The Airport Cooperative Research Program (ACRP)

The Airport Cooperative Research Program (ACRP) is an industry-driven, applied research program that develops near-term, practical solutions to problems faced by airport operators. ACRP is a program of the Transportation Research Board (TRB) of the National Academies of Sciences, Engineering, and Medicine and sponsored by the Federal Aviation Administration (FAA). The research is conducted by contractors who are selected on the basis of competitive proposals.

The University Design Competition for Addressing Airport Needs

The Airport Cooperative Research Program University Design Competition for Addressing Airport Needs engages individual students or teams of students at U.S. universities in addressing airport operations and infrastructure issues and needs.

The Competition is funded by the FAA. Under the guidance of a faculty mentor, students address challenges in one of four categories:

1. Airport Operations and Maintenance
2. Airport Management and Planning
3. Runway Safety/Runway Incursions/Runway Excursions
4. Airport Environmental Interactions

Participants are required to seek input from airport operators and industry professionals for feedback on the practicality of their designs. Students win cash awards for winning submissions and first-place winners present their winning designs at the Airport Consultants Council Airports Technical Workshop in Washington, D.C. and an appropriate Competition Partner workshop or conference in the fall.

The Competition is managed for the ACRP by the Virginia Space Grant Consortium. Visit the Competition's website at:
vsgc.odu.edu/acrpdesigncompetition

ACRP AIRPORT COOPERATIVE RESEARCH PROGRAM

University Design Competition for Addressing Airport Needs

Awards Ceremony

August 16, 2019

The National Academies of Sciences, Engineering, and Medicine
Washington, D.C.

PROGRAM

Remarks

Larry Goldstein, Senior Program Officer,
Cooperative Research Programs, Transportation Research Board

Neil Pedersen, Executive Director,
Transportation Research Board

Competition Overview

Mary Sandy, Director, Virginia Space Grant Consortium

Award Presentations

Airport Management and Planning Challenge
Presented by Larry Goldstein, Senior Program Officer, Cooperative Research Programs, Transportation Research Board First Place Winner (tie) Rutgers University
Faculty Advisor - Dr. Michael Smart

Airport Management and Planning Challenge
Presented by Larry Goldstein, Senior Program Officer, Cooperative Research Programs, Transportation Research Board
First Place Winner (tie) Purdue University
Faculty Advisor - Dr. Mary Johnson and Dr. Anne Lucitto

Airport Environmental Interactions Challenge
Presented by Kirk Shaffer, Associate Administrator for Airports, Federal Aviation Administration
First Place Winner - University of California, Berkeley Faculty Advisor - Dr. Jasenka Rakas

Airport Operation and Maintenance Challenge
Presented by Kirk Shaffer, Associate Administrator for Airports, Federal Aviation Administration
First Place Winner - Purdue University
Faculty Advisor - Dr. Mary Johnson and Dr. Timothy Ropp

Runway Safety/Runway Incursions/Runway Excursions Challenge
Presented by Anthony Schneider, Acting Director of Safety, Federal Aviation Administration
First Place Winner - University of Nebraska at Omaha
Faculty Advisor - Dr. Chenyu Huang

Design Presentations by First-Place Winning Teams

Addressing Airport Congestion as Traffic Takes Off in the Age of Uber and Lyft
Team Representatives
Rutgers University

Proposal of Mobile Application Design for Aging Travelers in Commercial Airports
Team Representatives
Purdue University

Smart Gate System for 400Hz Power Monitoring at Airports
Team Representatives
University of California, Berkeley

Augmented Reality Airport Training System
Team Representatives
Purdue University

Internet of Things in the Cockpit: Intelligent Runway Status Indication System (IRSIS)
Team Representatives
University of Nebraska at Omaha

Closing Remarks

Marci Greenberger, Manager,
Airport Cooperative Research Program, Transportation Research Board

Chris Hedges, Director,
Transportation Research Board Cooperative Research Programs