

Br. Paschal Strader, O.P.

Academic Dean
Dominican School of Philosophy & Theology
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Curriculum Vitae
(Updated Fall 2025)

Education

Ph.D., Physics

August 2016 UC Santa Barbara
Dissertation: "Digital Readout for Microwave Kinetic Inductance Detectors and Applications in High Time Resolution Astronomy"
Director: Benjamin A. Mazin
Area of Concentration: Experimental Astrophysics

M.A., Theology and M.A., Philosophy, Concurrent, with Honors

February 2024 Dominican School of Philosophy and Theology
Berkeley, California.

Thesis: "Arguments from an Ordered Universe:
Fine-Tuning vs. Final Causality"

M.A., Physics

June 2013 UC Santa Barbara

B.S., Physics, summa cum laude

March 2010 CSU San Bernardino

B.S., Computer Science, summa cum laude

March 2010 CSU San Bernardino

Professional Experience

Academic Dean

Dominican School of Philosophy and Theology, Berkeley, CA
February 2024 – present
July 2024 – February 2024, Interim.

Executive Assistant

Dominican School of Philosophy and Theology, Berkeley, CA
January 2024 – July 2024

Research Assistant

UC Santa Barbara, Physics Department
Mazin Lab, Fall 2011 - Summer 2016

Teaching Experience

Instructor of Record

Dominican School of Philosophy and Theology, Philosophy Department

Fall 2025

Courses: Philosophy of Nature

Teaching Assistant

UC Santa Barbara, Physics Department

Fall 2010 - Winter 2010, Fall 2011

Courses: Analog Electronics, Introductory Physics, Senior Laboratory

Areas of Interest

Aristotelian-Thomist Philosophy of Nature

Natural Theology

Philosophy of Physics

Astronomical Instrumentation

Pulsar Astronomy

Cosmology

Professional Associations

Society of Catholic Scientists, 2019 - present

Publications

Fruitwala, N., P. STRADER, G. Cancelo, T. Zmuda, K. Treptow, N. Wilcer, C. Stoughton et al. "Second generation readout for large format photon counting microwave kinetic inductance detectors." *Review of Scientific Instruments* 91, no. 12 (2020): 124705.

Meeker, S. R., B. A. Mazin, A. B. Walter, P. STRADER, N. Fruitwala, C. Bockstiegel, P. Szypryt et al. "DARKNESS: a microwave kinetic inductance detector integral field spectrograph for high-contrast astronomy." *Publications of the Astronomical Society of the Pacific* 130, no. 988 (2018): 065001.

Collura, G., P. STRADER, S. R. Meeker, P. Szypryt, A. B. Walter, C. Bockstiegel, B. A. Mazin, and T. A. Prince. "Search for Optical Pulsation in M82 X-2." *The Astrophysical Journal* 850, no. 1 (2017): 65.

STRADER, M. J., A. M. Archibald, S. R. Meeker, P. Szypryt, A. B. Walter, J. C. van Eyken, G. Ulbricht et al. "Search for optical pulsations in PSR J0337+ 1715." *Monthly Notices of the Royal Astronomical Society* 459, no. 1 (2016): 427-430.

van Eyken, J. C., M. J. STRADER, A. B. Walter, S. R. Meeker, P. Szypryt, C. Stoughton, K. O'Brien et al. "The ARCONS pipeline: Data reduction for MKID arrays." *The Astrophysical Journal Supplement Series* 219, no. 1 (2015): 14.

Szypryt, P., G. E. Duggan, B. A. Mazin, S. R. Meeker, M. J. STRADER, J. C. van Eyken, D. Marsden et al. "Direct detection of SDSS J0926+ 3624 orbital expansion with ARCONS." *Monthly Notices of the Royal Astronomical Society* 439, no. 3 (2014): 2765-2770.

STRADER, M. J., M. D. Johnson, B. A. Mazin, GV Spiro Jaeger, C. R. Gwinn, S. R. Meeker, P. Szypryt et al. "Excess optical enhancement observed with ARCONS for early Crab giant pulses." *The Astrophysical Journal Letters* 779, no. 1 (2013): L12.

Mazin, B. A., Seth R. Meeker, M. J. STRADER, P. Szypryt, D. Marsden, J. C. Van Eyken, G. E. Duggan et al. "ARCONS: A 2024 pixel optical through near-IR cryogenic imaging spectrophotometer." *Publications of the Astronomical Society of the Pacific* 125, no. 933 (2013): 1348-1361.

Presentations

The Existence of God: Aquinas and Astrophysics

Jan 2024 St. Thomas More Catholic Newman Center, Eugene, OR

Apr 2024 UW Catholic Newman Center, Seattle, WA

Topic: The Fine-Tuning Argument for God's Existence and its vulnerabilities, compared with Aquinas's Fifth Way.

God's Governance of the World

Dec 2023 Regional meeting of Dominican laity, Phoenix, AZ.

Topic: An explanation of Aquinas's Fifth Way, starting with modern physics, and implications for how God governs the world.

Pursuing Truth: Faith, Science, and Philosophy

Jan 2020 St. Dominic's Church, Los Angeles, CA

Topic: Philosophical mistakes leading to apparent conflict between faith and science, along with better philosophical principles leading to compatibility and complementarity.

Questions about the Universe

June 2017 St. Dominic's Parish, San Francisco, CA

Topic: A seven part lecture series covering the Big Bang, Evolution, Scriptural Interpretation, etc.

Professional Activities

"That Sounds Like Fun." Interview by Madeleine Shepley on the podcast "Shine Bright Like the Firmament." Sep 2023. Available online at <https://shinebrightlikethefirmament.buzzsprout.com/1997204/episodes/13581752-that-sounds-like-fun>.