

J. Pace VanDevender, PhD
President, VanDevender Enterprises, LLC
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and
Emeritus Vice President and CTO, Sandia National Laboratories
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Education

- Ph.D. in Physics from the Imperial College of Science and Technology, University of London, England in 1974
- M.A. in Physics from Dartmouth College in 1971
- B.A. in Physics from Vanderbilt University in 1969

Awards

- Marshall Scholar, United Kingdom
- Department of Energy's Lawrence Award for Physics in 1991 for his contributions to Pulsed Power Research and Technology
- Fellow of the American Physical Society
- Fellow of the American Association for the Advancement of Science
- Senior Member of the Institute of Electrical and Electronic Engineers

Recent Publications

1. VanDevender, J. Pace, Buchenauer, C. Jerald, Cai, Chunpei, VanDevender, Aaron P. and Ulmen, Benjamin A. Radio frequency emissions from dark-matter-candidate magnetized quark nuggets interacting with matter. *Sci Rep* **10**, 13756 (2020).
2. VanDevender, J. P., Shoemaker, I., Sloan T., VanDevender, A. P. & Ulmen, B.A. Mass distribution of magnetized quark-nugget dark matter and comparison with requirements and direct measurements. Submitted to *Sci. Repts*. Available at <https://arxiv.org/abs/2004.12272> (2020). (Date of access: 10/05/2020).
3. VanDevender, J. Pace, VanDevender, Aaron P., Sloan, T., Swaim, Criss, Wilson, Peter, Schmitt, Robert. G., Zakirov, Rinat, Blum, Josh, Cross Sr, James L. and McGinley, Niall Detection of magnetized quark nuggets, a candidate for dark matter. *Sci. Rep.* **7**, 8758 (2017). www.nature.com/articles/s41598-017-09087-3
4. VanDevender, J. Pace, Schmitt, Robert G., McGinley, Niall, Duggan, David G., McGinty, Seamus, VanDevender, Aaron P., Wilson, Peter, Dixon, Deborah, Auer, Helen, McRae, Jacquelyn Results of search of magnetized quark-nugget dark matter from radial impacts on Earth. Available at <https://arxiv.org/abs/2007.04826> (2020).
5. VanDevender, J. Pace, VanDevender, Aaron P., Wilson, Peter, and McGinley, Niall Results of search for magnetized quark-nugget dark matter from nearly tangentially transiting Earth. [Paper is in preparation for submission to *Scientific Reports*.]

Relevant Work Experience

President of VanDevender Enterprises, LLC, and Emeritus Vice President and CTO of Sandia National Laboratories. (July 2005 to Present)

As President of VanDevender Enterprises, LLC, Pace has led a team searching for evidence of quark nuggets (also called strangelets) as a significant contributor to dark matter. The publication cited above document the results of that work.

As Emeritus Vice President and CTO of Sandia National Laboratories, Pace has consulted with Sandia managers and executives, participated in technical and managerial reviews, and conducted and mentored research for inertial fusion energy and nuclear weapon effects. He also designed a Fusion Plasma Power Station (PPS), researched Quasi Spherical Direct Drive (QSDD) fusion capsules with LASNEX simulations, and designed diagnostics for experiments on Sandia's Z Machine imploding plasma driver.

Sandia National Laboratories

Vice President, Science, Technology, and Partnerships Division; Vice President of the Science, Technology; Engineering Strategic Management Unit; Chief Technology Officer; and Chief Scientific Officer for the Nuclear Weapons Program (September 2003 to June 2005)

Director, Executive Staff (July 2002 to September 2003)

Chief Information Officer (July 1998 to July 2002)

Director, Science Policy Center (February 1998 to July 1998)

Director of National Industrial Alliances Center (October 1993 to December 1995)

Director of Corporate Communications (May 1993 to September 1993)

In executive management roles and during his role as President of a spin-off company Prosperity Institute (1993-1995), Pace helped advances in laboratory and national missions of national defense, energy security, economic competitiveness, and science policy.

Director of the Center for Pulsed Power Sciences (1984 to 1993)

Manager of Fusion Research (1982 to 1984)

Supervisor of Pulsed Power Research (1978 to 1982)

Senior Member of Technical Staff (1974 to 1978)

In these four roles, Pace contributed original research and led organizations for Inertial Confinement Fusion, nuclear weapon effects simulation, directed energy weapons, x-ray physics, pulsed power sciences, and design and construction of superpower (> 10 TW) accelerators PBFA-I, PBFA-II, Saturn, and Hermes III.