The Airport Cooperative Research Program

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March 8, 2022

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ACRP AIRPORT COOPERATIVE RESEARCH PROGRAM

Airport Cooperative Research Program Projects in the Fiscal Year 2022 Program

Project No.	Title
01-50	Guidance for Improved Data Privacy Management for Airports
01-51	Enhancing DBE and ACDBE Participation at Airports
01-52	Championing the Airport System--Facing Challenges to the Paradigm
02-97	Update to ACRP Environmental Reports 11, 43, 147 & 160
02-98	Airport Energy Resiliency
02-99	Use of Equity and Environmental Justice Data to Support Airport Decision- Making
02-100	Pathways to Airport Net Zero Carbon Emissions
02-101	Airport Employee Onboarding to Environmental Issues
02-102	Encouraging Community Support for Airports and Air Travel
03-65	ACRP Policy and Planning Product Updates
03-66	Digital Twins forAirports
03-67	Peer-to-Peer Car Sharing Challenges and Opportunities at Airports
03-68	Integrated Contingency Planning for Small and Non-Hub Airports
05-03	Mitigating and Responding to Airport Cybersecurity Events
07-19	Update to ACRP Report 25: Airport Passenger Terminal Planning and Design
09-22	Cost-Effective Training for Airfield Electricians at General Aviation and Small Airports
10-33	Incorporating Emerging Ground Access Technologies at Airports
10-34	Airport Microgrid Toolkit Upgrade to WebResource
11-02/Task 43	Quick Response: Successful Community Integration of Advanced Air Mobility

ACRP Annual Research Cycle

January-March
Open solicitation for new problem statements.

April-June
Begin review and evaluation of problem statements.

February
Review proposals and select research contractors.

January
Begin synthesis meetings.

July
New projects selected from problem statements.

November-December
Begin issuing RFPs for new projects.

July-September
Open solicitation for new Synthesis and Legal topics.

October-November
Begin forming project panels and Synthesis topic panels.

August-September
Solicit nominations for panel volunteers.

October
Select new Synthesis and Legal topics.

AOC Meetings

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Graduate Research Award Program on Public Sector Aviation Issues

- To encourage applied research on airport and related aviation system issues and to foster the next generation of aviation leaders.

- To stimulate thought, discussion, and research by those who may become future airport managers, operators, designers, and policy makers in aviation.

- There have been 91 recipients since the program's inception.

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Graduate Research Award Program on Public Sector Aviation Issues

- Applicants select the research topics, supervised by a faculty member at their institution.

- Program funds up to 12 one-year awards of $12,000 each

- The program provides mentors to help guide the project, review research, and offer comments on the final papers

- Final papers are published in the TRB's Journal *Transportation Research Record*

University Design Competition for Addressing Airport Needs

National competition that engages graduate and undergraduate students to consider innovative approaches to address issues relating to airports and the National Airspace System.

- Builds on the former FAA Design Competition for Universities.

- Managed for the ACRP by the Virginia Space Grant Consortium.

- Students receive cash prizes for winning innovative design solutions.

- First place winners present their work at a national award ceremony.

"Through this competition, the students learn that even though they come from different backgrounds, they can contribute to the aviation field in a major way." - *Dr. Mary Johnson, Faculty Advisor, Purdue University*

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University Design Competition for Addressing Airport Needs

Goals

- Increase academic community's awareness of and involvement in ACRP

- Encourage undergraduate and graduate students to contribute innovative ideas and solutions to issues facing airports and the National Airspace System.

Competition focuses on design solutions in the following broad areas:

- Airport Operation and Maintenance,

- Runway Safety/Runway Incursions/ Runway Excursions,

- Airport Environmental Interactions, and

- Airport Management and Planning.

- Students are not limited to the suggested topical areas listed and are free to propose design solutions based on other topics that fit the four broad challenge areas.

ACRP INSIGHT EVENTS

What are ACRP Insight Events?

- Gatherings of airport industry leaders, subject matter experts, and researchers to discuss emerging topics
- Promote communication and collaboration, foster innovation, and help identify areas of future interest and research

Resources

- **6** Insight Events to date
- Presentations available on website
- **4** planned for 2021

  - Future of Aviation
  - On-Demand Aviation Services fro Passengers and Goods
  - Future of Airport Finances
  - Issues on Systemic Racism

Research Report 236: *Preparing Your Airport for Electric Aircraft and Hydrogen Technologies*

Design innovation for electrically powered and hybrid-electric aircraft is accelerating rapidly. While there are many potential benefits of electric aircraft and hydrogen technologies, not all air service can be replaced by electrically powered aircraft in the near term. The TRB Airport Cooperative Research Program's *ACRP Research Report 236: Preparing Your Airport for Electric Aircraft and Hydrogen Technologies* offers an introduction to the emerging electric aircraft industry, gives estimates of potential market growth, and provides guidance to help airports estimate the potential impacts of electric aircraft on their facilities and to be prepared to accommodate them.

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RECENT PUBLICATIONS

ACRP WebResource 10: *Periodic Publication on Transformative Technologies at Airports*

New and emerging technologies have the potential to revolutionize the aviation industry, particularly in the fields of customer service, safety, and operational efficiency on the ground and in-flight. However, these technologies bring disruptions that can be difficult for airports to prepare for. The TRB Airport Cooperative Research Program's *ACRP WebResource 10: Periodic Publication on Transformative Technologies at Airports* aims to help by posting periodic articles on transformative technologies anticipated to be the most impactful, including relevant definitions and background for each, plus compendious descriptions of timeline, cost, impact on affected populations, and degree of airport control.

COMING SOON

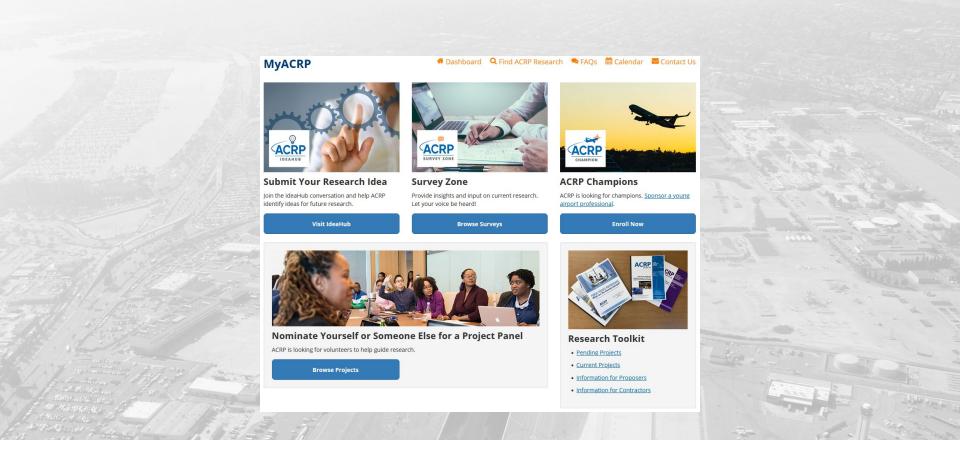ACRP 06-08 Human Factors in Airport Airside Operations

ACRP 09-19 Airfield Pavement Markings - Effective Techniques for Removal and Temporary Applications

ACRP 09-20 Quantifying the Impacts of Delayed Maintenance of Airport Assets

Problem Statements due April 4, 2022

Sign into *MyACRP* and click *Submit a Research Idea!*

ACRP is Hiring!!!

✈ A Senior Program Officer is responsible for managing projects in administration, operations, environment, finance and other topics.

More Information at
https://www.trb.org/ACRP/ACRP.aspx

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Airport Cooperative Research Program Weblinks

FY22 Project Announcement: https://onlinepubs.trb.org/onlinepubs/acrp/docs/FY22ACRPProjectAnnouncement.pdf

ACRP Publications: http://www.trb.org/Publications/Blurbs.aspx?fields=PublicationType|ACRPReport

ACRP Homepage: http://www.trb.org/ACRP/ACRP.aspx