

BIOGRAPHICAL SKETCH

John C. Baez

Professional preparation

- Princeton University, Princeton: B.A., Mathematics, 1982.
- Massachusetts Institute of Technology, Cambridge: Ph.D., Mathematics, 1986.

Appointments

- 2010–Present: Visiting Researcher, Center for Quantum Technologies.
- 1990–Present: Professor, University of California, Riverside.
- 1988–1990: Assistant Professor, University of California, Riverside.
- 1986–1988: Instructor, Yale University.

Five products most closely related to the proposed project

- John C. Baez and Mike Stay. **Physics, topology, logic and computation: a Rosetta Stone**. In New Structures for Physics, ed. Bob Coecke, Lecture Notes in Physics vol. 813, Springer, 2011, pp. 95–174.
- John C. Baez, Tobias Fritz and Tom Leinster. **A characterization of entropy in terms of information loss**. Entropy **13** (2011), 1945–1957.
- John C. Baez and Jason Erbele. **Categories in control**. Th. App. Cat. **30** (2015), 836–881.
- John C. Baez, Brendan Fong and Blake Pollard. **A compositional framework for Markov processes**. Jour. Math. Phys. **57** (2016), 033301.
- John C. Baez and Blake Pollard. **A compositional framework for reaction networks**. Rev. Math. Phys. **29** (2017), 1750028.

Five other significant products

- John C. Baez, Irving Segal and Zheng-fang Zhou. An Introduction to Algebraic and Constructive Quantum Field Theory, Princeton University Press, 1992.
- John C. Baez and James Dolan. **Higher-dimensional algebra and topological quantum field theory**. Jour. Math. Phys. **36** (1995), 6073–6105.
- John C. Baez. **Spin networks in gauge theory**. Adv. Math. **117** (1996), 253–272.

- John C. Baez. [Spin foam models](#). Classical and Quantum Gravity **15** (1998), 1827–1858.
- John C. Baez and Tobias Fritz. [A Bayesian characterization of relative entropy](#). Th. Appl. Cat. **29** (2014), 421–456.

Synergistic activities

- Subcontractor with Metron Scientific Solutions: DARPA’s [Complex Adaptive System Composition and Design Environment](#) (CASCADE) project.
- Organizer: special session on [Applied Category Theory](#), Fall Western Sectional Meeting of the AMS, 4–5 November 2017, U.C. Riverside.
- Founding member: [Azimuth Project](#), international collaboration of scientists and engineers working on environmental problems.