

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

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.



IMAGE COURTESY NASA/JPL-CALTECH/SWRI/MSS/KEVIN M. GILL

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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

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.

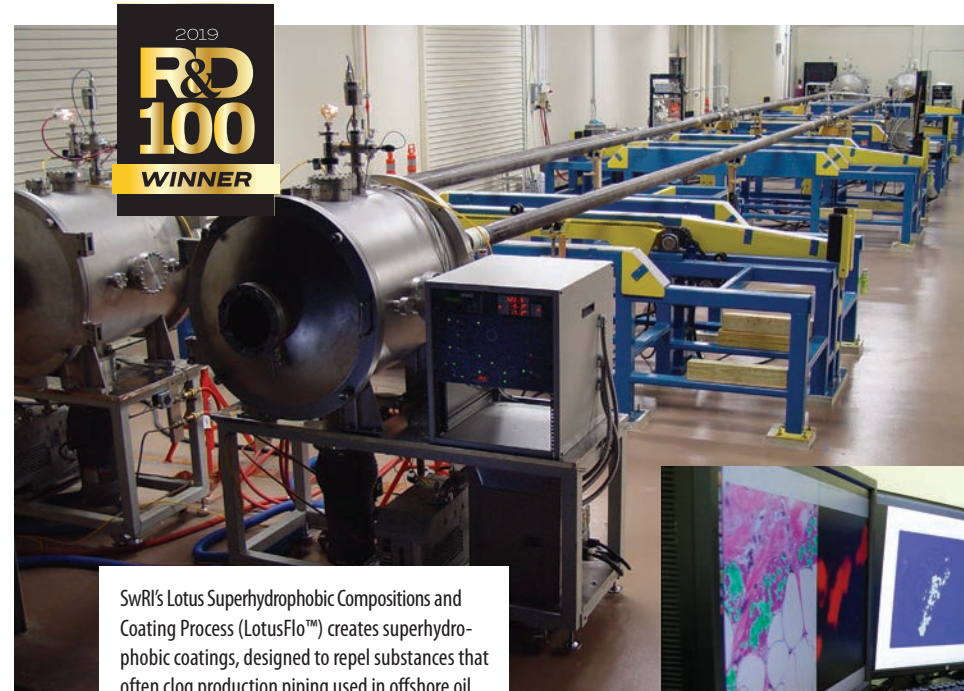
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PATENTS & inventions

41 U.S. PATENTS awarded

U.S. PATENT **33** applications filed

48 INVENTION disclosures submitted



D024098

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.



D023530_3787

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 M A S T E R S

789 BACHELORS

258 ASSOCIATES



In 2019, SwRI won two R&D 100 awards, which recognize the 100 most significant innovations for the year.