

Partnerships

The tables that follow detail the FAA's partner activities including active 1) Cooperative Research and Development Agreements (CRADAs), 2) Center of Excellence (COE) Grants, 3) Aviation Research Grants 4) Interagency Agreements (IAs), and 5) International Agreements.

CRADAs

The table below details the FAA's Active Cooperative Research and Development Agreements

Academia

Period of Performance		CRADA Number	Partner	Subject/Purpose
Start Date	End Date			
Academia (Active in FY 19)				
8/15/2018	8/13/2021	18-CRDA-0353	Clarkson University	The purpose of this Cooperative Research and Development Agreement is to allow Clarkson University personnel access to the test panels in the Full-Scale Aircraft Structural Test and Evaluation Research (FASTER) lab. Clarkson personnel will witness testing and provide guidance on testing and model validation of the Structural Health Monitoring (SHM) systems installed in the lab. The data will be public, and useable by the Society of Automotive Engineers, Aerospace Industry Steering Committee (SAE AISC) as needed.
6/14/2018	6/14/2021	18-CRDA-0350	Rowan University	The purpose of this Cooperative Research and Development Agreement is to establish a Collaborative relationship between the FAA and Rowan University, specifically the Engineering Department. Students will gain valuable research and development experience while the FAA benefits from any algorithms or tools created to improve the accuracy and efficiency of NextGen research methodologies.
5/24/2019	6/7/2021	17-CRDA-0348	George Mason University, School of Business	The purpose of this Cooperative Research and Development Agreement is to investigate how government organizations and people progress through change. FAA/AFS wants to capitalize on the research being conducted to better understand attachment styles associated with leading people through changes. George Mason University, School of Business and the FAA will undertake a research trial with at least one, but optimally two, groups within the AFS leadership group to gain insight and possibly validate the Attachment Style Index©.

Period of Performance		CRADA Number	Partner	Subject/Purpose
Start Date	End Date			
Academia (Active in FY 19)				
11/16/2016	11/15/2019	16-CRDA-0340	Rutgers, The State University of New Jersey	The purpose of this Cooperative Research and Development Agreement is to establish a mechanism for the initial FAA Technical Transfer and collaboration to facilitate preliminary exchange of ideas and solutions by students and faculty, to enhance the Modeling and Simulation (M&S) Branch's conflict-probe-related tools and algorithms.
7/24/2018	8/1/2023	16-CRDA-0335	Fairfield University	The purpose of this Cooperative Research and Development Agreement is to establish a mechanism for the initial FAA Technical Transfer and collaboration to facilitate preliminary exchange of ideas and solutions by students and faculty to enhance the Modeling and Simulation (M&S) Branch's conflict probe related tools and algorithms.
4/12/2018	4/12/2021	15-CRDA-0308	Rowan University	The purpose of this Cooperative Research and Development Agreement is the exchange of information on state-of-the-art airport pavement design methods and materials; the exchange of information on airport technology research results related to in-situ laboratory and full scale pavement tests, including airport pavement roughness, runway profiles, friction, pavement modeling, and non-destructive pavement testing; and collaboration on documents for joint submission to the relevant international bodies.

Industry

Period of Performance		CRADA Number	Partner	Subject/Purpose
Start Date	End Date			
Industry (Active in FY 19)				
8/20/2019	8/19/2022	19-CRDA-0366	GE Aviation Systems LLC	The purpose of this Cooperative Research and Development Agreement is to establish collaboration, provide engineering and research support, and conduct multiple safety-risk assessments using an established FAA methodology.

Period of Performance		CRADA Number	Partner	Subject/Purpose
Start Date	End Date			
Industry (Active in FY 19)				
7/16/2019	7/16/2024	19-CRADA-0374C (CAMI)	Rockwell Collins	The purpose of this Cooperative Research and Development Agreement is to conduct collaborative research using Rockwell Collin’s advanced vision software and the FAA’s flight-deck simulator to collect human performance data from representative samples of the end-user population.
09/25/2019	09/24/2021	19-CRADA-0373	Protean, LLC.	The modeling, simulation, demonstration, testing, and analysis activities set forth in this agreement are intended to collect, analyze, and share the data that will support the increased utilization and safety of low level helicopter operations for various mission segments
6/27/2019	6/25/2021	19-CRDA-0371	Mistras Group, Inc.	The purpose of this Cooperative Research and Development Agreement is to provide Mistras Group Inc.’s Acoustic Emission (AE) and Non-Contact Ultrasonic Research System (NCUTRS) technologies to the FAA for testing at the Full-scale Aircraft Structural Test Evaluation and Research (FASTER) lab and the Structural Health Monitoring Lab (SHML). Mistras Group, Inc. may provide technical support to the test personnel as they collect and analyze data.
3/4/2019	3/4/2022	19-CRDA-0367	Rockwell Collins, A Collins Aerospace Company	The purpose of this Cooperative Research & Development Agreement (CRADA) is to establish collaboration and provide engineering and research support to conduct multiple safety-risk assessments using an established FAA methodology. The FAA Safety-Risk Assessment (SRA) Methodology was established and documented in SRA Methodology description document (v 1.1), dated 9/5/2018.
12/21/2018	12/21/2021	19-CRDA-0361	Kerr Avionics	The purpose of this Cooperative Research and Development Agreement is to examine how the FAA can use new technologies present in the latest generation of Enhanced Vision Systems (EVS), Synthetic Vision Systems (SVS), and Combined Vision Systems (CVS) for helicopter operators. The goal is to provide credit for reducing the visibility requirements for point-in-space (Pins) and comparable instrument approaches during the approach segments of the “Proceed Visual Flight Rules (VFR)” and “Proceed Visual” segments.

Period of Performance		CRADA Number	Partner	Subject/Purpose
Start Date	End Date			
Industry (Active in FY 19)				
12/12/2018	12/13/2021	18-CRDA-0357	SIMMONDS PRECISION PRODUCTS, INC., A COLLINS AEROSPACE COMPANY	The purpose of this Cooperative Research and Development Agreement is to allow personnel from Simmonds Precision Products, Inc., a Collins Aerospace Company access to the test panels in the Full-scale Aircraft Structural Test Evaluation and Research (FASTER) lab. These personnel will install their sensors and provide the FAA test group with instruction on the use of their system to collect data while the panels are being tested. The data will be available to Collaborating Party, who will have title to the data, and is to be useable by the Society of Automotive Engineers, Aerospace Industry Steering Committee (SAE AISC).
4/24/2018	4/24/2020	18-CRDA-0349	The Dow Chemical Company	The purpose of this Cooperative Research and Development Agreement is to expand and improve microscale combustion calorimetry (MCC) testing. MCC is a small-scale test method that provides key fundamental information on the fire resistance of polymeric materials. This effort will implement the latest MCC technology at Dow Chemical and expand the method to provide more detailed information on the combustion process and the mechanistic action of fire retardancy for polymeric materials and additives.
4/24/2018	4/23/2021	18-CRDA-0352	Metis Design Corp	The purpose of this Cooperative Research and Development Agreement is to allow Metis access to the test panels in the Full-scale Aircraft Structural Test and Evaluation Research (FASTER) lab, where Metis will install their sensors. Metis will instruct the test group on use of their system to collect data while the panels are being tested. The data will be public and useable by the Society of Automotive Engineers, Aerospace Industry Steering Committee (SAE AISC).
1/13/2017	1/13/2022	17-CRDA-0343	Rockwell Collins	The purpose of this Cooperative Research and Development Agreement is to collaborate with Rockwell at the FAA Cockpit Simulation Facility to develop a high-fidelity rotorcraft simulation capability.
10/28/2016	10/28/2020	16-CRDA-0339	Livermore Software Technology Corporation	The purpose of this Cooperative Research and Development Agreement is to allow Livermore Software Technology Corporation (LSTC) to continue to implement and support material models developed by the FAA Aircraft Catastrophic Failure Prevention Program (ACFPP) in LSTC's LS-DYNA software. LSTC will provide 256 LS-

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Start Date	End Date			
Industry (Active in FY 19)				
				DYNA licenses for the FAA to use on the FAA Computing and Analytics Shared Services Integrated Environment (CASSIE) High Performance Computer (HPC) at no cost to the government.
9/10/2018	9/6/2021	16-CRDA-0336	Astronics Corporation, MaxViz	The purpose of this Cooperative Research and Development Agreement is to examine how the FAA can use new technologies present in the latest generation of Enhanced Vision Systems/Synthetic Vision System/Combined Vision Systems (EVS/SVS/CSV) available to helicopter operators. The goal will be to provide credit for reducing the visibility requirements for Point-In-Space (Pins) and other comparable instrument approaches during the approach segments of the "Proceed Visual Flight Rules (VFR)" and "Proceed Visual" segments.
5/15/2018	8/13/2021	16-CRDA-0338	Afton Chemical Corp. Mix-Viz	The purpose of this Cooperative Research and Development Agreement is to test potentially viable unleaded aviation gasolines.
6/1/2018	10/19/2021	15-CRDA-0309	Burlington Northern Santa Fe Railway	The purpose of this Cooperative Research and Development Agreement is to allow joint FAA and BNSF research in the areas of railway safety and integration of Unmanned Aircraft Systems ("UAS") into the NAS, along with the transfer of applicable technologies.
8/12/2019	11/12/2019	15-CRDA-0310	Arconic (formerly ALCOA)	The purpose of this Cooperative Research and Development Agreement is to obtain full-scale fuselage-panel test data to demonstrate whether and how fuselage concepts utilizing Emerging Metallic Structures Technologies (EMST) improve the durability and damage tolerance compared to current baseline aluminum fuselage structures. The single-aisle aircraft fuselage will be used as the baseline structure. Test data will be collected utilizing the unique capabilities of the FAA's Full-scale Aircraft Structural Test Evaluation and Research (FASTER) facility.

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Start Date	End Date			
Industry (Active in FY 19)				
12/15/2014	5/15/2020	14-CRDA-0304	Shell Global Solutions (US), Inc.	The purpose of this Cooperative Research and Development Agreement is to generate laboratory, rig, engine, and aircraft fit-for-purpose test data on unleaded fuels. The goal is to replace the leaded aviation gasoline, 100LL, with an unleaded fuel and approve its use in the majority of the general-aviation piston engines and allow the aircraft fleet to safely operate on this fuel.
9/29/2014	9/30/2024	18-CRDA-0295	FedEx	The purpose of this Cooperative Research and Development Agreement is to allow for collaboration on NextGen surface initiatives to evaluate the viability and benefits of new concepts and applications in an operational environment. Specifically, this CRADA will facilitate further evaluation of the Surface Decision Support System (SDSS) and Non-Movement Area (NMA) surveillance.
6/27/2019	7/25/2024	14-CRDA-0297	DFW	The purpose of this Cooperative Research and Development Agreement is to provide a mechanism for the conduct of research and exploratory development efforts in aircraft rescue and firefighting (ARFF) at the DFW Fire Training and Research Center (FTRC), located at Dallas-Fort Worth International Airport (DFW Airport). DFW and FAA share many common interests in aircraft rescue and firefighting technologies.
6/5/2017	6/5/2020	14-CRDA-0299	Northrop Grumman Systems Corporation	The purpose of this Cooperative Research and Development Agreement is to perform a variety of operational and technical assessments to meet specific objectives to support integration of Unmanned Aircraft Systems (UAS) into the National Airspace System (NAS), to support existing and future certification paths for UAS airframes and system components, and to assist in the Next Generation Air Transportation System (NextGen).
4/28/2017	4/29/2020	14-CRDA-0298	Astronics AES	The purpose of this Cooperative Research and Development Agreement is to develop solid-state power control and protective devices for Aircraft, and to provide support for industry standards.
11/4/2016	11/4/2019	14-CRDA-0296	Ametek Aerospace and Defense	The purpose of this Cooperative Research and Development Agreement is to develop solid-state Electronic Power Distribution Systems (EPDS) for Aircraft and to provide Support for industry Standards.

Period of Performance		CRADA Number	Partner	Subject/Purpose
Start Date	End Date			
Industry (Active in FY 19)				
11/14/2017	10/26/2022	13-CRDA-0289	The Boeing Company	The purpose of this Cooperative Research and Development Agreement is to allow technical evaluation of Federal Aviation Administration (FAA) Next Generation (NextGen) air transportation system concepts and to allow other mutually beneficial aviation research.
12/23/2010	12/23/2020	10-CRDA-0268	United Parcel Service Co.	The purpose of this Cooperative Research and Development Agreement is to allow for collaboration on NextGen surface initiatives and to evaluate the viability and benefits of new concepts and applications in an operational environment. Specifically, this CRADA will facilitate further evaluation of the Surface Decision Support System (SDSS) and Non-Movement Area (NMA) surveillance.
09/20/2019	10/31/2024	07-CRDA-0236	The Boeing Company	The purpose of this Cooperative Research and Development Agreement is to allow a long-term partnership to investigate areas of safety and airframe integrity of high importance to industry and FAA. The verification and certification of the design, analysis, and applications of bonded repairs are very important to the Boeing Company, airplane operators, and the FAA Technical Center.
7/29/2011	7/29/2021	96-CRDA-0097	The Boeing Company	The purpose of this Cooperative Research and Development Agreement is to allow research on real-time real-weight pavement testing at the National Aviation Pavement Test Facility, to determine wheel-interaction effects followed by trafficking tests, to develop pavement failure criteria.

International

Period of Performance		CRADA Number	Partner	Subject/Purpose
Start Date	End Date			
Industry (International – Active in FY 19)				
3/7/2019	3/7/2022	18-CRDA-0358	CMC Electronics Inc.	The purpose of this Cooperative Research and Development Agreement is to examine how the FAA can utilize new technologies present in the latest generation of Enhanced Vision Systems (EVS), Synthetic Vision System (SVS), and Combined Vision Systems (CVS) available to helicopter operators, to provide credit for reducing the visibility requirements for point-in-space (Pins) and other comparable instrument approaches during the approach segments of both the “Proceed VFR” and “Proceed Visual” segments.
5/8/2018	5/7/2021	18-CRDA-0354	MIPSoft OY (BlindSquare)	The purpose of this Cooperative Research and Development Agreement is to evaluate how the BlindSquare indoor-navigation technology (developed by MIPsoft) can be used to mitigate the wayfinding challenges faced by the blind and visually impaired (BVI) passengers at the airport terminals.
5/9/2017	5/8/2020	17-CRDA-0345	Thales Avionics SAS	The purpose of this Cooperative Research and Development Agreement is to examine how the FAA can allow helicopter operators to use new technologies present in the latest generation of Enhanced Vision Systems (EVS)/Synthetic Vision System (SVS)/Combined Vision Systems (CVS)/Head Worn Display (HWD)/Head Down Display (HDD) systems that are not currently available on the market; these systems enhance safety for Visual Flight Rules (VFR) and Instrument Flight Rules (IFR) helicopter operations.
10/1/2014	3/1/2020	14-CRDA-0306	Total Marketing Services	The purpose of this Cooperative Research and Development Agreement is to generate laboratory, rig, engine, and aircraft fit-for-purpose test data on unleaded fuels intended to replace the leaded aviation gasoline, 100LL. The goal is to approve this fuel in the majority of general-aviation piston engines and the aircraft fleet.
7/2/2018	7/2/2021	12-CRDA-0285	Team Eagle Ltd	The purpose of this Cooperative Research and Development Agreement is to improve the safety of commercial air travel by developing technology for quantifying the impact of contaminated runway conditions on aircraft wheel braking.

Small Business

Period of Performance		CRADA Number	Partner	Subject/Purpose
Start Date	End Date			
Industry (Small Business – Active in FY 19)				
3/11/2019	3/11/2022	19-CRDA-0368	Acellent Technologies Inc.	The purpose of this Cooperative Research and Development Agreement is to provide Acellent Technologies Inc. with access to the data from the FAA tests at the Full-scale Aircraft Structural Test and Evaluation Research (FASTER) and Structures and Materials Lab (SML) labs. Acellent Technologies Inc. will analyze the data and provide the results to the FAA. The FAA will provide aircraft quality test beds in both labs as test specimens. If Acellent Technologies Inc. wishes, they will be granted access to the test facilities.
6/29/2018	6/29/2020	16-CRDA-0334	Pentagon Performance, Inc.	The purpose of this Cooperative Research and Development Agreement is to develop a proof of concept that measures the suitability, effectiveness, efficiency, and safety of the Smart Airport Landing System (SALS), and to coordinate the completion of a Safety Management Systems (SMS) study if applicable and/or feasible.
6/1/2018	6/16/2021	15-CRDA-0317	A TECH Inc.	The purpose of this Cooperative Research and Development Agreement is for the Federal Aviation Administration (FAA) and ATECH, Inc., an Engineered Materials Arresting System (EMAS) manufacturer, to share knowledge and periodic reports during their research and development activities. This agreement is needed for a successful EMAS design that will meet FAA Advisory Circular 150-5220-22b.
4/5/2018	4/20/2023	16-CRDA-0326	GSSL, Inc. dba Near Space Corporation	The purpose of this Cooperative Research and Development Agreement is to explore the use of Automatic Dependent Surveillance-Broadcast (ADS-B) for tracking and trajectory modeling of Commercial Space and Suborbital Vehicles using high-altitude unmanned balloons.
1/30/2019	1/26/2024	09-CRDA-0257	Diakon Solutions LLC	The purpose of this Cooperative Research and Development Agreement is to complete the development, test, installation, and implementation of a production-model Aircraft Geometric Height Measurement Element (AGHME).

Period of Performance		CRADA Number	Partner	Subject/Purpose
Start Date	End Date			
Industry (Small Business – Active in FY 19)				
11/4/2014	12/10/2019	08-CRDA-0251	Diakon Solutions LLC	The purpose of this Cooperative Research and Development Agreement to advance and commercialize SunKeyST technologies and products that will benefit the FAA and the Aviation Research & Development community.

COE Grants

The table below details the FAA's Active Centers of Excellence (COE) grants.

Active Grants in FY 2019 - COE					
Period of Performance		Grant Number	Grant Title	Recipient Institution	Award Amount
Award Date	End Date				
3/14/2020	5/7/2020	15-C-UAS-WISU-09	UAS Airborne Collision Severity Evaluation - Structural Impact	Wichita State University	\$274,872
9/26/2019	2/25/2020	12-C-GA-GIT-041	Scenario Based Training For Rotorcraft Phase 2	Georgia Tech Research Corporation	\$66,327
9/26/2019	2/18/2020	12-C-GA-FIT-034	Scenario Based Training For Rotorcraft Phase 2	Florida Institute of Technology	\$20,000
9/26/2019	9/25/2020	12-C-GA-ISU-036	Rotorcraft Wire Strikes	Iowa State University of Science and Technology	\$85,707
9/26/2019	9/25/2019	12-C-GA-GIT-040	Rotorcraft Wire Strikes	Georgia Tech Research Corporation	\$190,000
9/26/2019	9/25/2020	12-C-GA-FIT-033	Rotorcraft Wire Strikes	Florida Institute of Technology	\$10,000
9/26/2019	6/30/2021	12-C-GA-FIT-030	Augmented Weather Interfaces	Florida Institute of Technology	\$109,522
9/26/2019	6/30/2021	12-C-GA-ISU-034	Augmented Weather Interfaces	Iowa State University of Science and Technology	\$237,428
9/26/2019	9/25/2021	12-C-GA-PU-089	Augmented Weather Interfaces	Purdue University	\$68,849
9/26/2019	9/25/2020	12-C-GA-PU-088	Helicopter Operations Weather Information	Purdue University	\$74,531
9/26/2019	6/30/2021	12-C-GA-FIT-031	Helicopter Operations Weather Information	Florida Institute of Technology	\$75,003
9/26/2019	3/31/2020	12-C-GA-GIT-038	Helicopter Operations Weather Information	Georgia Tech Research Corporation	\$141,392

Active Grants in FY 2019 - COE					
Period of Performance		Grant Number	Grant Title	Recipient Institution	Award Amount
Award Date	End Date				
9/26/2019	9/25/2020	12-C-GA-TEES-032	Management and Administration	Texas A&M Engineering Experiment Station	\$5,000
9/26/2019	9/25/2020	12-C-GA-PU-087	Management and Administration	Purdue University	\$150,000
9/26/2019	9/25/2020	12-C-GA-ISU-035	Management and Administration	Iowa State University of Science and Technology	\$5,000
9/26/2019	10/30/2020	12-C-GA-FIT-032	Management and Administration	Florida Institute of Technology	\$5,000
9/26/2019	9/25/2020	12-C-GA-OSU-056	Management and Administration	The Ohio State University	\$5,000
9/26/2019	10/30/2020	12-C-GA-GIT-039	Management and Administration	Georgia Tech Research Corporation	\$5,000
9/26/2019	3/31/2020	12-C-GA-GIT-037	General Aviation 2030 - GA Exploratory Analyses	Georgia Tech Research Corporation	\$40,000
9/26/2019	9/25/2020	12-C-GA-PU-090	General Aviation 2030 - GA Exploratory Analyses	Purdue University	\$22,000
9/26/2019	1/31/2020	12-C-GA-GIT-036	Rotorcraft ASIAs	Georgia Tech Research Corporation	\$169,101
9/26/2019	9/25/2022	12-C-TTHP-ERAU-041	AJW-3 Fleet Assessment Modernization Study Phase II	Embry-Riddle Aeronautical University	\$210,326
9/26/2019	9/25/2022	12-C-TTHP-WISU-17	AJW-3 Fleet Assessment Modernization Study Phase II	Wichita State University	\$15,000
9/26/2019	9/25/2021	16-C-TTHP-OK-036	OU Program Management and Technical Support (Years 4 and 5)	The University of Oklahoma	\$272,306
9/26/2019	9/25/2022	16-C-TTHP-WISU-018	WSU Administrative Program Management Support	Wichita State University	\$374,231
9/26/2019	9/25/2020	16-C-TTHP-OK-035	Ultra lightweight VORILS Receiver	The University of Oklahoma	\$2,626
9/26/2019	9/25/2020	16-C-TTHP-WISU-016	Ultra lightweight VORILS Receiver	Wichita State University	\$6,824
9/26/2019	9/25/2020	16-C-TTHP-OK-34	Ultra lightweight VORILS Receiver	The University of Oklahoma	\$120,000
9/26/2019	9/25/2020	16-C-TTHP-OK-033	ILS Zone 3 Measurement	The University of Oklahoma	\$2,626
9/26/2019	9/25/2020	16-C-TTHP-WISU-015	ILS Zone 3 Measurement	Wichita State University	\$8,224

Active Grants in FY 2019 - COE					
Period of Performance		Grant Number	Grant Title	Recipient Institution	Award Amount
Award Date	End Date				
9/26/2019	9/25/2020	16-C-TTHP-OKSU-005	ILS Zone 3 Measurement	Oklahoma State University	\$155,000
9/26/2019	9/25/2021	16-C-TTHP-AU-006	Effective Training and Checking Methods for the Emerging Pilot Workforce	Auburn University	\$595,933
9/26/2019	9/25/2021	16-C-TTHP-OK-032	Effective Training and Checking Methods for the Emerging Pilot Workforce	The University of Oklahoma	\$10,230
9/26/2019	9/25/2021	16-C-TTHP-WISU-014	Effective Training and Checking Methods for the Emerging Pilot Workforce	Wichita State University	\$39,770
9/26/2019	9/25/2021	16-C-TTHP-ERAU-042	FAA COE TTHP Program Support	Embry-Riddle Aeronautical University	\$163,431
9/9/2019	9/8/2022	15-C-UAS-UAF-08	STEM Outreach-UAS as a STEM Outreach Learning Platform for K-12 Students and Educators (STEM III)	University of Alaska Fairbanks	\$56,400
9/9/2019	9/8/2021	15-C-UAS-UCD-002	STEM Outreach-UAS as a STEM Outreach Learning Platform for K-12 Students and Educators (STEM III)	University of California-Davis	\$99,730
9/9/2019	9/8/2022	15-C-UAS-UAH-011	STEM Outreach-UAS as a STEM Outreach Learning Platform for K-12 Students and Educators (STEM III)	The University of Alabama in Huntsville	\$150,000
9/9/2019	9/8/2022	15-C-UAS-NMSU-023	STEM Outreach-UAS as a STEM Outreach Learning Platform for K-12 Students and Educators (STEM III)	Regents of New Mexico State University	\$82,884
9/9/2019	9/8/2022	15-C-UAS-OSU-017	STEM Outreach-UAS as a STEM Outreach Learning Platform for K-12 Students and Educators (STEM III)	The Ohio State University	\$70,001
9/9/2019	9/8/2021	15-C-UAS-UAF-07	Integrating Expanded and Non-Segregated UAS Operations into the NAS: Impact on Traffic	University of Alaska Fairbanks	\$50,000
9/9/2019	9/8/2021	15-C-UAS-OSU-016	Integrating Expanded and Non-Segregated UAS Operations into the NAS: Impact on Traffic	The Ohio State University	\$302,325

Active Grants in FY 2019 - COE					
Period of Performance		Grant Number	Grant Title	Recipient Institution	Award Amount
Award Date	End Date				
9/9/2019	9/8/2021	15-C-UAS-UAH-010	Integrating Expanded and Non-Segregated UAS Operations into the NAS: Impact on Traffic	The University of Alabama in Huntsville	\$179,954
9/9/2019	9/8/2021	15-C-UAS-UND-014	Integrating Expanded and Non-Segregated UAS Operations into the NAS: Impact on Traffic	University of North Dakota	\$229,220
9/9/2019	9/8/2021	15-C-UAS-DU-06	Integrating Expanded and Non-Segregated UAS Operations into the NAS: Impact on Traffic	Drexel University	\$180,000
9/9/2019	9/8/2021	15-C-UAS-ERAU-012	Integrating Expanded and Non-Segregated UAS Operations into the NAS: Impact on Traffic	Embry-Riddle Aeronautical University	\$255,000
9/9/2019	9/8/2021	15-C-UAS-NMSU-022	Integrating Expanded and Non-Segregated UAS Operations into the NAS: Impact on Traffic	Regents of New Mexico State University	\$50,000
9/9/2019	9/8/2021	15-C-UAS-KSU-008	Integrating Expanded and Non-Segregated UAS Operations into the NAS: Impact on Traffic	Kansas State University	\$250,016
9/9/2019	9/8/2021	15-C-UAS-UND-015	Establish Risk Based Thresholds for Approvals Needed to Certify UAS for Safe Operation	University of North Dakota	\$195,000
9/9/2019	9/8/2021	15-C-UAS-KSU-009	Establish Risk Based Thresholds for Approvals Needed to Certify UAS for Safe Operation	Kansas State University	\$305,037
7/24/2019	5/7/2020	15-C-UAS-MSU-039	COE UAS Program Management	Mississippi State University	\$1,076,940
6/14/2019	2/28/2022	13-C-AJFE-BU-016	Noise Impact Health Research-Cardiovascular Disease and Aircraft Noise Exposure	Trustees of Boston University	\$1,729,286
5/31/2019	2/28/2021	13-C-AJFE-MST-012	Reexamination of Engine to Engine PM Emissions variability using an ARP Reference Sampling and Measurement System	The Curators of the University of Missouri - Rolla	\$1,217,221
5/31/2019	5/30/2020	13-C-AJFE-GIT-049	Parametric Uncertainty Assessment for AEDT 2b	Georgia Tech Research Corporation	\$300,000

Active Grants in FY 2019 - COE					
Period of Performance		Grant Number	Grant Title	Recipient Institution	Award Amount
Award Date	End Date				
5/31/2019	5/30/2020	13-C-AJFE-PU-031	Quantifying Uncertainties in Predicting Aircraft Noise in Real-World situation	Purdue University	\$85,000
5/31/2019	10/30/2020	13-C-AJFE-PSU-049	Quantifying Uncertainties in Predicting Aircraft Noise in Real-World Situations	Pennsylvania State University	\$170,000
5/31/2019	5/30/2020	13-C-AJFE-MIT-054	Analysis to Support the Development of an Engine nvPM Emissions Standard	Massachusetts Institute of Technology	\$200,000
5/31/2019	7/30/2020	13-C-AJFE-UH-011	Alternative Jet Fuel Supply Chain Analysis-Tropical Region Analysis	University of Hawaii	\$200,000
5/31/2019	8/31/2020	13-C-AJFE-MIT-053	Naphthalene Removal Assessment	Massachusetts Institute of Technology	\$350,000
5/31/2019	5/30/2020	13-C-AJFE-SU-020	Shock Tube and Flow Reactor Studies of the Kinetics of Jet Fuels	Board of Trustees of Leland Stanford Jr University- CS	\$110,000
3/29/2019	3/28/2020	13-C-AJFE-UNC-010	Development of Aviation Air Quality Tools for Airport-Specific Impact Assessment: Air Quality Modeling	University of North Carolina at Chapel Hill	\$300,000
3/29/2019	3/28/2020	13-C-AJFE-GIT-045	CLEEN II System Level Assessment	Georgia Tech Research Corporation	\$170,000
3/29/2019	3/28/2020	13-C-AJFE-GIT-048	Noise Power Distance Re-Evaluation	Georgia Tech Research Corporation	\$220,000
3/29/2019	3/28/2020	13-C-AJFE-GIT-046	Takeoff /Climb Analysis to Support AEDT APM Development	Georgia Tech Research Corporation	\$175,000
3/29/2019	3/28/2020	13-C-AJFE-UTENN-009	Techno-Market Analysis of US Biorefinery Supply Chains from Feedstock to Alternative Jet Fuels	University of Tennessee	\$260,000
3/29/2019	3/28/2020	13-C-AJFE-MIT-051	Analytical Approach for Quantifying Noise from Advanced Operational Procedures	Massachusetts Institute of Technology	\$250,000
3/29/2019	3/28/2020	13-C-AJFE-PSU-046	Alternative Jet Fuel Supply Chain Analysis - Mid Atlantic	Pennsylvania State University	\$207,623
3/29/2019	3/28/2020	13-C-AJFE-WaSU-019	Program Office for Center of Excellence for Alternative Jet Fuels and Environment	Washington State University	\$390,911

Active Grants in FY 2019 - COE					
Period of Performance		Grant Number	Grant Title	Recipient Institution	Award Amount
Award Date	End Date				
3/29/2019	3/28/2020	12-C-AJFE-UI-026	Alternative Fuels Test Database Library	Board of Trustees of the Univ. of Illinois	\$130,000
3/29/2019	8/28/2020	12-C-AJFE-PSU-047	Identification of Noise Acceptance Onset for Noise Certification Standards of Supersonic Airplane	Pennsylvania State University	\$390,000
3/29/2019	3/28/2020	13-C-AJFE-MIT-052	Clean Sheet Supersonic Engine Design and Performance	Massachusetts Institute of Technology	\$250,000
3/29/2019	3/28/2020	13-C-AJFE-PU-029	Techno-Economic and Life-Cycle Analysis of Alternative Aviation Biofuels Supply Chains	Purdue University	\$400,000
3/29/2019	3/28/2020	13-C-AJFE-PU-028	National Jet Fuels Combustion Program: Area #5 Atomization Tests and Models	Purdue University	\$120,000
3/29/2019	3/28/2020	13-C-AJFE-GIT-047	Advanced combustion (area# 3)	Georgia Tech Research Corporation	\$30,000
3/29/2019	3/28/2020	13-C-AJFE-PSU-048	Outreach Project	Pennsylvania State University	\$30,000
3/12/2019	6/11/2020	12-C-GA-OSU-053	Re-evaluation of Effectiveness of Emergency Vehicle Colors in Safety and Identification	The Ohio State University	\$30,000
3/12/2019	6/11/2020	12-C-GA-TEES-029	Re-evaluation of Effectiveness of Emergency Vehicle Colors in Safety and Identification	Texas A&M Engineering Experiment Station	\$30,000
3/12/2019	6/11/2020	12-C-GA-ISU-032	Re-evaluation of Effectiveness of Emergency Vehicle Colors in Safety and Identification	Iowa State University of Science and Technology	\$30,000
3/12/2019	3/31/2020	12-C-GA-GIT-034	General Aviation 2030-GA Exploratory Analysis	Georgia Tech Research Corporation	\$25,000
3/1/2019	5/31/2021	12-C-AM-WISU-110	Composite Materials Handbook-17 (CMH-17)	Wichita State University	\$125,000
3/1/2019	8/31/2020	12-C-AM-WISU-111	Development and Safety Management of Composite Certification Guidance	Wichita State University	\$179,000

Active Grants in FY 2019 - COE					
Period of Performance		Grant Number	Grant Title	Recipient Institution	Award Amount
Award Date	End Date				
3/1/2019	2/28/2021	12-C-AM-OSU-011	Evaluation of Parameters used in Progressive Damage Models	Oregon State University	\$167,000
3/1/2019	2/28/2020	12-C-AM-UU-023	Development and Evaluation of Fracture Mechanics Test Methods for Sandwich Composites	The University of Utah	\$75,000
3/1/2019	2/28/2021	12-C-AM-WISU-112	Composite Repair Materials Guidance for Aircraft Maintainability and Safety Assurance	Wichita State University	\$425,000
3/1/2019	2/28/2021	12-C-AM-WISU-113	Resin Infused Fiber Reinforced Materials Guidelines for Aircraft Design and Certification	Wichita State University	\$700,000
3/1/2019	2/28/2021	12-C-AM-WISU-114	Ceramic Matrix Composite (CMC) Materials Guidelines for Aircraft Design and Certification	Wichita State University	\$350,000
3/1/2019	2/28/2021	12-C-AM-WISU-115	Polymer-Based Additive Manufacturing (PBAM) Guidelines for Aircraft Design and Certification	Wichita State University	\$750,000
3/1/2019	2/28/2021	12-C-AM-WISU-116	Advanced Fiber Reinforced Polymer Composite Materials Guidance for Aircraft Design Certification Process and Control	Wichita State University	\$700,000
3/1/2019	5/31/2020	12-C-AM-WISU-117	Adhesive Qualification Guidance for Aircraft Design and Certification	Wichita State University	\$350,000
3/1/2019	5/31/2020	12-C-AM-WISU-118	Adhesive Bond Qualification Guidance for Aircraft Design and Certification	Wichita State University	\$650,000
3/1/2019	8/31/2020	12-C-AM-WISU-119	Administration of the Center of Excellence for Composites and Advanced Materials (CECAM)	Wichita State University	\$75,000
3/1/2019	2/28/2020	12-C-AM-UW-043	Administration of JAMS-AMTAS Center of Excellence	University of Washington	\$82,186
3/1/2019	2/28/2020	12-C-AM-MSU-002	Effects of New Jet Fuel Exposure & Post-Crash Fire Forensic Analysis on Aerospace Composites	Mississippi State University	\$500,000

Active Grants in FY 2019 - COE					
Period of Performance		Grant Number	Grant Title	Recipient Institution	Award Amount
Award Date	End Date				
3/1/2019	2/28/2020	12-C-AM-UU-024	Development of a Building Block Approach for Crashworthiness Testing of Composites	The University of Utah	\$75,000
2/21/2019	7/20/2019	12-C-GA-ISU-030	Heated Pavements	Iowa State University of Science and Technology	\$206,063
11/30/2018	11/29/2019	12-C-GA-ISU-028	Heated Pavements	Iowa State University of Science and Technology	\$60,000
11/16/2018	11/15/2019	12-C-GA-ISU-026	Heated Pavements	Iowa State University of Science and Technology	\$80,000

Aviation Research Grants

The table below details the FAA's Active Aviation Research Grants.

Active Aviation Research Grants in FY 2019				
Award Date	Grant Type	Project Title	Recipient Institution	Award Amount
9/17/2019	Cooperative Agreements	Modern Training Practices: Methods and Assessment in the Air Carrier Industry	University of Florida	\$965,526
9/17/2019	Cooperative Agreements	Methodologies to Model Tail Cutoff Location for SMART-DT Input Random Variables	Rutgers University	\$260,310
9/17/2019	Cooperative Agreements	Microwave System for Surface Collection Efficiency Measurements	Baylor University	\$216,125
9/17/2019	Cooperative Agreements	Lighting and Visual Guidance Research for Airport Applications	Rensselaer Polytechnic Institute	\$250,000
9/26/2019	Cooperative Agreements	Specification of Nonnuclear Technology in Measuring Properties of Unbound Pavement Materials	University of Texas at El Paso	\$155,000
9/26/2019	Cooperative Agreements	ATO Alarm Management	University of Chicago	\$139,707
9/26/2019	Cooperative Agreements	Tree Growth Forecasting	Broome County IDA	\$172,000
9/26/2019	Cooperative Agreements	Air Carrier Training Recommendations to Address Limitations of Pilot Procedures during Unexpected Events in NextGen Operations	University of Central Florida	\$352,748
9/26/2019	Cooperative Agreements	FAA Joint University Program for Air Transportation	MIT	\$179,053.07

Active Aviation Research Grants in FY 2019				
Award Date	Grant Type	Project Title	Recipient Institution	Award Amount
9/26/2019	Cooperative Agreements	Simulation-Aided Design of Novel Ductile Fracture Experiments for Aerospace Metals	University of Dayton	\$58,864
9/26/2019	Cooperative Agreements	Gamifying Visual Strategies for Training Enroute Air Traffic Controllers	University of Oklahoma	\$134,153

Interagency Agreements

The table below details the FAA's Active Interagency Agreements (IAs).

Active Agreements in FY 2019 - Interagency						
Period of Performance		Agrmt No.	Agrmt Type	Agency/Team (if appl.)	Vendor Org	Purpose
Start Date	End Date					
10/10/2019	10/9/2024	CT-19-00013-A1	Interagency Agreement	DOD	US Air Force Lifecycle Management Center	Conduct research for tasks in the area of airborne systems at Software Engineering Institute (SEI) (Carnegie-Mellon), a Federally Funded Research Development Center.
9/9/2019	TBD	6973GH-19-D-00066	Contract	GEN 10025	Brigham and Women's Hospital, Harvard University	Sleep Deprivation.
9/11/2019	7/1/2024	692M15-19-T-00020	Memorandum of Agreement	University of Pennsylvania	University of Pennsylvania	Support national sleep study.
9/11/2019	7/1/2024	692M15-19-T-00021	Memorandum of Agreement	Westat	Westat	Support national sleep study.

Active Agreements in FY 2019 - Interagency						
Period of Performance		Agrmt No.	Agrmt Type	Agency/Team (if appl.)	Vendor Org	Purpose
Start Date	End Date					
7/25/2019	7/24/2021	692M15-19-N-00010	Interagency Agreement	NASA	Ames Research Center	Develop performance-based standards for novel cockpit pilot interfaces of optionally piloted vehicles to support regulatory, standards, and guidance development.
7/1/2019	06/24/2024	DTFAC-14-X-00001	Interagency Agreement	Smithsonian Institute	Smithsonian Institute	Identify bird strike remains through feather and DNA analysis
6/24/2019	6/28/2024	DTFAC-14-X-00007	Interagency Agreement	USDA	US Department of Agriculture, Wildlife Services	Continue operational support, research, and exploratory development efforts in wildlife hazard mitigation.
6/24/2019	6/23/2024	692M15-19-N-00013	Interagency Agreement	NASA	Armstrong Flight Research Center	Develop safety systems and improve methodologies for certifying general aviation aircraft.
3/19/2019	Indefinite	Unassigned	MOU	AUT	Southwestern Oklahoma State University	Student/Research & Training.

Active Agreements in FY 2019 - Interagency						
Period of Performance		Agrmt No.	Agrmt Type	Agency/Team (if appl.)	Vendor Org	Purpose
Start Date	End Date					
10/3/2018	4/2/2020	692M15-18-T-00006	Memorandum of Agreement	Port of Seattle	Port of Seattle	Quantify safety benefits of utilizing Foreign Object Debris detection systems in airport environments.
10/1/2018	09/30/2020	6973GH-18-C-00096	Contract	DYN 10087	Garrett Sager	Consultant.
10/1/2018	9/30/2019	IAA 9531BM19H0	IAA	CHE	NTSB	Surface Accidents.
9/17/2018	12/31/2019	DTFAWA-10-C-00080	Interagency Agreement	FFRDC	MITRE CAASD (Center for Advanced Aviation System Development)	Support simple airport capacity model.
9/17/2018	12/31/2020	DTFAWA-10-C-00080	Interagency Agreement	FFRDC	MITRE CAASD (Center for Advanced Aviation System Development)	Support runway length evaluations - Phase 4.
9/1/2018	9/2/2023	692M15-18-N-00022	Interagency Agreement	DOD	Naval Air Warfare Center Weapons Division (NAWCWD)	Support uncontained engine debris damage assessment modeling.
9/1/2018	TBD	6973GH-18-D-00110	Contract	GEN 10022	Baylor College of Medicine	Modafinil, sequencing.

Active Agreements in FY 2019 - Interagency						
Period of Performance		Agrmt No.	Agrmt Type	Agency/Team (if appl.)	Vendor Org	Purpose
Start Date	End Date					
8/1/2018	7/31/2023	692M15-18-T-00015	Other Transaction Agreement	Battelle Memorial Institute	Battelle Memorial Institute	Support for "Metallic Materials Properties Development and Standardization (MMPDS)" handbook activity. Standardization effort to develop allowables needed for aircraft certification and continued airworthiness.
7/6/2018	1/6/2020	692M15-18-N-00019	Interagency Agreement	DOT	Volpe National Transportation System Center	Collect images of LED High Intensity Runway Edge Lights with IR with a visible and enhanced vision system cameras.
7/3/2018	1/3/2020	DTFAC-17-V-00011	Memorandum of Agreement	Metropolitan Airports Commission	Metropolitan Airports Commission	Conduct an Indoor Navigation Trial Project to assist Blind and Visually Impaired (BVI) passengers at the Minneapolis-St. Paul International Airport.
6/28/2018	06/27/2023	Unassigned	MOU	CAMI	OK Office of the Chief Medical Office	COOP (Tox. Samples, etc.).

Active Agreements in FY 2019 - Interagency						
Period of Performance		Agrmt No.	Agrmt Type	Agency/Team (if appl.)	Vendor Org	Purpose
Start Date	End Date					
3/30/2018	10/30/2019	16-G-006	Cooperative Agreement	National Institute of Aerospace	National Institute of Aerospace (NIA)	Conduct research in aircraft composite sandwich structures failure. Develop analytical and numerical models to study face sheet to core disbonds, in order to support ASTM test standardization and disbond growth prediction.
02/12/2018	02/11/2023	Unassigned	MOU	AAM-600	New Castle H.S.	Student Internships.
1/18/2018	1/18/2023	692M15-18-T-00003	Memorandum of Agreement	National Institute of Aerospace	National Institute of Aerospace (NIA)	Conduct research and development; provide for outreach efforts; and establish a framework for partnering in Science, Technology, Engineering, and Mathematics (STEM) academic institutional relationships, internships, and K-12 initiatives.
12/21/2017	12/20/2022	USAMRMC 1223899/8.1 0.17	MOU	GEN 10144	Walter Reed Army Institute of Research	Rotations/ Laboratory Training.
9/15/2017	11/30/2019	DTFAWA-10-C-00080	Interagency Agreement	FFRDC	MITRE CAASD (Center for Advanced Aviation System Development)	Support runway length evaluations – Phase 3.

Active Agreements in FY 2019 - Interagency						
Period of Performance		Agrmt No.	Agrmt Type	Agency/Team (if appl.)	Vendor Org	Purpose
Start Date	End Date					
8/1/2017	7/31/2020	DTFACT-17-V-00009	Other Transaction Agreement	Elbit Systems, Ltd.	Elbit Systems, Ltd.	Support helicopter safety research efforts to lower the fatal accident rate for rotorcraft operations. One of the FAA's current efforts underway focuses on reducing the fatal accident rate by examining helicopter operational safety improvements using enhanced/synthetic vision systems' technologies.
7/1/2017	6/30/2022	DTFACT-17-X-80002	Interagency Agreement	NOAA	National Centers for Environmental Prediction (NCEP)	Conduct aviation hazard diagnosis and forecast research and development
6/1/2017	12/1/2019	17-G-008, Am. 2	Grant	DYN 10085	SW Research Institute (SWRI-II)	Crash Survival.
3/1/2017	2/29/2020	17-G-002	Grant	DYN 10082	Medical College of Wisconsin (MCW-II)	Crash Survival.
2/21/2017	2/20/2021	DTFACT-17-X-80000	Interagency Agreement	NASA	Ames Research Center	Conduct joint research and development and testing activities related to the development of stable approach criteria.
9/24/2016	9/23/2021	DTFACT-16-X-00005	Interagency Agreement	DOD	Naval Air Warfare Center Weapons Division (NAWCWD)	Support uncontained engine debris damage assessment modeling.

Active Agreements in FY 2019 - Interagency						
Period of Performance		Agrmt No.	Agrmt Type	Agency/Team (if appl.)	Vendor Org	Purpose
Start Date	End Date					
9/8/2016	Until Terminated	DTFAC-16-X-0004	Interagency Agreement	NASA	Langley Research Center	Conduct research, development and testing in the area of aircraft structures and materials.
8/16/2016	8/16/2020	DTFAWA-15-A-80017	OTA	AEE	Honeywell	<p>Under CLEEN Phase II, Honeywell's advanced turbine BOAS increases high pressure turbine efficiency, resulting in reduced fuel burn. The technology leverages advanced light-weight, high-temperature materials and coatings and is designed to minimize leakage between shroud and advanced turbine blade tip.</p> <p>Under CLEEN Phase II, Honeywell is developing a compact low emissions combustor that uses advanced aerodynamics and fuel injection technologies to reduce engine NO_x emissions while reducing weight, and thereby reducing fuel burn.</p>
8/1/2016	7/31/2021	DTFAAC-16-D-00058	Contract	Division	Venesco LLC	In-House Labor.

Active Agreements in FY 2019 - Interagency						
Period of Performance		Agrmt No.	Agrmt Type	Agency/Team (if appl.)	Vendor Org	Purpose
Start Date	End Date					
6/1/2016	5/31/2021	DTFAWA-16-X-80009	Interagency Agreement	NOAA	Earth System Research Laboratory (ESRL)	Conduct meteorological research and development related to modeling and data assimilation techniques, and measurement of forecast quality
9/30/2015	9/30/2020	DTFAWA-15-A-80010	OTA	AEE	Pratt & Whitney	Under CLEEN Phase II, Pratt & Whitney is developing and demonstrating technologies for the engine compressor and turbine to improve engine thermal efficiency and reduce fuel burn for Pratt & Whitney geared turbofan engines. The development work is focused on advanced aerodynamics, cooling, and durability optimization.

Active Agreements in FY 2019 - Interagency						
Period of Performance		Agrmt No.	Agrmt Type	Agency/Team (if appl.)	Vendor Org	Purpose
Start Date	End Date					
9/30/2015	9/30/2020	DTFAWA-15-A-80012	OTA	AEE	Rolls-Royce	Under CLEEN Phase II, Rolls-Royce's advanced Rich-Quench-Lean (RQL) combustion system employs advanced fuel injection and mixing technologies that will provide significant emissions reduction while simultaneously enabling the increase in Turbine Entry Temperature required by advanced engine cycles.

Active Agreements in FY 2019 - Interagency						
Period of Performance		Agrmt No.	Agrmt Type	Agency/Team (if appl.)	Vendor Org	Purpose
Start Date	End Date					
9/30/2015	9/30/2020	DTFAWA-15-A-80011	OTA	AEE	Boeing	<p>Under CLEEN Phase II, Boeing is conducting design and test work in collaboration with Rolls-Royce on a compact nacelle inlet and thrust reverser design for ultra-high bypass engines. The technology is expected to reduce weight and allow for improved acoustic treatment.</p> <p>Under CLEEN Phase II, Boeing is developing and demonstrating advanced aircraft wing technologies. The SEW provides large weight reductions through new manufacturing techniques and advanced composite material technology, resulting in a reduction of aircraft fuel burn.</p>
9/30/2015	9/30/2020	DTFAWA-15-A-80016	OTA	AEE	America's Phoenix, MDS Coating, and Delta Tech Ops	<p>Under CLEEN Phase II, The team is developing and demonstrating a protective leading edge coating for gas turbine engine fan blades. This coating protects against fan blade erosion, a source of lost aerodynamic efficiency in engines in service</p>

Active Agreements in FY 2019 - Interagency						
Period of Performance		Agrmt No.	Agrmt Type	Agency/Team (if appl.)	Vendor Org	Purpose
Start Date	End Date					
9/16/2015	9/16/2020	DTFAWA-15-A-80013	OTA	AEE	General Electric	<p>Under CLEEN Phase II, GE conducted extensive rig test validation and development of risk mitigation technologies for the TAPS III low emissions combustor, thus enabling the technology to meet the CLEEN II NOx target.</p> <p>Under CLEEN Phase II, GE is developing novel acoustic liner and fan noise source strength reduction technologies to combat the reduced noise treatment area available in low fan pressure ratio engines.</p> <p>Under CLEEN Phase II, MESTANG is an integrated aircraft power system designed to support future "more-electric" aircraft architectures that optimizes new power extraction, generation, distribution, and conversion systems.</p> <p>Under CLEEN Phase II, GE's FMS software algorithms will optimize aircraft performance during the cruise</p>

Active Agreements in FY 2019 - Interagency						
Period of Performance		Agrmt No.	Agrmt Type	Agency/Team (if appl.)	Vendor Org	Purpose
Start Date	End Date					
						and descent phases of flight.
8/5/2015	8/5/2020	DTFAWA-15-A-80015	OTA	AEE	Collins Aerospace (formerly known as United Technologies Corporation / Rohr Inc.	Under CLEEN Phase II, Collins Aerospace is developing integrated propulsion system nacelle technology to reduce noise, fuel burn, and emissions. The company is advancing innovative acoustic treatment technologies and clean fan duct thrust reverser designs.
8/1/2015	Indefinite	Unassigned	MOU	CAMI/Division	Aerospace Medicine Research Alignment and Collaboration Council (AMRAC: NASA/USA/USN /USAF/ FAA)	Aerospace Medicine Research Alignment and Collaboration.
7/16/2015	7/15/2020	DTFACT-15-X-00007	Interagency Agreement	DOD	US Naval Air Warfare Center	Support integration of UAS into the NAS.
7/9/2015	7/8/2020	DTFACT-15-X-80005	Interagency Agreement	NOAA	National Severe Storms Laboratory (NSSL)	Conduct research and development of weather sensing and processing networks
4/22/2013	Indefinite	Unassigned	MOU	CAMI	NTSB-FAA-CAMI-ASIAS	NTSB data.

Active Agreements in FY 2019 - Interagency						
Period of Performance		Agrmt No.	Agrmt Type	Agency/Team (if appl.)	Vendor Org	Purpose
Start Date	End Date					
9/30/2012	3/31/2020	DTFACT-12-X-00009	Interagency Agreement	DOE	Department of Energy (DOE)/National Nuclear Security Administration (NNSA)/Sandia Site Office (SSO)	Support research in the areas of maintenance and inspection, structural and health monitoring, and nondestructive evaluation.
5/26/2011	3/21/2020	DTFAWA-11-X-80007 TO #48	Interagency Agreement	Federally Funded Research & Development Center, MIT Lincoln Laboratory	Federally Funded Research & Development Center, MIT Lincoln Laboratory	Support Aircraft Systems Information Security Protection effort and develop a Safety Risk assessment study.
11/15/2010	9/30/2030	DTFASO-10-H-00131	Memorandum of Agreement	Delaware River and Bay Authority	Delaware River and Bay Authority (DRBA)	Grant rights to construct, operate, and maintain research infrastructure at Cape May County Airport.
7/10/2007	7/9/2012	AST – Being Updated	MOC	Division	AST-CAMI	Collaboration, Research, Training, and support.
1/3/1975	Indefinite	N/A	Reimbursable MOA	AM-2 Requirement	DOT and NTSB	Aerospace Accident Forensic Toxicology.

International Agreements

The table below details the FAA's Active International Agreements.

Active Agreements in FY 2019 - International				
Effective Date	FAA R&D Program	Agrmt No.	Partner	Objective/Purpose
6/11/2019	Disbond Failures of Sandwich Structures	CON-I-8000-1-1	Technical University of Denmark	Sets forth the terms and conditions under which the FAA and DTU may cooperate to investigate the in-service disbond failures observed in composite sandwich aircraft structures.
12/13/2017	NextGen/SESAR Air Traffic Management Modernization, Civil Aviation Research and Development and Global Interoperability	NAT- I- 9406A1-1-1	European Union	Cooperation on research and development of ATM modernization programs, NextGen, and SESAR, taking into account the interests of civil and military airspace users.
12/13/2017	NextGen/SESAR Air Traffic Management Modernization, Civil Aviation Research and Development and Global Interoperability	NAT- I- 9406A1-1-2	European Union	Develop comparable operational performance measures, including measures concerning gate-to-gate operational performance and cost efficiency. Continuation of operational performance reports produced by FAA and EUROCONTROL.
12/13/2017	NextGen/SESAR Air Traffic Management Modernization, Civil Aviation Research and Development and Global Interoperability	NAT- I- 9406A1-1-3	European Union	Cooperation within ATM modernization programs on NextGen/SESAR deployment programs and projects, taking into account the interests of civil and military airspace users.
3/28/2017	GBAS	NAT-I-4016-I	Brazil ANSP (DECEA)	Research and analysis of data collected from ionospheric disturbances and its effect on the system performance of Ground-Based Augmentation Systems.
9/4/2015	Aircraft Icing	CON-I-5102-1-1	Finnish Transport Safety Agency (Trafi)	Aircraft icing research, including frost formation studies, computational fluid dynamics for ground de/anti-icing fluids, and the aerodynamics characteristics of de/anti-icing.

Active Agreements in FY 2019 - International				
Effective Date	FAA R&D Program	Agrmt No.	Partner	Objective/Purpose
9/3/2014	Alternative Fuels	NAT-I-8417 Annex 4	National Research Council of Canada	Aircraft and Propulsion System Alternative Fuels Research.
12/9/2013	Aircraft Icing	CON-I-3101-1	Centre National de la Recherche Scientifique	Research of in-flight icing conditions, including convective weather ice crystal and supercooled large droplet icing conditions.
12/9/2013	Aircraft Icing	CON-I-3101-1-1	Centre National de la Recherche Scientifique	Research of inflight icing environment and the instrumentation used to measure the variables employed to describe those environments.
9/24/2013	ATM Performance Measurement	NAT-I-3001	CAA- Singapore	Establish cooperation in performing ATM modernization.
2/12/2013	ATM Performance Measurement	NAT- I-9406-2	European Union	US-EU Coordination of ATM-related Operational Performance Reports.
9/24/2012	Biochemistry Research Team – (CHE)	Other –N/A	Royal Canadian AF	Forensic Tox. Cases (≤ 10 /yr.).
12/9/2011	Aircraft Icing	NAT-I-8917	National Research Council of Canada	Aircraft and Propulsion System Icing Research (Annex 1 to MOC): This agreement establishes cooperative research on the simulation of ice-crystal environments, for the investigation of the effects of such environments on engines.
10/07/2011	Aircraft Icing	CON-I-2901-1	Bureau of Meteorology (BOM), Australia	Research of inflight icing conditions, including super cooled large-droplet conditions.
10/07/2011	Aircraft Icing	CON-I-2901-1-1	Bureau of Meteorology of Australia (BOM)	Research of inflight icing environments and the instrumentation used to measure the variables used to describe those environments.
9/30/2011	Aircraft Icing	NAT-I-3444	Environment and Climate Change Canada (ECCC)	Support atmospheric icing research.
9/28/2011	Aircraft Icing	CON-I-2901	Bureau of Meteorology of Australia (BOM)	Support research flights focusing on high-ice-water-content conditions conducive to engine ice-crystal icing.

Active Agreements in FY 2019 - International				
Effective Date	FAA R&D Program	Agrmt No.	Partner	Objective/Purpose
5/11/2011	Wake Turbulence	NAT-I-8417-1-3	National Research Council of Canada	Research on the effects of aircraft wake turbulence on training aircraft.
6/19/2007	Airport Technology Capacity	AIA/CA-5 Annex 16	La Direction Generale de L'Aviation Civile (DGAC)	Coordination of R&D activities and the sharing of information resulting from related studies, tests, and analyses in the field of airfield pavement.
9/24/2004	Wake Vortex Research	NAT- I-3454-1	EUROCONTROL	Air Traffic Management Research: Collaborate and share experiences on various ATM research topics that are of interest to both the U.S. and Europe.
9/24/2004	Environmental Modeling for ATM and Safety Management Techniques	NAT-I- 3454-5	EUROCONTROL	Collaborate on and share methods for evaluating safety management, ATM security, and ATM environmental factors.
4/2/2004	Fire Safety	AIA/CA-41 Annex 3 Appendix 7	CAA – United Kingdom	Establish a method of cooperation in performing research to improve passenger survivability during aircraft emergencies or accidents involving fire.
2002	Numerical Sciences	MOU/ unassigned	Royal Military College of Canada	Instrument Loan.
7/10/2001	System Safety Management	AIA/CA-52	CAA - Netherlands	Establishes a method of cooperation in R&D programs in the area of aviation-system safety, including the risks to the public connected with civil aviation activities and operations in the vicinity of airports.
7/10/2001	System Safety Management	AIA/CA-52-8	CAA - Netherlands	Cooperatively study risk, safety modeling, and safety analysis.
8/1/1996	Aircraft Icing	NAT-I-8417	National Research Council of Canada (NRC)	Conduct atmospheric and facility icing research (supercooled liquid drops and ice-crystal icing).
8/1/1996	Aircraft Icing	PA-17	Transport Canada	Conduct ground icing research.

Active Agreements in FY 2019 - International				
Effective Date	FAA R&D Program	Agrmt No.	Partner	Objective/Purpose
4/29/1999	Aircraft Icing	NAT-I-3444	Environment and Climate Change Canada	Collaborative research in the area of inflight icing environments and the instrumentation used to measure the variables used to describe those environments.
6/18/1970	Aircraft Icing	MOC NAT- I-0831 PA- 19	Transport Canada	Deicing and Anti-Icing Research: the investigation of aerodynamic flow-off characteristics of anti-icing fluids contaminated with different types of frozen precipitation; the investigation of the effectiveness of proposed laboratory test procedures in evaluating aircraft anti-icing fluids' failure modes in mixed icing conditions; and the investigation into other aircraft deicing problems and issues.