

# Southwest Research Institute®

*Benefiting government, industry and the public  
through innovative science and technology*

Dr. Pablo Bueno – Lead Engineer  
Mechanical Engineering Division

Presented at IARPA SOLTICE Proposers Day  
May 7, 2024



ADVANCED SCIENCE. APPLIED TECHNOLOGY.

# SwRI Today



- Nonprofit
- Over 2,700 employees
- Over 1,500 acres / 6.07 km<sup>2</sup> facility in San Antonio, Texas
- 2.3 million ft<sup>2</sup> / 213,000 m<sup>2</sup> of laboratories & offices
- More than 1,300 patents
- 47 R&D 100 awards

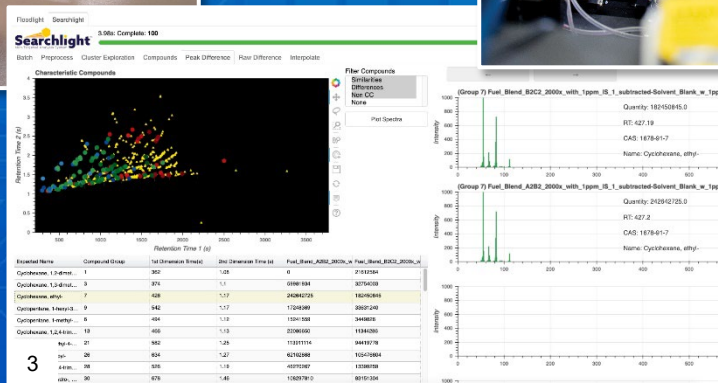
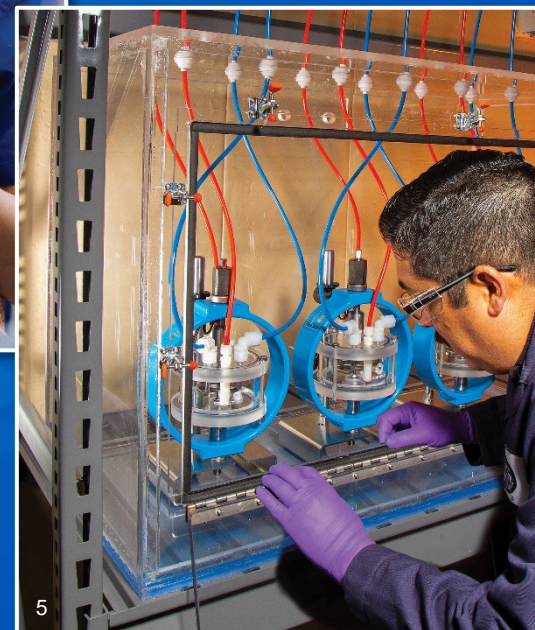
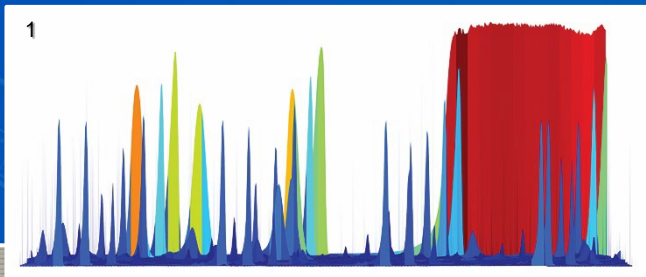
# SwRI in the Technology Spectrum



# SwRI R&D Organizations

- Applied Physics
- Applied Power
- Chemistry and Chemical Engineering
- Defense and Intelligence Solutions
- Center for Nuclear Waste Regulatory Analyses - FFRDC
- Fuels and Lubricants Research
- Intelligent Systems
- Mechanical Engineering
- Powertrain Engineering
- Space Science and Engineering

# Chemistry & Materials

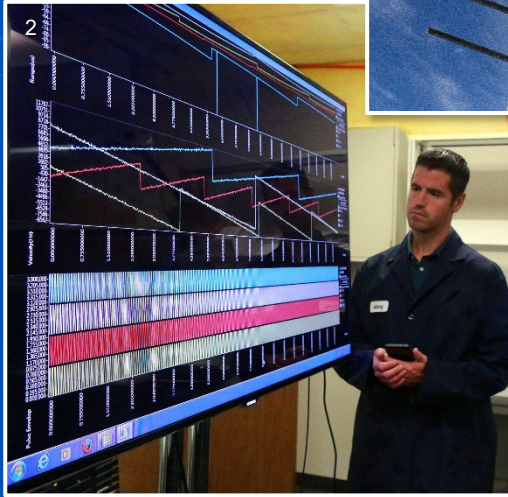


Chemicals and materials are a part of our everyday lives, from the products we use to the foods we eat and more. Our team of scientists, analysts, and engineers works to find solutions to difficult technical challenges that help improve safety, health, and product performance. We comply with regulatory and safety requirements and use advanced analysis technologies to develop and improve materials that enhance the performance of client products.



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# Defense & Security

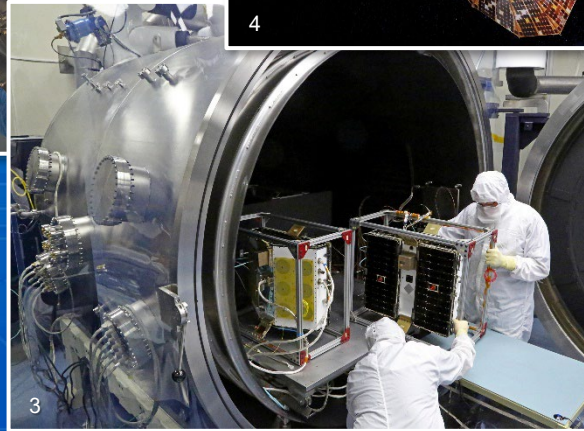
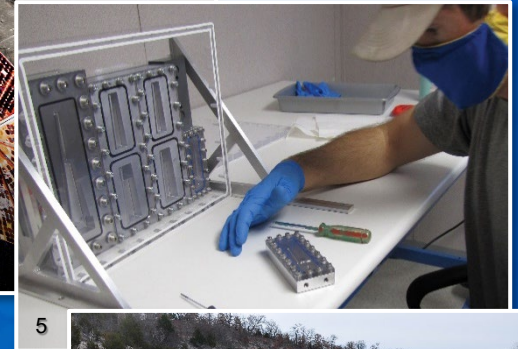
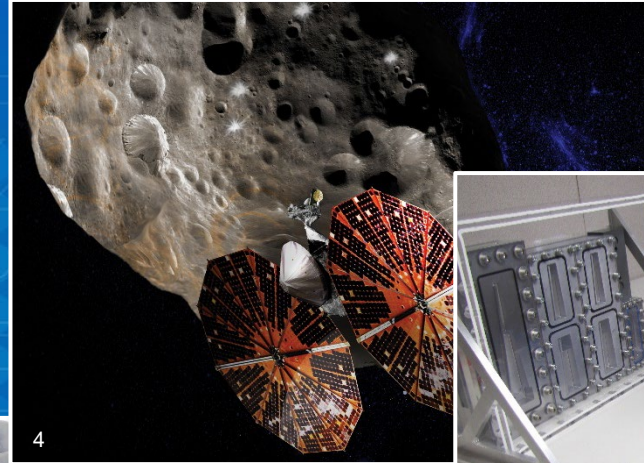
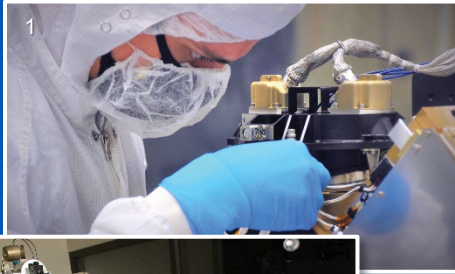


*We evaluate weapons and armors including both large and small ballistics and explosives. We also perform work in cyber security, radio frequency and signal analysis to advance industry network and homeland security. We provide world-class aerospace and aircraft solutions, and we also develop highly advanced, custom defense systems, large antennas, and sophisticated armors.*



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# Earth & Space

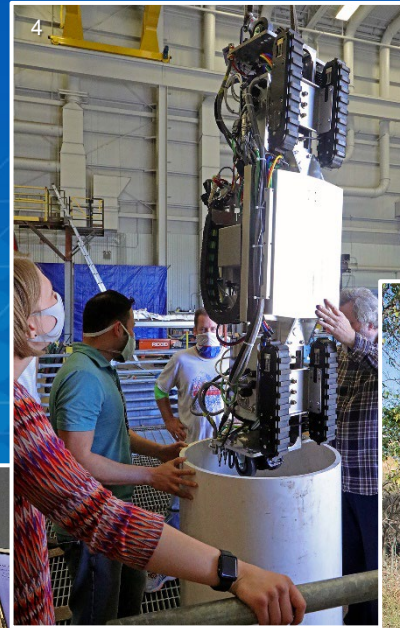


*Our research efforts explore mysteries from deep sea to deep space. Here at home, we explore the geological secrets of our own planet and apply expertise in deep-water systems to adapt components for harsh ocean environments. We also lead programs and missions that study the farthest reaches of our solar system.*



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# Electronics & Automation



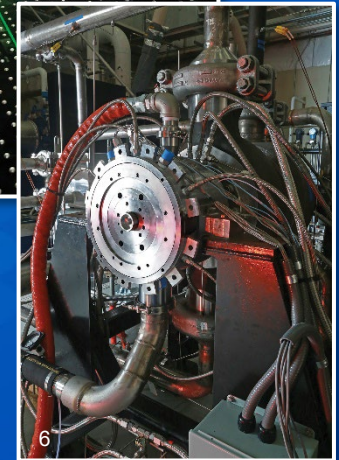
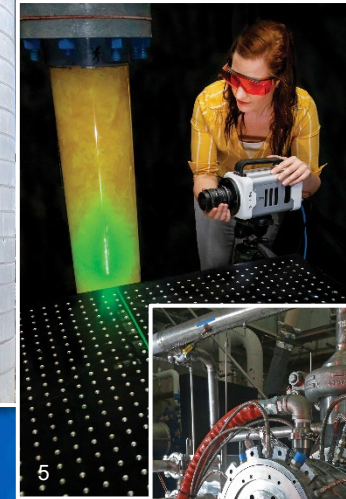
*We use advanced computer tools and electronics to develop innovative solutions for difficult technical challenges. We design and develop custom software programs to meet specific client needs. We license a number of our advanced software programs. We design and implement software products, intelligent transportation systems, automated manufacturing systems, industrial engineering solutions and communications electronics for government and industry clients. Our programs are used in operations and maintenance for military and commercial manned aircraft, unmanned aerial vehicles and training systems..*



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# Energy & Environment



*Energy fuels the global economy from the power plants driving heavy industry to the refining of conventional resources that drive transportation for land, sea, air, and even space. From oil and gas to nuclear and renewable resources, SwRI is a leading provider of technical solutions that improve the efficiency, performance, and safety of energy across fuel cycles and supply chains. As part of our work in energy, we provide comprehensive environmental services that complement our work in improving efficiency and lowering emissions.*



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# SOUTHWEST RESEARCH INSTITUTE®

Advanced science. Applied technology.