteiro, Jose

Summer 1998
Fastener Dynamics: Optimum Placement, Effect of Thread Dimensional Comformance, and Threadlocker Life
STUDENT: Dong, Yubo
ADVISOR(S): Hess, Daniel

Summer 1995
A Simplified Experimental Model to Simulate and Air Conditioner
STUDENT: Rasario, Luis
ADVISOR(S):