MILESTONES 2019

673 PAPERS published
PRESENTATIONS GIVEN 318

HONORS

Dr. Christopher Freitas: ASME 2019 Patrick J. Higgins Medal
Adam L. Hamilton, P.E.: Named American Association for the Advancement of Science (AAAS) Fellow
Dr. Peter Lee: Elected Institution of Mechanical Engineers Fellow
Dr. Kelsi Singer: Received 2019 Harold C. Urey Prize from the American Astronomical Society’s Division for Planetary Sciences
Dr. Alan Stern: Appointed to the National Science Board

AWARDS

Dr. Terry Alger: 2019 Edith and Peter O’Donnell Award in Technology Innovation from The Academy of Medicine, Engineering and Science of Texas
Dr. Amanda Bayless: 40 Under 40 Award, San Antonio Business Journal
Dr. Scott Bolton: Smithsonian Magazine’s American Ingenuity Award
Matthew Herron: National Safety Council Rising Stars of Safety Award
Henry Sees: Association of Old Crows Lifetime Achievement Award
George Wilson: ASTM Award of Merit and Fellow

PATENTS & INVENTIONS

41 U.S. PATENTS awarded
33 U.S. PATENT applications filed
48 INVENTION disclosures submitted

In 2019, SwRI’s AF-360 VHF/UHF Terrestrial Direction-Finding (DF) Antenna measures the angle of arrival of signals across the VHF/UHF radio frequency spectrum. Its novel sleeved electric dipoles boast 80% more usable bandwidth than conventional dipoles, providing 10 times the sensitivity of other commercially available DF antennas at significantly reduced cost and complexity.

SwRI’s Lotus Superhydrophobic Compositions and Coating Process (LotusFlo™) creates superhydrophobic coatings, designed to repel substances that often clog production piping used in offshore oil wells. The coating process involves linking 40-foot sections of pipe, creating vacuum conditions inside and accelerating ionized molecules onto the interior surfaces to create a glass-like coating.

In 2019, the Juno mission to Jupiter imaged the shadow of the moon Io on the facade of the gas giant. The shadow was roughly the size of Io itself and only slightly larger than Earth’s Moon.

Dr. Terry Alger: 2019 Edith and Peter O’Donnell Award in Technology Innovation from The Academy of Medicine, Engineering and Science of Texas
Dr. Amanda Bayless: 40 Under 40 Award, San Antonio Business Journal
Dr. Scott Bolton: Smithsonian Magazine’s American Ingenuity Award
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In 2019, SwRI won two R&D 100 awards, which recognize the 100 most significant innovations for the year.

Using machine learning, SwRI trained an algorithm using breast cancer cell images for the BreastPathQ: Cancer Cellularity Challenge. Out of 100 submissions, our algorithm placed first in the international challenge to automate breast cancer cell detection.

2,749 EMPLOYEES

285 DOCTORATES
549 MASTERS
789 BACHELORS
258 ASSOCIATES