



Ohio
Federal
Research
Network

Driving Innovation Through Strategic Partnerships

Administered by:

Parallax
ADVANCED RESEARCH

THE OHIO STATE
UNIVERSITY

Funded by:

Ohio | Department of
Higher Education

Services & Impact

MISSION

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 Ohio's four federal partners and create leading-edge technologies that drive economic development in Ohio.

IMPACT

Return on Investment (~6:1) since 2015

- \$72M State of Ohio Investment
- \$405M+ Follow-on Funding Awarded
- \$41.3M Cost-share
- 16 Spinouts created
- 48 R&D Projects Funded
- 391 Jobs Created
- 12 IPs Created, +2 Pending

Network/Collaborators/Partners

- 5 Government Agencies
 - AFRL, NASIC, NASA-GRC, NAMRU-D, ONG
- 113 Industry Companies
- 25 Academic Institutions

SERVICES



Commercialization/ Tech Transfer & Transition

Identify the best market(s) for your technology, and move your technology from concept to market quickly and efficiently.



Networking, Collaboration & Team Matchmaking

Make new connections, build teams, and share ideas with likeminded individuals to evolve your technology and/or scientific capabilities.



Workforce Development

Leverage our workforce development services to help you spin out new businesses, create high-quality jobs in Ohio, and commercialize your technologies.



R&D Funding

Apply for OFRN open solicitation rounds and earn government funding to move your technology from idea to reality.



Marketing & Communications

Work with our marketing and communications team to develop case studies, success stories, and demonstration videos about your OFRN-funded technologies and we'll promote these stories across the web, in media, and at various events.



Education, Training & Proposal Navigation

Learn how to write successful proposals and pitch your technology to potential government customers with our education & training and SBIR/STTR proposal navigation services.

CONTACT US

If you are an Ohio-based academic or industry innovator with a promising idea or intellectual property for which you'd like to pursue federal funding, or are interested in collaborating on research projects or need assistance; or are an Ohio-based academic or small business, then we want to hear from you!

e-mail: ofrn@parallaxresearch.org

On the web: ohiofrn.org

Ongoing or Completed 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"
- R6 - The Ohio State University: "Structural Materials Joining in Space"
- R7 - Ohio State University: "Photonic Interfaces for Atom-based Quantum Processors"
- R7 - Laser Fusion Solutions: "Joining of ODS Additive Materials"

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: "Brushless Doubly-fed Machine and Drive System for Aviation Application"

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: "Autonomous Capabilities for CASEVAC and Resupply in Urban Environments (ACCRUE)"
- R6 - GhostWave: "Quantum Sensor System using Rydberg Atoms"

COMMUNICATION

- R2 - Wright State University: "C2PNT Intelligent Channel Sensing"

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: "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"
- R6 - University of Akron: "High Bandwidth Light Weight Modular GaN Based Utility Interactive DC Generator"
- R7 - Ohio State University: "Gas-insulated Cable with Integrated Partial Discharge Detection for Aerospace Systems"

AEROSPACE AWARENESS

- R2 - Wright State University: "Human-Centered Big Data"
- R3 - University of Cincinnati: "Regional Unmanned Traffic Management System (RUTMS)"
- R4 - GhostWave: "Integrated Optical-Radar Sensor Fusion System for Air Space Awareness"
- R5 - Flightprofiler: "Low Altitude Weather Network (LAWN)"
- R7 - Ohio State University: "Space GUIDE: Spaceborne Gain-enabled Ultra-sensitive Infrared Detector with Event-based sensing"

COMMAND & CONTROL

- R1 - Wright State University: "Sliding-Scale Autonomy through Physiological Rhythm Evaluations (SAPHYRE)"
- 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"
- R6 - Kairos Research: "Ocular and Physio-Temporal Indicators of Cognitive State (OPTICS)"
- R7 - Mined XAI: "Resilient Explainable AI for Casualty Triage with Logistics Awareness Using Deep Topological Modeling (REACT-X)"
- R7 - Kairos Research: "Validated Indicators for Selective Trust in Autonomy (VISTA)"

PLANNING

- R1 - Wright State University: "Regional Live-Virtual-Constructive Enterprise (RLVC)"

HYPERSONICS

- R6 - CFD Research Corporation: "A Machine Learning Framework for Digital Engineering of Hypersonic Vehicles with Quantified Prediction Uncertainty (Hypersonic ML FW)"
- R6 - ARCTOS Technology Solutions: "Gradient Alloy Processing in Laser Powder Bed Fusion for Hypersonic Applications"
- R7 - AsterTech: "Hypersonic Engineered Reusable Ceramic Ultra-Lightweight Enduring System (HERCULES)"

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
- R6 - The OFRN Round 6 projects
- R7 - The OFRN Round 7 projects

