

**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: Develop Process Parameters for Laser Hole Drilling in Superalloy Sheet

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. Chen-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