Parallax ADVANCED RESEARCH

Ohio Federal Research Network

Driving Innovation Through Strategic Partnerships

The Ohio Federal Research Network (OFRN) is a program managed by Parallax Advanced Research Corporation in collaboration with The Ohio State University and funded by the Ohio Department of Higher Education. OFRN has the mission to stimulate Ohio's innovation economy by building vibrant, statewide university and industry research collaborations that meet the requirements of OFRN's five government partners and create leading-edge technologies that drive economic development in Ohio. ***OFRN, codified in state statute, invested to date more than $51.4 million to advance applied research to address federal needs.*** Since 2014, the OFRN has achieved the following:

$355.7M+ in follow-on funding | **35 research projects funded** | **21 academic partners** | **97 industry partners**

Funding Round Terms Key

R1 - The OFRN Centers of Excellence Round 1 projects
R2 - The OFRN Centers of Excellence Round 2 projects
R3 - The OFRN SOARING Initiative Round 3 projects
R4 - The OFRN SOARING Initiative Round 4 projects
R5 - The OFRN SOARING Initiative Round 5 projects

CONTROL

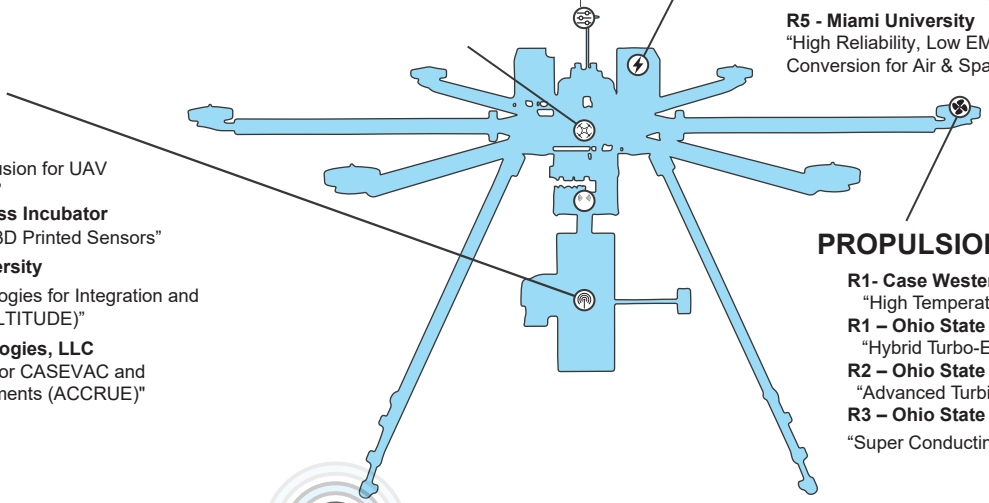
R1 – Ohio State University
"Intelligent Control Architecture"
R2 – Ohio State University
"Effects of Motion Sickness on Military Health"
R2 – Wright State University
"Automated Test, Evaluation, Verification and Validation Tools"
R3 – Persistent Surveillance Systems
"Automated Cirrus SR22 for Surveillance or Personnel Transport"
R4 – Asymmetric Technologies
"IronClad Secure Flight Controller"

STRUCTURAL

R1 – University of Toledo
"Adaptive Bio-Inspired Aerospace Structures Actuated by Shape Memory Alloys"
R1 – University of Akron
"High Performance Plastic Substrates for Flexible Electronics"
R2 – University of Dayton Research Institute
"Cost Effective 3D Printed Complex Geometry Composites"
R2 – The Ohio State University
"Carbon Nanotube Electro-Thermal Ice Protection System for UAVs"

POWER

R1 – Case Western Reserve University
"Multifunctional Structural Battery"
R1 – University of Akron
"High Density Li-ion Battery with Silicon Anodes"
R1 - University of Dayton Research Institute
"High-Energy Long-Life Li-S Battery"
R4 – Kent State University
"A Hybrid Fuel Cell – Battery/Capacitor Power Source for UASs"
R5 - Safran Power USA, LLC
"Advanced High Voltage DC Generator System for Aerospace with Rapid Dynamic Response"
R5 - Miami University
"High Reliability, Low EMI, Wide Bandgap Power Conversion for Air & Space Applications"



SENSORS & AWARENESS

R3 – GhostWave
"Optical-Radar Sensor Fusion for UAV Onboard Detect and Avoid"
R4 – Youngstown Business Incubator
"Geometrically Complex 3D Printed Sensors"
R5 - The Ohio State University
"Affordable LIDAR Technologies for Integration and Unmanned Deployment (ALTITUDE)"
R5 - Asymmetric Technologies, LLC
"Autonomous Capabilities for CASEVAC and Resupply in UrbanEnvironments (ACCRUE)"

PROPULSION

R1- Case Western Reserve University
"High Temperature Magnetic Materials"
R1 – Ohio State University
"Hybrid Turbo-Electric Propulsion"
R2 – Ohio State University
"Advanced Turbine Cooling"
R3 – Ohio State University
"Super Conducting Brushless Motors"

COMMUNICATION

R2 – Wright State University
"C2PNT Intelligent Channel Sensing"

AEROSPACE AWARENESS

R2 – Wright State University
"Human-Centered Big Data Trustworthiness"
R3 – University of Cincinnati
"RouteMaster – A Collision Avoidance and Traffic Management Digital Infrastructure"
R4 – GhostWave
"Integrated Optical-Radar Sensor Fusion System for Air Space Awareness"
R5 - Flightprofiler
"Low Altitude Weather Network (LAWN)"

COMMAND & CONTROL

R1 – Wright State University
"Augmented UAV Operator Human Machine Interface (HMI)"
R2 – University of Cincinnati
"Advanced Cognitive and Physical Sweat Biosensing for Operators"
R4 – CAL Analytics
"Interoperability in the Modern UAS Traffic Management Architectures"
R4 – Riverside Research
"Computer-Human Interaction for Rapid Program Analysis through Cognitive Collaboration"

PLANNING

R1 – Wright State University
"Regional UAV Live-Virtual-Constructive Enterprise"

Contact us today or visit our website to learn about each initiative and project round:
www.ohiofrn.org | ofrn@parallaxresearch.org