

Center For Space Engineering

Industry Day
February 28, 2006

Utah Center for Advanced Satellite Manufacturing
Utah Center for Advanced Imaging LADAR
Space Instrumentation Laboratory

Thank You!

- Third annual Industry Day
- Corporate affiliates (sponsoring today)
 - The Aerospace Corporation
 - The Space Dynamics Laboratory
- Students and their faculty mentors
- Lisa Cole and Sonya Warner

Center for Space Engineering

- The Center for Space Engineering is a multi-disciplinary group of faculty who are principal investigators of space programs and have ties to the Space Dynamics Laboratory.
- The Center for Space Engineering promotes basic research and technology development involving faculty, students and professionals.
- <http://cse.usu.edu/>

Affiliated Personnel

- **Faculty Investigators**

- **Dr. Charles Swenson**
Associate Professor Electrical and Computer
- **Dr. Robert Pack**
Research Professor
Civil and Environmental
- **Dr. Brent Stucker**
Assistant Professor
Mechanical and Aerospace.
- **Dr. Rees Fullmer**
Associate Professor
Mechanical and Aerospace
- **Dr. Scott Budge**
Associate Professor
Electrical and Computer

- **Dr. Stephen Whitmore**
Assistant Professor
Mechanical and Aerospace
- **Dr. David Geller**
Assistant Professor
Mechanical and Aerospace
- **Mr. Paul Israelson**
Research Professor
Electrical and Computer
- **Dr. Randy Jost**
Assistant Professor
Electrical and Computer
- **Dr. Todd Moon**
Professor
Electrical and Computer

- **Support Staff**

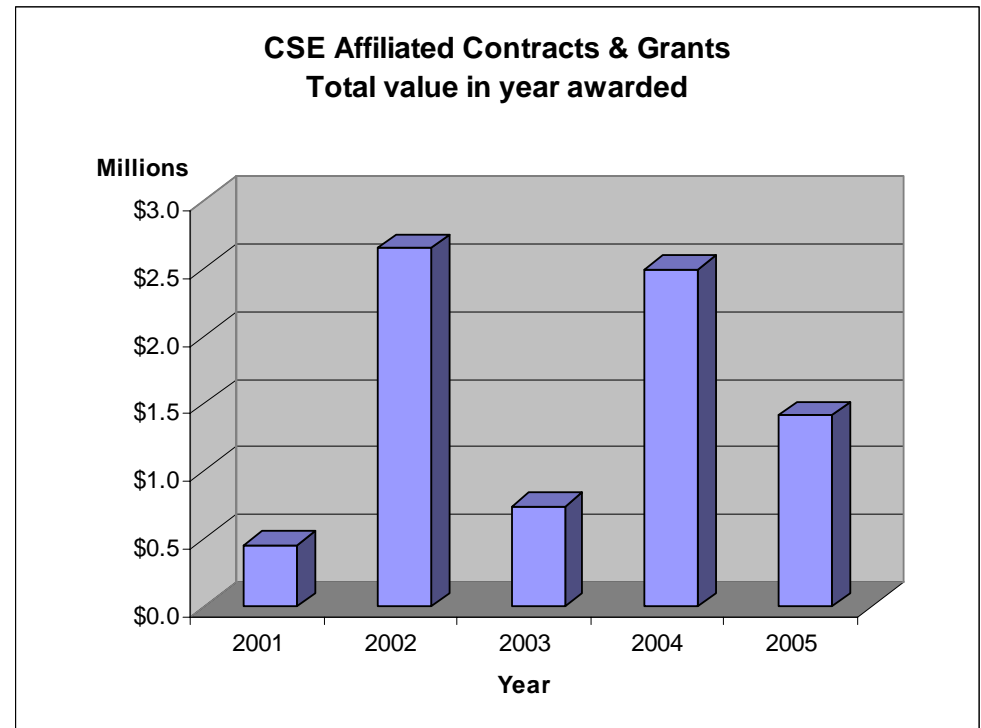
- **Lisa Cole**, Accountant

Research Centers and Labs

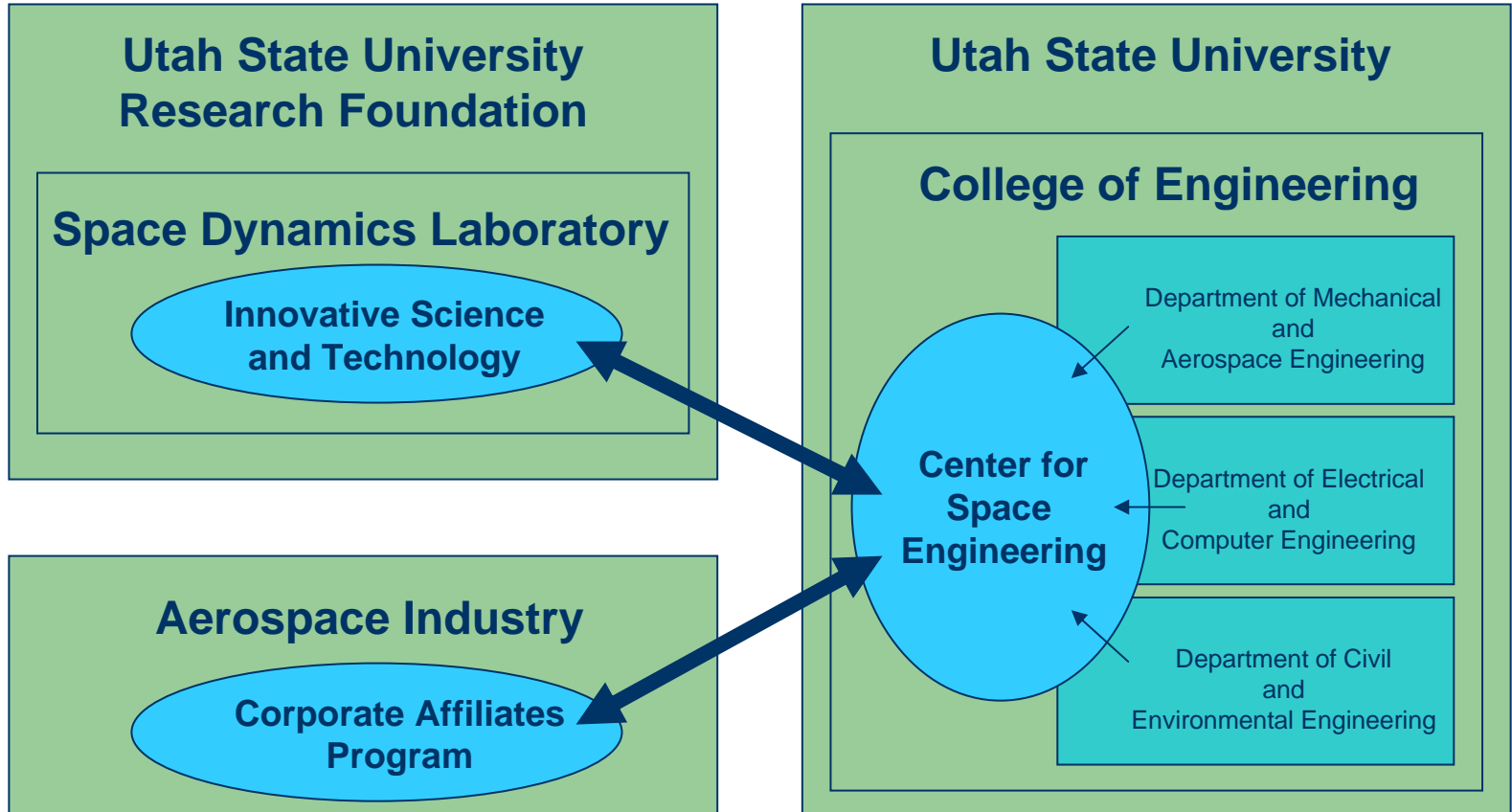
- **CAIL**
Center for Advanced Imaging LADAR
- CASM
Center for Advanced Satellite Manufacturing
- SIL
Space Instrumentation Laboratory

CSE Metrics

- \$1.5M/Year in funding
- ~8 PhD Students
- ~30 MS Students



Relationships



Corporate Affiliates Program

- Actively facilitate access to students
 - Resume CD
 - Industry give technical presentations in specific classes.
 - Support Interviews for full-time positions or co-op and internship opportunities.
- Invitation to Industry Day
 - Graduating Students
 - Current Research
- A Faculty liaison expert in field of interest to affiliate
 - Opportunities for sponsored-research
 - Other collaborations may evolve.

Corporate Affiliates Program

- Membership Levels
 - Sustaining, \$25,000
 - Associate, \$10,000
 - Entry, \$5,000

Agenda

Industry Day

2006

Pre-Lunch Schedule

- 9:30 AM *Formal Methods for Spacecraft Systems Engineering*, **Allan McInnes**
- 9:50 *Modular Spacecraft Design*, **Quinn Young**
- 10:10 *Additive Manufacturing for Spacecraft*, Josh George and Chris Robinson
- 10:30 *Structurally Embedded Thermal and Electrical Systems for spacecraft*,
Jared Clemets and **Erik Siggard**
- 10:50 Break
- 11:10 *The Utah State University TOROID Small Satellite*, **Matt Carney**
- 11:30 *The Utah State University Chimaera Hybrid Rocket*, **David Omer**
- 11:50 *Direct Entry Aero Breaking and Lifting Aero Capture*,
Ben Anderson and **Patrick Jolley**
- 12:10 PM Lunch / Poster Viewing

After Lunch Schedule

- 1:40 PM *Autonomous Optical Navigation at Jupiter*, **Nathan Stastney**
- 2:00 *Orbital Rendezvous Navigation Studies*, **David Woffinden**
- 2:20 *LIDAR Assisted Rendezvous and Docking*, **Ron Fenton**
- 2:40 *Simulation of an Integrated LIDAR Imaging System*, **Brad Leishman**
- 3:00 Break
- 3:20 *Prototype of a 3D Imaging System, the Texel Camera*, **Kylee Sealy**
- 3:40 *Instrumentation for Tomographic Studies of the Ionosphere*,
John Salmon
- 4:00 *Use of Interferometric SAR for Remote Sensing*, **Avinash Uppuluri**
- 4:20 Closing Remarks and Reception, Dr. Charles Swenson
- 5:50 Conclude

Introduction

Questions?