

**Materials Science and Engineering
Capstone Design Project Reports
Friday, May 1, 2009**

**Oral Presentations: 8:00 AM – 1:00 PM
Institute of Materials Science, Room 20**

**Poster Presentations: 1:00 PM – 2:00 PM
Institute of Materials Science, Outside Room 159**

- 8:00 AM** **Topic: Primary Gamma Prime Dissolution Kinetics in Powder-Processed Inconel 100**
Student: Daniel Gynther
Sponsor: Pratt & Whitney
Industry Advisor: Dr. Agnieszka Wusatowska- Sarnek
Faculty Advisor: Prof. Mark Aindow
- 8:25 AM** **Topic: Design Rule for Strength & Modulus with Fiber Orientation**
Students: Brian Gardner and Matthew Kuba
Sponsor: Hamilton Sundstrand
Industry Advisors: Noah Toth, Blair Smith
Faculty Advisor: Prof. Puxian Gao
- 8:50 AM** **Topic: Design and Implement Wear Test
for Dynamically Loaded Component**
Students: Stephanie Gagliardi and Melissa Jacques
Sponsor: Hamilton Sundstrand
Industry Advisors:
Tim Boysen, Kevin Rankin, Blair Smith, & Glen Grandischer
Faculty Advisor: Profs. George Rossetti and Thomas Barber (ME)
- 9:15 AM** **Topic: Specify Allowable Contamination on Adhesive Surface**
Students: Gregory Santone and Alex Williams
Sponsor: Sikorsky Aircraft
Industry Advisor: John Csonka and Daniel Ursenbach

Faculty Advisor: Prof. Bryan Huey

- 9:40 AM** **Topic: Process Design to Reduce Cracking Sensitivity
of Laser Cut Heat Treatable Al-alloys**
Students: Keith Grayeb and Richard Gursky
Sponsor: Sikorsky Aircraft, with Support by CCAT & Trumpf
Industry Advisors: Dr. Michael Urban and Paul Denney
Faculty Advisor: Prof. Harris Marcus
- 10:05 AM** **Topic: The Impacts of Beam Quality on the Metallurgical
Characteristics of Percussion Drilled Holes**
Students: Salay Stannard
Sponsor: Connecticut Center for Advanced Technology
Industry Advisor: Paul Denney
Faculty Advisor: Prof. Harris Marcus
- 10:30 AM** **Topic: Duplex Stainless Steel Welding Electrode Procedures**
Students: Jason Brown and Robert Scalise
Sponsor: General Dynamics-Electric Boat
Industry Advisors: Neil Fichtelberg, Robert Peirce, and Jeff Hall
Faculty Advisor: Prof. Harold Brody
- 10:55 AM** **Topic: The Effects of HIPing on Recycled
A356-T6 Alloys with Iron-rich Particles**
Students: Anthony Tenaglier and Nathan Dew
Sponsor: Bodycote International
Industry Advisor: Dr. Stephan Mashl
Faculty Advisor: Prof. Harold Brody
- 11:20 PM** **Topic: Design Rule Development for High Strength
Investment Cast Heat Treated Aluminum Alloys**
Students: James Bosse and Julie Mackey
Sponsor: Integra-Cast, Inc.
Industry Advisor: David Arcesi
Faculty Advisor: Prof. Harold Brody
- 11:45 PM** **Topic: Optimization and Selection of Stainless Steel
for Elevator Applications**
Students: Sarah Winiarz
Sponsor: Otis Elevator

Industry Advisor: Mark Thompson
Faculty Advisors: Profs. Barry Carter and Alevtina Smirnova

**12:10 PM Topic: Design of a Characterization Protocol for
 Carbon-based Fuel Cell Catalyst Supports**

Students: Adam Wentworth
Sponsor: United Technologies Power
Industry Advisors: T.T. Cheng-Aindow
Faculty Advisor: Prof. Mark Aindow

12:35 PM Topic: Design of a Recrystallization Process for Niobium

Students: Timothy Kazienko
Sponsor: Ulbrich Steel
Industry Advisor: William Keenan
Faculty Advisor: Prof. Rainer Hebert

1:00 PM Posters, Lunch, Judging
Institute of Materials Science, Room 159 & Hallway

2:00 PM Announcement of Awards by the Judging Panel
Judges: Dr. Thomas Cameron, Ultimate NiTi Technologies, Inc.
Dennis Norwich, Memry Corporation
Dr. Donald Potter, Professor Emeritus, MSE