Lee Phillips

Education	Ph.D., Dartmouth College, Hanover, NH, 1987: theoretical physics. B.A., Hampshire College, Amherst, MA, 1980: physics, mathematics, music. Diploma, Stuyvesant High School, New York, NY, 1976.
Employment	Freelance writer and consultant, 2011 – present. Chief Scientist, Alogus Research Corporation, 2011 – present. Research Physicist, 1989 – 2011, Naval Research Laboratory, Washington, DC. Postdoctoral Research Associate, 1987 – 1989, Dartmouth College (under Prof. David Montgomery).
Experience, Skills, & Awards	Large-scale, parallel simulation of plasmas, fluids, and molecular dynamics. Fluid and MHD theory. Large-scale simulation of plasmas, fluids, and molecular dynamics. Major contributer to multiple grant proposals resulting in funding of large, multi-year physics projects. Analysis and visualization of massive datasets from simulations using Fortran and Scientific Python. Development of novel analytical techniques for studying fluids, magnetohydrodynamics, object tracking, and shocks and detonations in crystals. Linux workstation and server administration. Website programming using Python, Django, and PostgreSQL. Numerous Research Publication Awards and Merit Awards from NRL. Regular presenter at international conferences. Fortran and C on massively parallel supercomputers. Dartmouth Graduate Fellowship. Dartmouth Postdoctoral Research Fellowship.
Service	Member of the Board of Directors of the Friends of Arlington's Planetarium. Frequent reviewer of submissions to physics journals. Mentor to high school scientists in NRL's Science and Engineering Apprentice Program. Judge for the Sigma Xi Pure Science Award. Create and host dynamic websites for nonprofit organizations. Regular volunteer at local public elementary school.
Some Representative Publications	General relativity: 100 years of the most beautiful theory ever created. *Ars Technica* (December 2015). The leap second: Because our clocks are more accurate than the Earth. *Ars Technica* (April 2016). Meet the largest science project in US government history—the James Webb Telescope. *Ars Technica* (March 2016). A Dozen Science Destinations. *Northern Virginia Magazine* **10** 50 - 53 (March 2015). The female mathematician who changed the course of physics — but couldn't get a job. *Ars Technica* (May 2015). Scientific computing's future. *Ars Technica* (May 2014).

Annie Jump Cannon's Birthday. *Friends of Arlington's Planetarium* (December 2014).

Have a scientific problem? Steal an answer from nature. *Ars Technica* (January 2015).

The never-ending conundrums of classical physics. *Ars Technica* (August 2014).

Richtmyer-Meshkov-like instabilities and early-time perturbation growth in laser targets and Z-pinch loads. *Phys. Plasmas* **7** 1662–1671 (2000).

New Target Designs for Direct-Drive ICF. *Laser and Particle Beams* **17** 225 (1999).

Observation of Parameteric Instabilities in the Quarter Critical Density Region Driven by the Nike KrF Laser. *Phys. Plasmas* **20** (February 2013).

Recent Interviews

About solar energy on the Matt Townsend Show, Sirius XM Radio Ch. 143, May 16, 2017.

"Science 2.0" on G-Town Radio (Philadelphia), June 28, 2014.

How A Crappy User Interface Can Create A Privacy Nightmare, *Fast Company*, January 2014.