Character of the Laboratory

The ElectroScience Laboratory (ESL) is a major center-of-excellence within the Ohio State University College of Engineering and Department of Electrical and Computer Engineering, and is one of the largest Radio Frequency (RF) research laboratories in the world. Our reseach involves all aspects of electromagnetic and RF technologies, including:

- Ground penetrating radar systems
- RF measurement techniques
- RF materials
- Remote sensing
- Computational methods for EM
- Radar imaging
- Propagation and radar scattering
- Antenna design
- Electromagnetic compatibility and interference
- Bioelectromagnetics
- Photonics
- Signal Processing
- Satellite and ultra-wide-bandwidth communications
- RF integrated circuits (RFICs) and systems
- Packaging and interconnect design
- Composite material characterization
- Micro-device modeling
- Bio-nanotechnology and nano-imprinting

ESL offers government and industry sponsors an environment for both fundamental and engineering systems research to solve real-world challenges. Our researchers are experts in all aspects of applied EM research, including analytical and numerical modeling as well as sensor development and data interpretation. The laboratory maintains world-class experimental facilities and leads an industrially supported Electromagnetic Measurements Consortium. In addition to our indoor anechoic chamber and RF measurement facility, numerous ESL-developed sensor systems for ground penetrating radar, microwave radiometry, and electromagnetic characterization are available.

ESL 2004 PROFILE

FACULTY	10
EMERITUS FACULTY	4
RESEARCHERS	14
GRADUATE STUDENTS	67
INDUSTRY FELLOWS	5
UNDERGRADUATES	17
SUPPORT STAFF	9
TOTAL PERSONNEL	121
ANNUAL EXTERNAL FUNDING	$6.54M