OUR RESEARCH LABORATORIES: GTRI is headquartered on the Georgia Tech campus in Midtown Atlanta, Georgia. In Fiscal Year 2014 we performed more than $300 million of problem-solving research in our eight dynamic laboratories organized into three directorates: Electronics, Optics and Systems (EOS), Information and Cyber Sciences (ICS) and Sensors and Intelligent Systems (SIS). These laboratories are found on and off the main campus, and in 15 field offices located around the nation.

ELECTRONICS, OPTICS & SYSTEMS
Joe Brooks, GTRI Deputy Director

APPLIED SYSTEMS LABORATORY (ASL)
Laboratory Director: Barry Bullard, Ph.D.
www.gtri.gatech.edu/asl
ASL conducts applied research, development, test and evaluation (RDT&E) of ground-based air and missile defense (GBAMD) and rotary-wing aviation systems. Activities include hardware-in-the-loop (HWIL) and software-in-the-loop (SWIL) RDT&E, system modeling and simulation, system-of-systems and family-of-systems interoperability for integrated air and missile defense (IAMD), GBAMD fire control and command & control (C2), and critical safety software development & engineering.

ELECTRONICS SYSTEMS LABORATORY (ELSYS)
Laboratory Director: John Balsam (Interim)
www.gtri.gatech.edu/elsys
ELSYS delivers innovative products, research, and education, making positive and lasting impacts on our customers. Our mission is to solve problems and advance solutions to meet state and national objectives. ELSYS employs an “end-to-end” approach to developing electronic warfare and other electronic systems solutions. ELSYS human systems research supports U.S. government agency needs, industrial product usability and accessibility evaluation, and workplace health and safety programs.

ELECTRONIC OPTICAL SYSTEMS LABORATORY (EOSL)
Laboratory Director: Gisele Bennett, Ph.D.
www.gtri.gatech.edu/eosl
eosl.gtri.gatech.edu
EOSL is a leader in electro-optical systems, materials, and interfaces of those systems. EOSL spans the electromagnetic spectrum from radio frequency (RF) through ultraviolet (UV). We develop and validate materials and devices to create novel applications that use sensors to turn photons into knowledge. Core research includes LIDAR, active electro-optical intelligence, surveillance, and reconnaissance (EO-ISR); modeling and simulation of infrared countermeasures; RF transmit/receive modules for radar; multifunctional materials; optical and RF tagging and tracking; and sensor intelligence and visualization. EOSL houses the Medical Device Test Center and the Army Reprogramming Analysis Team (ARAT) program office, providing EW support to the U.S. Army.

OUT LOCATIONS
Aberdeen (MD) Field Office
Atlanta (GA) Headquarters
Cobb County (GA) Research Facility
Dayton (OH) Field Office
Hampton Roads (VA) Field Office
Huntsville (AL) Research Center
Orlando (FL) Field Office
Paxtuxent River (MD) Field Office
Panama City (FL) Field Office
Pearl City (HI) Field Office
Quantico (VA) Field Office
San Antonio (TX) Field Office
San Diego (CA) Field Office
Shalimar (FL) Field Office
Tucson (AZ) Field Office
Warner Robbins (GA) Field Office
Washington (DC) Field Office

OUR MISSION: To solve complex problems through innovative and customer-focused research and education.

OUR VISION: To be the world’s premier applied research and development organization.
INFORMATION & CYBER SCIENCES
Bo Rotoloni, GTRI Deputy Director

CTISL
Cyber Technology and Information Security Laboratory (CTISL)
Laboratory Director: Andrew Howard
www.gtri.gatech.edu/ctisl

CTISL conducts applied research focused on cyber threats and countermeasures, secure multi-level information sharing, resilient command and control network architectures, reverse engineering, information operations and exploitation, high performance computing, and data analytics. CTISL engineers develop and apply cutting-edge technologies in computing, network architectures, signal and protocol analysis, network forensics, malware analysis, open source threat information collection and correlation, insider threat detection and mitigation, hardware and software reverse engineering, and advanced analytics to solve the toughest problems of the times. CTISL also brings this knowledge to the classroom through professional education offerings across the full range of these technologies.

ICL
Information and Communications Laboratory (ICL)
Laboratory Director: Jeff Evans
www.gtri.gatech.edu/icl

ICL conducts research that solves complex problems in areas of computer science, information technology, communications, networking, and socio-technical systems. Research for public and private clients supports national security; emergency response; integration of health care systems; interoperability and security of interconnected systems; education and learning; technology strategy, planning, and decision support; development of public policy; and commercial product realization.

SENSORS & INTELLIGENT SYSTEMS
William Melvin, GTRI Deputy Director

ACL
Advanced Concepts Laboratory (ACL)
Laboratory Director: Mark Mitchell
www.gtri.gatech.edu/acl

ACL provides innovative, tailored solutions to challenging problems for our customers, including Department of Defense, Intelligence Agencies, and industry. Our laboratory identifies and transitions advances in basic research for use in real-world applications, with particular emphasis on antennas, electromagnetics, quantum computing, and integrated analysis of signals and systems. ACL possesses extensive capabilities for numerical modeling, experimentation, and characterization to prove new technologies and concepts.

ATAS
Aerospace, Transportation and Advanced Systems Laboratory (ATAS)
Laboratory Director: Rusty Roberts
www.gtri.gatech.edu/atas

ATAS develops advanced technologies and systems from concept development to prototypes. Included are system simulations and test and evaluations related to threat radars, missiles, air and ground vehicles, unmanned and autonomous systems, transportation systems, power and energy systems, and food processing technologies.

SEAL
Sensors and Electromagnetic Applications Laboratory (SEAL)
Laboratory Director: Mel Belcher
www.gtri.gatech.edu/seal

SEAL research falls into four primary areas: intelligence, surveillance, and reconnaissance (ISR); air and missile defense; foreign material exploitation and electromagnetic systems; and electronic attack/electronic protection (EA/EP). SEAL investigates and develops radio/microwave frequency sensor systems with particular emphasis on radar systems engineering, electronics intelligence (ELINT), communications intelligence (COMINT), measurements intelligence (MASINT), electromagnetic environmental effects, radar system performance modeling and simulation, advanced signal and array processing, sensor fusion, antenna technology, and EA/EP. SEAL develops advanced signal and data processing methods for acoustic sensors and multi-sensor intelligence exploitation architectures and algorithms covering all wavebands.