



CATS Annual Dinner and Technology Showcase

John Wen, Director, Professor in ECSE and MANE

Program:

- Brief summary of state of the CATS
- Dinner speaker: Edward Reinfurt, Executive Director of NYSTAR

Rensselaer



CATS is a NYSTAR-Designated Center for Advanced Technology



CATS IAB Members

- Alex Cable, founder and President of **Thorlabs**
- Andy Cohn, Director of Program Management and Technical Support, **Anorad**
- Dr. Gordon Calundann, CTO, **BASF Fuel Cell**
- John Evans, **Independent Consultant**
- Jeff Lawrence, Executive Vice President, Technology, **Center for Economic Growth (CEG)**
- John M. Papazian, Technical Fellow, **Northrop Grumman**
- Miriam Pye, Senior Project Manager, Industrial Research, **NYSERDA**
- Paul Burton, President, **DynaBil Industries**
- Dan Sexton, Program Manager, **GE Global Research (Acting Chair)**
- Jim Smith, Assistant VP for Economic Development, **Stony Brook University**
- Mark Unrath, Senior Research Engineer, **Electro Scientific Industries**
- Tony Wilson, Director of Quality Systems, **Albany International**

CATS Partner Organizations Here Tonight

- **NYSTAR:** Roland Schmidt (Chairman of Board), Ed Reinfurt (Executive Director), Jim Roberts (Senior Program Manger)
- **NYSERDA:** Gunnar Walmet (Program Director for Industry & Buildings R&D), Dana Levy (Program Manger, Industrial Research), Miriam Pye (Senior Project Manager, Industrial Research)
- **Center for Economic Growth:** Michael Tucker (President & CEO), Jeff Lawrence (Executive Vice President, Technology)
- **CAT in Nanonmaterials and Nanoelectronics (University of Albany):** James Castracane (Director)
- **Center for Electronic Imaging Systems (University of Rochester):** Barry Watkins (Associate Director, Business Development)
- **CAT in Photonics Applications (City University of New York):** Harry Gafney (Director), Alan Doctor (Deputy Director)
- **Computer Applications and Software Engineering (CASE) Center:** Laura Welch (Deputy Director), Roy Welch (Prof. in Biology)
- **Center for Engineered Polymeric Materials (College of Staten Island):** Andrew Auerbach (Business Development Manager)
- **SUNY Stonybrook:** Jim Smith (Assistant VP for Economic Development)
- **Wadsworth Center, NYS DOH:** Richard Cole (Director of Microscopy Core)

CATS Industrial Partners Here Tonight (A-C)

- **Albany International:** Tony Wilson
- **Anorad:** Andy Cohn
- **Applied Robotics:** Clifford Annis
- **Automated Dynamics:** Jim Mondo, David Hauber, Mike Pasanen
- **BASF Fuel Cell:** Gordon Calundann
- **Center Square Consulting:** Ted Eveleth
- **Ceralink:** Shawn Allen
- **Choice Solutions:** Erika Choi
- **Construction Robotics:** Jane & Nate Podkaminer, Scott Peters
- **Creative Logic Entertainment:** David Swift
- **Crystal IS:** Ding Day, Ken Morgan, Stephan Mueller
- **Custom Electronics:** Chad Hall

CATS Industrial Partners Here Tonight (D-M)

- **David Brown Consultant:** David Brown
- **Dynabil Industries:** Paul Burton, Hugh Quigley
- **Ecovative Design:** Eben Bayer
- **Electro Scientific Industries:** Mark Unrath
- **Extreme Molding:** Lynn Momrow, Joanne Moon, Mary Krenceski
- **Halcyon Development:** Jeff DePree
- **Infoscitex:** Gordon Hirschman, Jay Miracle
- **Infotex:** Kristen Roy
- **Interscience:** James Woo, Michelle Simkulet
- **KB Imaging Solutions:** David Biggs
- **KEMA Services:** Angelo Tarantino
- **MPI:** Bruce Phipps

CATS Industrial Partners Here Tonight (N-Z)

- **Next Advance:** Ian Glasgow
- **Northrop Grumman:** John Papazian
- **O'Brien and Gere:** Terry Madden, Chris Campbell
- **Progressive Machine & Design:** Tom Coller, Garry Sperrick
- **Simmons Machine Tool:** David Davis
- **Starfire Systems:** Rich Saburro
- **Ultradian Diagnostics:** John Willis
- **Thorlabs:** Alex Cable
- **Veratag:** John Schneiter
- **Welch Allyn:** Ray Dromms
- **X-Ray Optical Systems:** Jay Burdett

CATS Partners in Rensselaer Here Tonight

- **VP for Research, Acting:** Wolf von Maltzahn
- **Dean of Science:** Wei Zhao
- **Associate Dean of Engineering:** Joe Chow
- **Head of ECSE Dept:** Kim Boyer
- **Chief Information Officer:** John Kolb
- **Vice Provost in Entrepreneurship:** Robert Chernow
- **Executive Director on IP, Tech Transfer, New Venture:** Ron Kudla
- **Office for Technology Commercialization:** Chuck Rancourt, Beth Bornick
- **Corporate Relations:** Veronica Fitzgerald, Serge Mendez
- **Government Relations:** Alison Newman, John MacEnroe
- **Incubator:** Mike Tentnowski, Tammy Cousins
- **Scientific Computation Research Center (SCOREC):** Mark Shephard, Max Bloomfield
- **Multidisciplinary Design Laboratory (MDL):** Mark Steiner, Junichi Kanai, Barry Stein
- **Center for Innovations in Pre-College Education (CIPCE):** Les Rubenfeld, Melissa Hershey

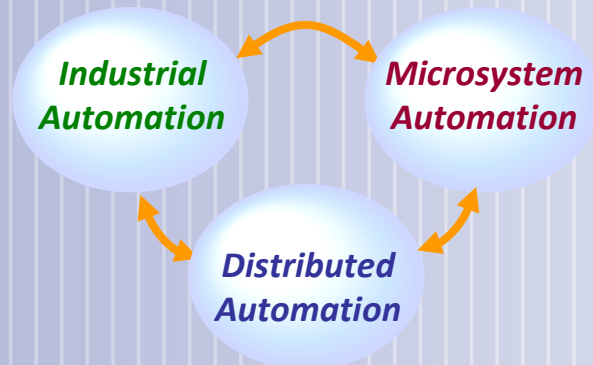
Rensselaer Faculty Here Tonight

- **ECSE:** Kim Boyer, Alhussein Abouzeid, Murat Arcak, Joe Chow, Ken Connor, Rena Huang, Qiang Ji, Junichi Kanai, Russ Kraft, Jong Kyu Kim, James Lu, George Nagy, Badri Roysam, Gary Saulnier, Paul Schoch, Fred Schubert, Jian Sun, Tong Zhang
- **Materials:** Doug Chrisey
- **DSES:** Dan Berg
- **Biomedical:** John Brunski, David Corr, Eric Ledet, Wolf von Maltzahn
- **Chemical & Bio:** Wayne Bequette
- **MANE:** Miki Amitay, Steve Derby, Michael Jensen, Antoinette Maniatty, Yoav Peles, Henry Scarton, Mark Shephard, Mark Steiner, Dan Walczyk
- **Computer Science:** Wei Zhao
- **Math:** Margaret Cheney, Les Rubenfeld

CATS Staff

- Director: John Wen
- Associate Director: Mike Shimazu
- Program Director in Industrial Automation: Ray Puffer
- Research Scientist: Steve Rock
- Research Scientist: Bill Gressick
- Research Engineer: Glenn Saunders
- Research Technician: Kenneth Myer
- Postdoctoral Research Associate: Cong Deng
- Postdoctoral Research Associate: Greg Michna
- Postdoctoral Research Associate: Tiejun Zhang
- Business Analyst: Heidi Merrill
- Administrative Associate: Jeanette Young

Current CATS Projects: Applications



Integrated Modeling, Design & Optimization

Industrial automation:

- NYS: Albany Int., Arcadia Supply, Brown Coach, Ceralink, Construction Robotics, Crystal-IS, Dynabil, Ecovative Design, GE, IBM, Kintz Plastics, MPI, PMD, Simmetrix, Somstech, Welch Allyn
- Non-NYS: BASF Fuel Cell
- Federal: DOE, NSF, ONR
- State: NYSERDA

Microsystem Automation:

- NYS: O'Brien & Gere, Solidus,
- Non-NYS: ESI, Thorlabs
- Federal: NIST

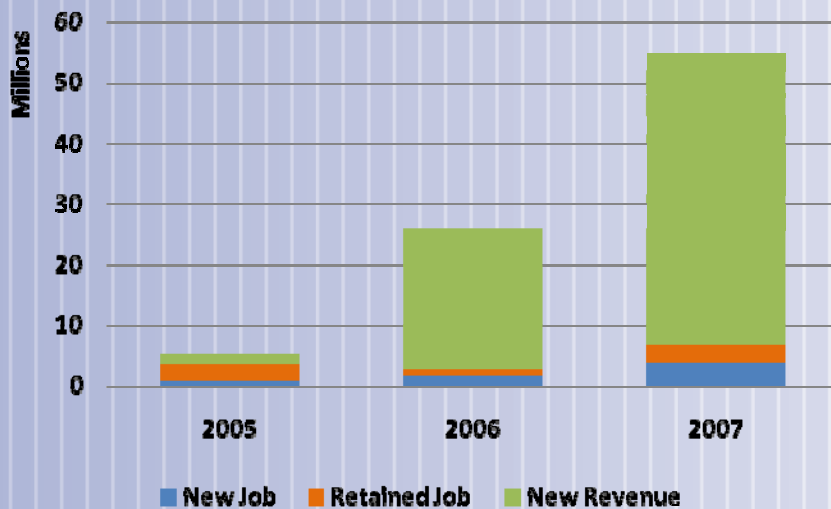
Distributed Automation:

- NYS: Lockheed Martin, Northrop-Grumman, NYISO
- Non-NYS: AEP, PJM, 1st Energy
- Federal: AFOSR, NSF, ONR

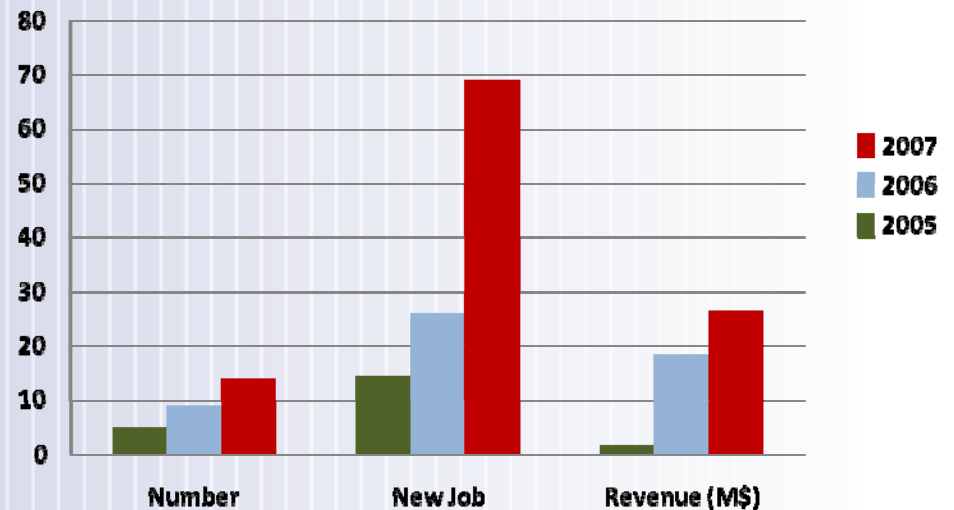
Highlights of Past Year

- **NY State Economic Impact NYSTAR criteria:** # of companies, size of companies (small companies particularly encouraged), revenue generated

CATS Economic Impact 2005-2007



CATS Impact on Small Companies



- **Financial Status:**

- FY 2008 (7/07-6/08): First 3 quarters expenditure \$3M
- FY 2007: expenditure \$2.5M

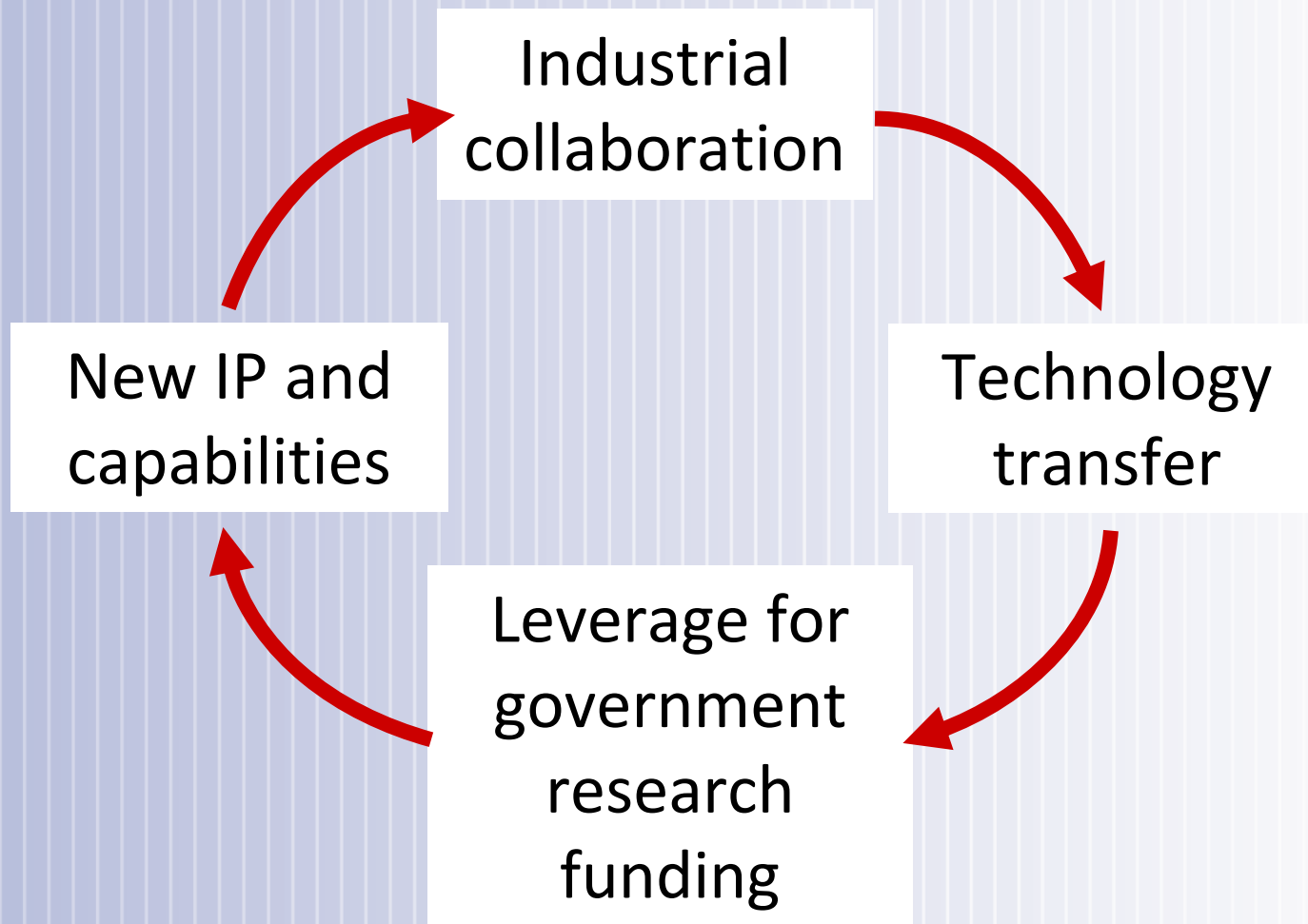
Highlights of Past Year

- **New NYS Company projects** (total budget: \$1.4M)
 - O'Brien & Gere (Huang)
 - Construction Robotics (Rock, Puffer: NYSERDA)
 - Dynabil (Saunders, Puffer, Jensen: NYSERDA)
 - Somstech (Amitay: NYSERDA)
 - Ecovative Design (Saunders: NYSERDA)
 - Northrop Grumman (Amitay, Jansen, Wen, Gressick)
 - IBM (Shephard)
 - Lockheed Martin (Scarton, Saulnier)
 - Welch Allyn (Akella)
 - Albany Police Department (Saunders, Gressick)
 - JD Axis (Saunders)

Highlights of Past Year

- **Other New Funding:**
 - Department of Energy (Puffer, Walczyk, Arcak, ASU, BASF Fuel Cell, PMD, Ultracell, 42 months, 2.5M)
 - Office for Naval Research (Jensen, Peles, Wen, UVA, ASU, UCB, UIUC, 5 yrs, 3.2M for RPI)
 - Air Force Office of Scientific Research (Arcak)
 - National Science Foundation (Arcak)
 - National Science Foundation (Nagy)
 - National Science Foundation (Zhang)
 - National Science Foundation (Akella)
 - National Science Foundation (Akella, Linhardt)
 - National Science Foundation (Akella, Dordick, Linhardt)
 - National Science Foundation (Akella, Busch, Dordick, Linhardt)
 - New York Independent Systems Operators (Chow, Chan)
 - ESI (Wen)
 - Stratasys Corp. (Walczyk)

CATS Model



Edward Reinfurt **Excutive Director, New York State Foundation for Science Technology and Innovation (NYSTAR)**



Mr. Reinfurt is a graduate of the University at Albany of the State University of New York. He was nominated to serve as the Executive Director of NYSTAR on May 7, 2007 and was confirmed by the State Senate on October 22, 2007.

Prior to his appointment at NYSTAR, Mr. Reinfurt served as Vice President of the Business Council of New York State, Inc. The Business Council represents more than 3,000 member businesses, chambers of commerce and professional and trade associations.

While at the Business Council, Mr. Reinfurt spent considerable time on a wide range of public policy issues. In 2000, he assembled working groups that brought together leaders from both the business and academic sectors to help formulate a comprehensive Research University Business Initiative (RUBI).