872 PAPERS PUBLISHED

212 PRESENTATIONS GIVEN

136 WEBINARS HOSTED

17 PODCASTS AIRED

25 U.S. PATENTS AWARDED

46 U.S. PATENT APPLICATIONS FILED

48 INVENTION DISCLOSURES SUBMITTED

2,774 EMPLOYEES

276 DOCTORATES

560 MASTERS

864 BACHELORS

226 ASSOCIATES

MILESTONES 2021

HONORS

Dr. Sidney Chocron: American Institute of Aeronautics and Astronautics (AIAA) Associate Fellow

Dr. David Ferrill: Geological Society of America Fellow

Dr. Stephen Fuselier: Elected to National Academy of Sciences

Dr. Imad Khalek: SAE Fellow

Dr. John Spencer: American Geophysical Union (AGU) Fellow

Dr. Alan Stern: AGU Fellow, AIAA Associate Fellow

Dr. Roy B. Torbert: AGU Fellow

AWARDS

Dr. Terry Alger: Meritorious Service Medal (Civilian), Army Science Board

Dr. Scott Bolton: National Space Society's 2020 Space Pioneer Award

Dr. James L. Burch: AGU's 2021 William Bowie Medal

Don Grosch: NASA's Exceptional Public Achievement Medal

Svitlana Kroll: SAE International's Forest R. McFarland Award

Dr. Amy McCleney: 2021 New Emerging Leaders Award, Offshore Technology Conference

D025171

D024949_6141

At an industry challenge event, SwRI demonstrated autonomy technology for an unmanned aircraft system, successfully navigating a nonoperational nuclear facility to locate radiation sources hidden inside. SwRI's drone-based system uses novel algorithms and computer vision to autonomously explore and map unfamiliar environments.
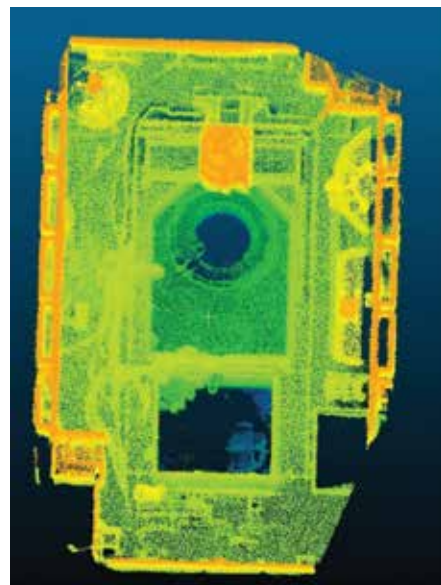
Three SwRI-developed technologies were selected as winners of prestigious R&D 100 Awards, recognizing them as being among the 100 most significant innovations for 2021.

2021
R&D 100 WINNER

Developed with internal and Department of Energy's NEXTCAR program funding, SwRI's Eco-Mobility with Connected Powertrains technology achieves over 20% in energy savings and reduced carbon emissions in connected and automated vehicles. This breakthrough technology uses algorithms, software and testing tools to enhance vehicle route, speed profile and power flows, lowering fuel consumption by leveraging vehicle-to-vehicle, vehicle-to-infrastructure and vehicle-to-everything technologies.
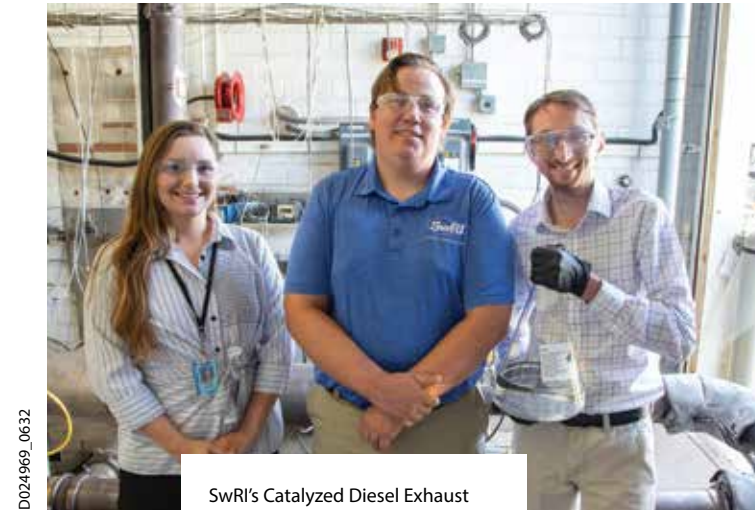
D024969_0632

SwRI's Catalyzed Diesel Exhaust Fluid (Cat-DEF™) is a catalyst- and surfactant-modified diesel exhaust fluid that improves nitrogen oxide and carbon dioxide emissions by reducing deposit formation in diesel engine exhaust systems. The Cat-DEF innovation will help reduce air pollution and improve air quality, allowing automotive manufacturers to meet regulations, and can be used in new and existing vehicles without modifying existing engines.

D025113_9683

Using internal funding, a multidivisional team developed Floodlight™ software to efficiently sort through analytical data to accurately identify the chemicals present in food, air and consumer products. Using SwRI's ground-truth labeling of analytical data, machine learning specialists trained the system to identify chemicals at accuracies comparable to human experts, accelerating the process by as much as 100 percent.

D025116_9576