

CURRICULUM VITAE

- Dr. Oliver Davis JOHNS
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- Residence: San Francisco, California, USA; Nationality: U.S.A.

Education:

- B.S., Physics, Massachusetts Institute of Technology, Cambridge, Massachusetts, 1956.
- B.A. (M.A.), Mathematics, Oxford University, Oxford, England, 1958 (1962).
- B.Sc., Physics, Oxford University, Oxford, England, 1959.
- Ph.D., Physics, University of California, Berkeley, California, 1968.

Positions held:

- Rhodes Scholar, Balliol College, Oxford University, Oxford, England, 1956–1959.
- Teaching assistant and University fellow, U.C. Berkeley, Berkeley, California, 1960–1961.
- Senior research physicist, AGN Corporation, San Ramon, California, 1961–1963.
- Research and teaching assistant, Lawrence Radiation Laboratory and U.C. Berkeley, Berkeley, California, 1965–1968.
- Guest fellow, Nuclear Research Institute, Prague, Czechoslovakia, 1969.
- Postdoctoral fellow, Niels Bohr Institute, Copenhagen, Denmark, 1969–1970.
- Guest lecturer and visiting fellow, Technical University, Munich, West Germany, 1971–1972.
- Chercheur associé, Institut d'Astrophysique, Paris, France, and Centre d'Études Nucléaires de Saclay, Gif sûr Yvette, France, 1972–1973.
- Guest, Department of Astronomy, U.C. Berkeley, and Lawrence Berkeley Laboratory, Berkeley, California, 1973.
- Guest fellow, Université de Paris, Faculté de Science, Laboratoire René Bernas, Orsay, France, 1974.
- Guest, Lawrence Berkeley Laboratory, Berkeley, California, 1974–1975.
- Visiting associate professor, Department of Physics and Astronomy, University of Hawaii, Honolulu, Hawaii, 1975.
- Visiting research fellow, Centre d'Études Nucléaires de Saclay, Gif sûr Yvette, France, 1976.
- Lecturer, California State University Sacramento, Sacramento, California, 1977–1978.
- Lecturer, San Francisco State University, San Francisco, California, 1978–1982.

- Associate professor of Physics, San Francisco State University, San Francisco, California, 1982–1986.
- Visiting professor (sabbatical leave), Department of Theoretical Physics, Oxford University, Oxford, England, 1987.
- Professor of Physics, San Francisco State University, San Francisco, California, 1986 to 2004.
- Teaching Excellence Award, Phi Beta Kappa National Scholastic Honorary Society, 2001.
- Professor of Physics Emeritus, San Francisco State University, San Francisco, California, 2004 to present.
- Visiting Scholar (yearly visits), Department of Theoretical Physics and Sub-Faculty of Philosophy, Wolfson College, Oxford University, Oxford, England, 1987 to present.

Memberships:

- American Physical Society, British Society for the Philosophy of Science, The Philosophy of Science Association, The American Radio Relay League.

Research Interests:

- Analytical Mechanics.
- Foundations of current physical theories.

Publications:

- "A spherical version of Feynman's static field momentum example" <<https://arXiv.org/abs/1911.05893v2>> (2023).
- "Is electromagnetic field momentum due to the flow of field energy?" *Studies in the History and Philosophy of Science*, 88: 358–366 (2021). Updated in <<https://arXiv.org/abs/2105.05355v3>> (2023).
- "Magnetic charge and duality invariance" <<https://arXiv.org/abs/2303.05624v1>> (2023).
- "Validity of the Einstein hole argument" *Studies in the History and Philosophy of Modern Physics* 68: 62-70 (2019). Updated in <<https://arXiv.org/abs/1907.01614v2>> (2023)
- "Leibniz equivalence, Newton equivalence, and substantivalism" <<https://arXiv.org/abs/1908.04326v1>> (2019).
- **Analytical Mechanics**, Oxford University Press, 2005. (2nd ed. 2011, paperback 2016)
- "Canonical transformations with time as a coordinate" *American Journal of Physics* 57: 204 (1989).
- "Form of the manifestly covariant Lagrangian" *American Journal of Physics* 53: 982 (1985)
- "The long-lived radioisotopes as monitors of stellar and galactic evolution" (with H. Reeves) *The Astrophysical Journal* 206: 958 (1976)
- "The r-process production ratios of long-lived radionuclides" (with H. Reeves) *The Astrophysical Journal* 202: 21 (1975)

- "The long-lived radioisotopes as monitors of stellar, galactic, and cosmological phenomena" (with H. Reeves) *Lawrence Berkeley Laboratory report LBL-4000*: 229 (1974)
- "The dynamic r-process nucleosynthesis of heavy and superheavy elements" *Laboratoire René Bernas, Orsay, report LR74*: 3 (1974) and *Lawrence Berkeley Laboratory report LBL-4000*: 277 (1974).
- "Neutron energy distributions and the termination of the r-process" (with H. Reeves) *The Astrophysical Journal* 186: 233 (1973)
- "Projections and removal of non-vibrational correlations from states of the random phase approximation" *Annals of Physics* 77: 216 (1973)
- "A consistent random phase approximation formalism" *Zeitschrift für Physik* 253: 269 (1972)
- "The pairing force in the quasi-boson approximation" (with J.O. Rasmussen) *Nuclear Physics* A154: 65 (1970)
- **Pairing in Nuclei**, Ph.D. Thesis, U.C. Berkeley (1968), and *Lawrence Berkeley Laboratory report UCRL 18614*: (1969)
- "A new particle-conserving variational wave function," (with J.O. Rasmussen) *Lawrence Berkeley Laboratory report UCRL 16580*: 29 (1965)