University Design Competition for Addressing Airport Needs
Airport Cooperative Research Program 2014-2015
University Design Competition for Addressing Airport Needs

- The former FAA Design Competition: Now sponsored by the FAA through the Airport Cooperative Research Program (ACRP) continues to be managed by the Virginia Space Grant Consortium
- ACRP, a program of the Transportation Research Board of the National Academies, is charged with researching problems shared by airport operating agencies
- New website for design competition is vsgc.odu.edu/ACRPDesignCompetition
- Previous FAA Competition was managed by the Virginia Space Grant Consortium for 8 years and engaged 1354 students and 95 faculty members from 66 universities
University Design Competition for Addressing Airport Needs Partners

- The American Association of Airport Executives
- The Airport Consultants Council
- The Airports Council International
- The National Association of State Aviation Officials
- University Aviation Association

All are providing advice, expert links for teams, assistance in dissemination of the Competition opportunity to its members, and participation in design reviews.

Space Grants for marketing!
University Design Competition for
Addressing Airport Needs

Competition Goals

• Raise awareness of the benefits of the Airport Cooperative Research Program and the importance of airports to the National Airspace System Infrastructure.

• Increase the involvement of the academic community in addressing airport operations and infrastructure issues and needs.

• Engage students at U.S. colleges and universities in the conceptualization of applications, systems and equipment capable of addressing related challenges in a robust reliable and comprehensive manner.

• Encourage undergraduate and graduate students at U.S. colleges and universities to contribute innovative ideas and solutions to issues facing airports and the National Airspace System.

• Provide the framework and incentives for quality educational experiences for university students.

• Develop an awareness of and an interest in airports as a vital and interesting area for engineering and technology careers.
University Design Competition for Addressing Airport Needs

Competition Elements

- Individuals or teams
- Undergraduates and Graduates eligible
- Multidisciplinary, multi-departmental or multi institutional teams an option
- Good vehicle for collaboration among institutions though infrequently done this way
- A worthwhile aeronautics project for design courses or independent study
- Allows for interdisciplinary approach and solutions
- Real world applications
- Many faculty use the guidelines even if designs are not submitted
University Design Competition for Addressing Airport Needs

Key Dates

- Competition announcement - August 2014
- Notice of Intent (strongly encouraged but not required) fall semester - September 30, 2014; spring semester - January 30, 2015
- Winners will be announced in June 2015
- Award Ceremony and presentations by first place winners - summer 2015
University Design Competition for Addressing Airport Needs

Technical Design Challenge Broad Areas

- Airport Operation and Maintenance
- Runway Safety/Runway Incursions/Runway Excursions
- Airport Environmental Interactions
- Airport Management and Planning
ACRP Graduate Research Awards

- Graduate Research Awards program on research related to airport issues
- Sponsored by U.S.DOT Federal Aviation Administration, administered by the Transportation Research Board’s Airport Cooperative Research Program (ACRP)
- Managed by Virginia Space Grant Consortium
- Counting on Space Grant network to get the word out
ACRP Graduate Research Awards

• Up to 10 awards of $10,000 each for one year
• Mentorship by two expert national advisors; students have faculty advisor
• Topics are interdisciplinary
• Potential applicants should review topics of interest to ACRP on the program web site
• Open to U.S., Canadian, and other foreign students attending U.S. universities
ACRP Graduate Research Awards

Key Dates

- Anticipate early 2015 call for applications due May 15, 2015
- Winners Selected - August 15, 2015
- Research conducted - September 2015 - May 2016
- Research report due - August 31, 2016
- Student presentations at the Transportation Research Board’s Annual Meeting - January 2017
ACRP Graduate Research Awards
2014 Award Winners

• Jacob Avery - Massachusetts Institute of Technology, Predictive Modeling of Runway Configuration Selection, Aeronautical Engineering

• Benjamin Bacon - Auburn University, Competitiveness and Relative Role of Air Travel Within Individuals’ Annual Collection of Intercity Trips, Civil Engineering

• Lauren Bowers - Purdue University, System of Systems Cost-Benefit Analysis of Autonomy and Automation in the Air Transportation System, Aerospace Engineering

• Kanthasamy Chelliah - Illinois Institute of Technology, Next Generation Airport Noise Monitoring System, Mechanical and Aerospace Engineering

• Heng Chen - University of Massachusetts, Optimal Metering Configurations at Airports, Management Science
ACRP Graduate Research Awards
2014 Award Winners continued

- Elizabeth Connelly - University of Virginia, Systems Engineering of Future Aviation Biofuels in US Commercial Aviation, Systems and Information Engineering

- Jonathan Keeney - University of North Carolina at Chapel Hill, Perceptions of Risk and Operational Safety Decision-Making in Airports, Business Administration-Organizational Behavior

- Carey Nadeau - Massachusetts Institute of Technology, Affordability of Public Transportation for Employees of Airports, City Planning

- Stephanie Sherman - Virginia Tech, Quantifying the Effects of Uncertainty in a Decentralized Model of the National Airspace System, Aerospace Engineering

- Navaneethan Sivagnanasundaram - Wichita State University, Glyphs in Air Traffic Control Displays, Human Factors Psychology
ACRP Graduate Research Awards

Contact Information

ACRP Graduate Research Awards Website: http://www.trb.org/ACRP/ACRPgraduateAwardProgram.aspx

Questions can be emailed to: ACRP@odu.edu

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