

Glenn Eric Johnson

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Dr. Johnson lived in San Gabriel and Alhambra, California. Dr. Johnson attended Harvey Mudd College in Claremont, California as a California State Scholar and graduated with a B.S. in 1972 majoring in physics. At Harvey Mudd, he was recognized with the Thomas Benjamin Brown Memorial Award for outstanding senior physics research for a polarizing interferometer demonstrating distinctions between classical and quantum mechanics. Dr. Johnson subsequently attended the University of Maryland at College Park, Maryland receiving a M.S. in physics in 1976 and a Ph.D. in physics in 1978 under his advisor Dr. Daniel Fivel. His masters research paper was “Notes on Schrödinger’s Cat and the Formal Theory of the Many-worlds Interpretation of Quantum Mechanics” and his dissertation was “Model Green’s functions and the Axioms of Quantum Field Theory.” Dr. Johnson attended the 1976 Cargèse Summer Institute on New Developments in Quantum Field Theory and Statistical Mechanics in Corsica, France.

Dr. Johnson’s professional interests are mathematical physics, particularly the foundations of relativistic quantum physics, algorithms, simulation of radar and communication systems, and applications to issues of national security. Dr. Johnson’s professional pursuits included systems analysis, the limits of radar and communication systems performance, signal processing, and probability analysis.

From 1979 until 1982, Dr. Johnson was an Engineering Systems Analyst with Texas Instruments in Dallas, Texas. From 1985 until July of 1991, Dr. Johnson was with the Mission Research Corporation in Santa Barbara, California.

In August 2010, Dr. Johnson retired as Technical Director of the National Systems Business Unit of TASC in Chantilly, Virginia. While TASC was owned by Northrop-Grumman, Dr. Johnson was a Northrop-Grumman IT Technical Fellow. Dr. Johnson was a member of the technical staff at TASC from 1982 until 1985, and rejoined TASC in 1991 until his retirement.

Selected Publications:

1. G.E. Johnson, “Consistent Descriptions of Quantum Fields”, *Reports on Mathematical Physics*, Vol. 80(2), 2017, p. 193.
2. G.E. Johnson, “Are strings the aether of our time?”, June 2015, arXiv:quant-ph/1506.05361.
3. G.E. Johnson, “Classical approximations of relativistic quantum physics”, April 2015, arXiv:quant-ph/1604.07654.
4. G.E. Johnson, “Introduction to quantum field theory exhibiting interaction”, Feb. 2015, arXiv:math-ph/1502.07727.
5. G.E. Johnson, “Measurement and self-adjoint operators”, May 2014, arXiv:quant-ph/1405.7224.

6. G.E. Johnson, "Fields and Quantum Mechanics", Dec. 2013, arXiv:math-ph/1312.2608.
7. G.E. Johnson, "Massless Particles in QFT from Algebras without Involution", May 2012, arXiv:math-ph/1205.4323.
8. G.E. Johnson, "Algebras without Involution and Quantum Field Theories", March 2012, arXiv:math-ph/1203.2705.
9. G.E. Johnson, "Interacting quantum fields", *Rev. Math. Phys.*, Vol. 11, 1999, p. 881-928 and Vol. 13, 2001, p. 601-602.
10. G.E. Johnson, R.A. Muir, J.M. Scanlan, W.M.. Steedly, "The Sliding Frequency-Domain Adaptive Filter Algorithm Amenable to Parallel Implementation", *Proceedings of the 29th Asilomar Conference on Signals, Systems, and Computers*, October 30 -November 1, 1995, Pacific Grove, CA.
11. G.E. Johnson, R.A. Muir, J.M. Scanlan, W.M.. Steedly, "Practical Comparison of Adaptive Filter Algorithms", *Proceedings of the 28th Asilomar Conference on Signals, Systems, and Computers*, October 31-November 2, 1994, Pacific Grove, CA.
12. G.E. Johnson, "Constructions of Particular Random Processes", *Proceedings of the IEEE*, vol. 82, no. 2, February 1994.
13. G.E. Johnson, "Mimic Nets", *IEEE Transactions on Neural Networks*, vol. 4, no. 5, September 1993.
14. G.E. Johnson, G. Chapman and R. Burdick, "Automated Threat Response Recommendation in Environments of High Data Uncertainty Using the Countermeasure Association Technique (CMAT)", *AGARD Conference Proceedings 499*, September 1991.
15. G.E. Johnson, "Image Processing for Increased Resolution", *Texas Instruments Equipment Group Engineering Journal*, Vol. 5, No. 5, Sept 1982.
16. G.E. Johnson, and D.I. Fivel, "Consequences of Weakening the Positivity Property of Wightman Quantum Field Theories", *J. Math Physics*, 21(4), April 1980.