

# FAA Air Transportation Centers of Excellence

## **COE Overview - Part 2** and **Preview for Tomorrow**

**Government/Academic/Industry**  
**Public/Private Partnerships**

Presented at: **COE UAS Public Meeting**

Presented by: **Patricia Watts**  
FAA Centers of Excellence

Date: **Wednesday, May 28, 2014 (4 PM)**



**Federal Aviation  
Administration**



# Agenda

- **DOT/FAA Grant Authority**
- **COE Funding Levels**
- **COE Competitive Process**
- **Review Agenda Day 2**

~ **Introductions** ~ (continued)



**Secretary of Transportation, Anthony Foxx  
and 2014 RAISE Award Recipient**

# Overview: DOT/FAA Grants Authority

- DOT: 92 Grants Programs ~ **\$60 B** (vs. Contracts \$ 6 B)

## **2 Centers Programs**

- University Transportation Centers (UTCs)
- FAA Centers of Excellence (COEs)

- FAA: Authority for Major Grants Program

1. Airway Science
2. AIP
3. Aviation Research
4. COE – P.L. 101-508 ~ \$500 M / LOE



**Enacted to enhance FAA's access to resources and research capabilities and facilities available at colleges, universities, and other organizations and institutions by establishing COEs on behalf of AOA**

# COE Funding – Levels of Effort

2015 – 2020	Unmanned Aircraft Systems	HQ	TBD
2014 – 2019	Alternative Jet Fuels & Environment (AJF&E)*	HQ	\$ 8M
2012 – 2017	General Aviation Research (PEGASAS)*	TC	\$ 6M
2010 – 2015	Commercial Space Transportation (CST)*	HQ	\$ 11M
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2004 – 2014	Research in the Intermodal Transport Environment (RITE)*	HQ	\$ 45M
2004 – 2015	Advance Materials (JAMS)*	TC	\$ 47M
2003 – 2014	Aircraft Noise and Emissions Mitigation (PARTNER)*	HQ	\$ 112M
2001 – 2013	General Aviation (CGAR)*	TC	\$ 39M
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1997 – 2007	Airworthiness Assurance (AACE)	TC	\$ 124M
1996 – 2007	Operations Research (NEXTOR) <u>Self-Sufficient**</u>	HQ	\$ 45M
1995 – 2013	Airport Technology (CEAT) <u>Self-Sufficient**</u>	TC	\$ 42M
1992 – 1996	Computational Modeling of Aircraft Structures (CMAS)	TC	\$ <u>10M</u>
		Total.....	\$ ~500 M

\* Operational = 7

\*\* Graduated = 2



# COE Competitive Process - Schedule

## 2014 Activity Schedule

- **FAA Pre-solicitation – with FAA Administrator Concurrence**
  - Define FAA Needs
  - Identify Sponsor & FAA COE UAS Program Manager
  - Public Meeting – registration open through May 22
  
- **FAA Draft Solicitation – Coordinate & Issue May 21**
  - Conduct Public Meeting----- May 28 - 29
  - Period of Public Comment – closes-----July 9
  - Coordinate & Publish Final Solicitation -----August
  
- **University Teams Submit Proposals to COE Program Office ----- Sept 15**
  - Conduct Technical Evaluation – NJ----- Oct
  - Conduct Management/Fiscal Review – NJ----- Nov
  - Prepare Executive Summary for FAA Administrator----- Dec
  
- **Administrator Selects & Announces w DOT Secretary-----Nov/Dec**
  - Coordinate w Government Affairs, Public Affairs, OST/AOA staff-----~Jan/Feb
  
- **Funding - FAA and other sponsors**
  - COE Program Office executes Cooperative Agreements ----- ~Feb 2015
  - COE Program Office issues Grants to support 'new' proposals / tasks-- ----- July
  - ACQ issues Contract ----- 2016



# COE UAS – Agenda Day 2

- \* Review Draft Solicitation
- \* Discuss Current COE Structures
- \* Open Discussion
- \* Wrap Up



*~ Planning for the Future ~*



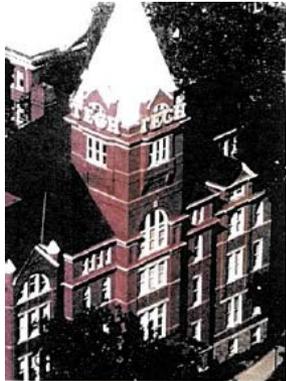
# Q+A



## *The Challenges of Serious Heavy Lifting*



Scott Pipkins, Ph.D., George Donohue, Ph.D., Bruce Singer, Virginia Sham  
Satya Atluri, Ph.D., Patricia Watts, Ph.D., Chris Seher



# COE Mission

- **Enhance** access to university research capabilities and products by awarding single and multiyear research grants and contracts to colleges, universities and affiliate organizations in multidisciplinary aviation/aerospace related disciplines
- **Capture** qualities of academic research:
  - Outreach*
  - Flexibility*
  - Innovation*
  - Education*
  - Tech Transfer*
- **Promote** the growth of a scientifically and technologically trained US workforce  
*(Commission on the Future of the US Aerospace Industry)*
- **Augment** internal resources and research facilities through long-term public / private partnerships and matching contributions



*Dennis Filler, FAATC Director, introduces  
2014 RAISE Recipient  
to FAA Headquarters Senior Technical Staff.*

# COE UAS GOALS

- ***Use the COE competitive process to enable AOA to select a world-class team to enhance FAA capabilities with scientists throughout the UAS community, coordinate these activities across organizations to avoid duplication of effort and achieve common goals***
- ***Engage industry, generate matching contributions, to reduce costs for all, conduct research within a trusted structure using grants for public purpose and contract tasks to obtain FAA deliverables***
- ***Engage and collaborate with a network of the best and brightest UAS experts throughout the U.S. and abroad***
- ***Comply with Congressional intent to establish a new FAA COE for UAS to conduct critical research and education jointly with other public and private entities over the next decade***



*COE Joint Meeting*

# COE University Members



Andrew Leonard, UND  
COE for General Aviation

2010 DOT FAA COE  
Student of the Year

John Porcari  
Deputy Sec. of Transportation w/  
Chelsea He, MIT  
COE for Noise & Emissions

2011 DOT FAA COE  
Student of the Year



**Auburn University**  
**Boise State University**  
**Boston University**  
**Edmonds Community College**  
**Embry-Riddle Aeronautical University**  
**Florida Institute of Technology**  
**Florida International University**  
**Florida State University**  
**Georgia Institute of Technology**  
**Harvard University**  
**Iowa State University**  
**Kansas State University**  
**Massachusetts Institute of Technology**  
**New Mexico Inst. of Mining & Tech**  
**New Mexico State University**  
**Northwestern University**  
**Oregon State University**  
**Pennsylvania State University**  
**Purdue University**  
**Rensselaer Polytechnic Institute**  
**Stanford University**

# COE University Members (Continued)



Phillip Donovan, UIUC  
COE for Airport Technology

2009 DOT FAA COE  
Student of the Year

Gregory D. Winfree  
Deputy Administrator, RITA w/  
Bradley Cheetham, Un. of Colorado at Boulder  
COE for Commercial Space Transportation

2012 DOT FAA COE  
Student of the Year



- Texas A&M University
- The Ohio State University
- Tuskegee University
- University of Alaska at Anchorage
- University of Alaska at Fairbanks
- University of California at Los Angeles
- University of Central Florida
- University of Colorado at Boulder
- University of Delaware
- University of Florida
- University of Illinois at Urbana  
Champaign
- Un. of Medicine & Dentistry of NJ
- University of Missouri at Rolla
- University of North Dakota
- University of North Carolina at Chapel Hill
- University of Pennsylvania
- University of Texas Medical Branch
- University of Utah
- University of Washington
- Washington State University
- Wichita State University

# COE Co-Sponsors

Advanced Transportation R&E  
Laboratory (ATREL)  
Aero Shell  
AeroClave  
Aerodyne Research Inc.  
Air Force Research Laboratory  
Air Tran Airways  
Air Transport Association of America  
(ATA)  
Airborne Express  
Airbus Industries  
Aircraft Owners & Pilots Association  
(AOPA)  
Airline Pilots Association (APA)  
Airports Council International – North  
America  
Alaska Airmen's Association  
Alaska Airways  
Alaska Science and Technology  
Alcoa Technical Center  
AlliedSignal  
Allison Engine Company  
Aloha Airlines  
American Airlines  
American Eagle Airlines, Inc.  
American Institute of Aeronautics and  
Astronautics (AIAA)  
ARINC Dayton  
Battelle

Bell Helicopter TEXTRON  
BF Goodrich R&D Center  
Boeing Company  
Bombardier Aerospace-Learjet  
Brookhaven National Lab  
California DOT  
Cape Air  
Cessna Aircraft  
Chicago O'Hare International  
Airport  
Cirrus Aviation  
Comair, Inc.  
Continental Airlines  
Delta Airlines  
Donaldson Company, Inc.  
Draper Laboratory  
Elite Air Center  
Executive Jet Aviation  
Experimental Aircraft Assoc. (EAA)  
FedEx Corporation  
General Electric Company  
General Aviation Mfg. Assn.  
(GAMA)  
Goodrich  
Gulfstream Aerospace Corporation  
Harris Corporation  
Honeywell  
Illinois Department of Aeronautics

Indiana Department of  
Transportation  
International Centre for Indoor  
Environment & Energy, Technical  
University of Denmark  
JENTEK Sensors, Inc.  
Livermore Software Technology  
Corp.  
Lockheed Martin Aeronautics Co.  
Los Angeles World Airports  
Lufthansa  
Maryland Aviation Administration  
Massachusetts Port Authority  
McDonnell Douglas Aerospace  
Metron Aviation, Inc.  
Metropolitan Washington Airport  
Authority  
NASA  
National Business Aviation Assn.  
(NBAA)  
NMS Bio-Defense  
Northrop Grumman Corporation  
Northwest Airlines  
Northwest Composites  
O'Hare Modernization Program  
(OMP)  
O'Hare Noise Compatibility  
Commission  
Ohio Department of Development  
Ohio Department of Transportation  
Pratt & Whitney

Professional Flight Attendants  
Association  
Raytheon Aircraft Company  
Regional Airport Authority of  
Louisville and Jefferson County  
Rockwell International  
Rolls Royce  
SAE International  
San Francisco Inter.  
Airport/Community Roundtable  
Sandia National Laboratories  
Seagull Technology  
Sikorsky Aircraft  
Southern Air Transport  
Southern California Association of  
Governments  
Southwest Research Institute  
Spitfire Aviation Partners  
SRI International  
Illinois Dept. of Transportation  
STERIS Corporation  
Sun Microsystems  
Transport Canada  
United Airlines  
United Parcel Service  
US Airways  
US DOT Volpe National Trans.  
Systems Center  
US EPA  
Virginia Department of  
Transportation  
Wyle Laboratories





# FAA Air Transportation Centers of Excellence



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**Secretary of Transportation Rodney Slater and University of Illinois student Bill Vavrik, 1999 DOT COE Student of the year**

