

Michael Epperson

Research Professor, Department of Philosophy &
College of Natural Science and Mathematics

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Director, Center for Philosophy and the Natural Sciences
California State University Sacramento

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EDUCATION:

Ph.D. PHILOSOPHY – UNIVERSITY OF CHICAGO – THE DIVINITY SCHOOL March 2003

Dissertation: “Quantum Mechanics and the Philosophy of Alfred North Whitehead”
(Published 2004, Fordham University Press)

Committee: David Tracy (Dissertation Director); Peter Hodgson, Head of the
Nuclear Physics Theoretical Group, University of Oxford; John
Albright, Professor of Physics and Chemistry, Purdue University;
Franklin I. Gamwell, The University of Chicago; John B. Cobb, Jr.,
Claremont Graduate University

M.A. PHILOSOPHY – UNIVERSITY OF CHICAGO – THE DIVINITY SCHOOL March 1996
Philosophical and Theological Ethics

B.A. SANTA CLARA UNIVERSITY June 1990
Concentrations in Biology and English

CURRENT EMPLOYMENT:

Director & Principal Investigator - Center for Philosophy and the Natural Sciences 2008 - present
California State University Sacramento (www.csus.edu/cpns)

Research Professor – Department of Philosophy & College of Natural Sciences and Mathematics 2007 - present
California State University Sacramento
Courses taught include: Ancient Philosophy, Early Modern Philosophy, Philosophy of Science,
Philosophy of Religion, Philosophical Ethics

RESEARCH & GRANTS:

2010 – 2013: “Foundations of Relational Realism: Logical Causality, Intrinsic Decoherence, and a Category-Theoretic Mereotopological Model of Quantum Spacetime” (Principal Investigator) \$572,760 – Fetzer Franklin Fund

Co-Investigators: Elias Zafiris, Senior Research Fellow in Theoretical and Mathematical Physics, University of Athens; Philip Stamp, Professor, Condensed Matter Theory, Department of Physics and Astronomy, University of British Columbia; Stuart Kauffman, Research Professor, Complex Systems Center, University of Vermont

2008 – 2009: “Logical Causality in Quantum Mechanics: Relational Realism and the Evolution of Ontology to Praxiology in the Philosophy of Nature” (Principal Investigator) \$209,000 – Fetzer Franklin Fund

Co-Investigators: Dr. Henry P. Stapp, Lawrence Berkeley National Laboratory; Dr. David Finkelstein, Professor, Department of Physics, Georgia Institute of Technology; Dr. Timothy Eastman, Group Manager, Heliospheric Physics Laboratory, NASA Goddard Space Flight Center

2007: “Quantum Mechanical Investigations into the Causal and Logical Orders and the Physical Basis of Possibility” (Principal Investigator) \$20,000 – CTNS / Templeton Foundation

Co-Investigators: Dr. Henry P. Stapp, Lawrence Berkeley National Laboratory; Dr. David Finkelstein, Professor, Department of Physics, Georgia Institute of Technology; Dr. Timothy Eastman, Group Manager, Heliospheric Physics Laboratory, NASA Goddard Space Flight Center; Dr. William Kallfelz, Foundations of Physics Group, University of Maryland.

PUBLICATIONS:

Books:

Quantum Mechanics and the Philosophy of Alfred North Whitehead. Fordham University Press (2004)

Physics and Speculative Philosophy: The Rehabilitation of Metaphysics in 21st Century Science (ed., with David Ray Griffin and Tim Eastman) (forthcoming, Ontos-Verlag)

Book Chapters and Articles:

“Quantum Mechanics and Relational Realism: Logical Causality and Wave Function Collapse,” *Process Studies*. 38:2, 340-367 (2010)

“Relational Realism: The Evolution of Ontology to Praxiology,” *World Futures*, 65:1, 19-41. Routledge. (2009)

“Whitehead and Modern Physics” in *Handbook of Whiteheadian Process Thought*. Nicholas Rescher, Johanna Seibt, Michel Weber, eds. Ontos-Verlag (2008)

“The Mechanics of Concrescence: Quantum Theory and Process Metaphysics” in “The Resource Guide to *Physics and Whitehead: Process, Quantum, and Experience*,” Timothy E. Eastman and Hank Keeton, eds, SUNY Press, (2003)

Encyclopedia Articles and Book Reviews:

Review of *Subquantum Kinetics: A Systems Approach to Physics and Cosmology* by Paul LaViolette, in *Process Studies* 33, no. 1 (2004)

Review of *Divine Action & Modern Science* by Nicholas Saunders, in *The Journal of Religion* 84, no. 4 (2004)

Review of *In Whom We Live and Move and Have Our Being: Panentheistic Reflections on God’s Presence in a Scientific World*, Philip Clayton and Arthur Peacocke, eds. in *The Journal of Religion* 85, no. 2 (2005)

“Roman Religions” in *The Encyclopedia of Religion and War*. Palmer-Fernandez, G. ed. New York: Routledge, (2003)

Editorial Board Member

Studies in Ethics, Law and Technology (Berkeley Press), 2007-present

PAPERS AND PRESENTATIONS:

October 7, 2011 – European Philosophy of Science Association Conference, University of Athens, Greece
 “Quantum Decoherence: A View from Topology”

February 17, 2011 – Library of Congress, Washington D.C.
 “Logical Causality in Whitehead's Philosophy of Nature” – Symposium: “The Philosophy of Alfred North Whitehead”

June 15-20, 2011 – Zurich, Switzerland – Swiss Federal Institute of Technology
 Workshop: "Quantum Relational Realism: Mereotopology, Logical Implication, and Internal Relation in Quantum Mechanics as Represented via Sheaf-theoretic Boolean Covering Systems": Michael Epperson - CPNS, California State University Sacramento; Roland Omnès - University of Paris XI (Part II of the workshop held in Bernex, France); Elias Zafiris - University of Athens; Karim Bschrir - Swiss Federal Institute of Technology; Timothy E. Eastman - NASA Goddard & Plasmas International

October 19-23, 2010 – Athens, Greece – University of Athens – Institute of Mathematics
 Workshop: "Applying Sheaf/Category Theory to Quantum Mechanics: Logical Implication And The Internal Relation Of The Local To The Global In Quantum Mechanical Predication": Elias Zafiris - University of Athens; Karim Bschrir - Swiss Federal Institute of Technology; Michael Epperson, CPNS, Department of Philosophy, California State University Sacramento

July 19-20, 2010 – Orcas Island, Washington
 “Foundations of Relational Realism: Logical Causality, Intrinsic Decoherence, and a Category-Theoretic Mereotopological Model of Quantum Spacetime” – Workshop with Elias Zafiris, Senior Research Fellow in Theoretical and Mathematical Physics, University of Athens; Philip Stamp, Professor, Condensed Matter Theory, Department of Physics and Astronomy, University of British Columbia; Stuart Kauffman, Research Professor, Complex Systems Center, University of Vermont; Timothy E. Eastman, NASA-Goddard; Karim Bschrir, Swiss Federal Institute of Technology.

July 4-7, 2010 – Frankfurt-Oder, Germany – Europa University Viadrina
 “Quantum Relational Mereotopology: Category Theory, Logical Implication, and the Internal Relation of the Local to the Global” – *International Symposium on Generalizing Quantum Theory*

February 2, 2010 – Freiburg, Germany – University of Freiburg
Generalized Quantum Theory Research Group. Participants include: Thomas Filk, Prof. of Theoretical Physics, University of Freiburg; Gunter Mahler, Prof. of Theoretical Physics, University of Stuttgart; Harald Walach, Research Professor in Psychology, Univ. of Northampton, UK; Jose Raul Narango, Dept. of Physics, Univ. of Freiburg; Nikolaus v. Stillfried, Sektion Evaluation Komplementärmedizin, University of Freiburg.

January 29-20, 2010 – Zurich, Switzerland – Swiss Federal Institute of Technology
 CPNS/ETH Workshop - *Quantum Logical Causality, Category Theory, and the Philosophy of Whitehead*. Other participants include: Elias Zafiris, Dept. of Mathematics, University of Athens; Karim Bschrir, Chair of Philosophy, Swiss Federal Institute of Technology

June 27-28, 2009 – Brussels, Belgium - Vrije Universiteit Brussel
 Center for Logic and Philosophy of Science: Symposium - *Logical Causality and the Philosophy of Alfred North Whitehead*. Other participants include: Jean Paul Van Bendegem, Dean of the Math Faculty at VUB and Director of CLWF; Paul Gochet, Emeritus Professor of Philosophy, University of Liège

June 13-20, 2009 – University of Rome (Roma Tre), Italy
 Lecture and panel discussion on *Logic in Quantum Mechanics*: International Conference on Philosophy, Science and Spirituality (Cortona, Italy). Other speakers include: Fritjof Capra, Center for Ecoliteracy, Berkeley, CA;

Anne Harrington, Chair, Dept. of History of Science, Harvard University; Stuart Kauffman, University of Calgary, Depts. of Biological Sciences and Physics

August 14-17, 2008 – CSU Sacramento – Center for Philosophy and the Natural Sciences
Workshop: *Logical Causality in Quantum Mechanics*: David Finkelstein, Dept. of Physics, Georgia Institute of Technology; Henry Stapp, Lawrence Berkeley National Laboratory; Timothy E. Eastman, NASA-Goddard; Mohsen Shiri-Garakani, Pace University; William Kallfelz, University of Maryland

August 15-18, 2007 – University of Maryland
Workshop: *Quantum Physical Investigations into the Causal and Logical Orders and the Physical Basis of Possibility*: David Finkelstein, Dept. of Physics, Georgia Institute of Technology; Henry Stapp, Lawrence Berkeley National Laboratory; Timothy E. Eastman, NASA-Goddard; Mohsen Shiri-Garakani, Pace University; William Kallfelz, University of Maryland

July 3 – 6, 2006 – Salzburg, Austria – Salzburg University
6th Annual International Whitehead Conference – “First Principles and Modern Science: On Description and Explanation in Quantum Theory” – Section Head, “Whitehead, Science, and Theology”

September 28 – October 2, 2005 – Claremont School of Theology
“Bridging Necessity and Contingency: The Scientific Rehabilitation of Process Metaphysics” – *Quantum Physics, Process Philosophy, and Matters of Religious Concern* – Panelist with David Ray Griffin, Philip Clayton, Jorge Nobo, John Cobb, Shimon Malin

July 2003 – Ascona, Switzerland – Eranos Conference
“Critique of Arpad Szakolczai’s ‘World-Rejections and World-Conquests: The Spiraling Dynamics of War and Peace’” – Eranos Conference 2003, “Humans at War, At Peace with Nature”

April 23, 2003 – Claremont Graduate University
“The Mechanics of Concrescence: Quantum Theory and Process Metaphysics” – Center for Process Studies

March 14, 2002 – Chicago, IL – “The Philosophical Implications of Quantum Mechanics” – Center for Theology and the Natural Sciences Chicago Group

RESEARCH INTERESTS:

My focus is the exploration of the philosophical implications underlying recent innovations in contemporary science, particularly as regards novel interpretations of quantum mechanics, cosmology, and the study of complex adaptive systems. This exploration is, in part, a speculative philosophical enterprise intended to contribute to the framework of a suitable bridge by which scientific and philosophical concepts might not only be cross-joined, but mutually supported.

WORK IN PROGRESS:

Current book project: *Relational Realism*

FELLOWSHIPS AND HONORS:

Wabash Fellowship for the Chicago Forum on Pedagogy and the Study of Religion (2001-2002); Stephen and Ruth Durchlag Fellowship for the application of complex adaptive systems theory to the philosophy of science and religion (1997-1998); University of Chicago Fellowship (1996-1999); Biological Sciences Colloquium Fellow, Department of Biology, Santa Clara University (1989-1990); Alpha Sigma Nu, Jesuit Honor Society.

TEACHING COMPETENCIES:

Classical and modern philosophy and metaphysics; philosophy of science and cosmology; philosophical foundations of quantum physics; modern and contemporary philosophy of religion; issues in science and religion; epistemology; classical, modern and contemporary philosophical and theological ethics.

TEACHING EXPERIENCE:

Websites and syllabi for all the following courses can be accessed at: www.csus.edu/cpns/epperson:

<i>CALIFORNIA STATE UNIVERSITY SACRAMENTO</i> , Department of Philosophy	2005 - present
“Ancient Philosophy”	
“Early Modern Philosophy”	
“Philosophy of Religion”	
“Introduction to Philosophy”	
“Philosophical Ethics”	
“Ethics and Personal Values”	
“Critical Thinking”	
 <i>UNIVERSITY OF CHICAGO</i> , Graham School, Chicago, IL	 2003 - 2004
"The Metaphysics Behind Quantum Mechanics II: Quantum Mechanics and Modernity"	
"The Metaphysics Behind Quantum Mechanics I"	
“Problems in Science and Religion: God and 21 st Century Science”	
“Religion and the History, Method, and Theories of Modern Science”	
 <i>LOYOLA UNIVERSITY</i> , Chicago, IL	 2002 - 2004
“Science, Religion, and Society”	
“Rationality, Religion, and Ethics”	
“Moral Problems”	
 <i>ST. IGNATIUS COLLEGE PREPARATORY</i> , Chicago, IL	 1996 - 1997
Taught two sections of comparative ethics and three sections of senior philosophy of religion. Also taught summer sections in English literature, chemistry, and biology.	
 <i>BROPHY COLLEGE PREPARATORY</i> , Phoenix, AZ	 1990 - 1993
Responsible for the instruction of high school freshmen, sophomores, and juniors in English literature, composition, and rhetoric. Served as band instructor and as director of school plays.	

RELATED PROFESSIONAL EXPERIENCE:

Documentary Films on Ethics and Warfare: 2003 - 2006

The 11th Day: Crete 1941: (writer – producer). Archangel Films and the Mnimi Foundation
(December 2006)

www.amazon.com/dp/B0001V639K

www.The11thDay.com

Outpost Harry (writer – producer). Archangel Films and the Mnimi Foundation (in production)

WRITER & PRODUCER: *The 11th Day: Crete 1941*
Archangel Films ALEX G. SPANOS, Executive Producer

Responsible for story development, script, dialogue editing, and off-line editing consultation. *The 11th Day* is a 90 minute documentary film sponsored by the A.G. Spanos Companies (www.AGSpanos.com) and filmed by an award winning Discovery Channel production crew. It chronicles the story of the Cretan resistance movement in World War II as told first hand and on-location by several of its surviving members, and through dramatic re-enactments.

In 2005, the film made a theatrical tour throughout the United States, Europe, Australia, and New Zealand. It received outstanding print reviews in publications ranging from major newspapers including *The Chicago Tribune*, *The Sacramento Bee* and *Newsday*, to Greek-American publications like *The National Herald* and *Greek America Magazine*. In 2003, the film was shown to the United States Congress in Washington, D.C. at their invitation—a first for any documentary film. An archive of thousands of photos has been created and made freely available to the public in what has become the largest on-line World War II photo gallery in the world; and photos and artifacts collected for the film have been requested by and provided to museums around the world, including the National D-Day Museum, The CIA Museum at CIA Headquarters, Britain’s Imperial War Museum, Chicago’s Hellenic Center, and The National Archives. (www.The11thDay.com)

ASSISTANT DIRECTOR, PROGRAM IN SCIENCE AND RELIGION
THE LUMEN CHRISTI INSTITUTE, Chicago, IL

2002-2004
 (Program
 Coordinator,
 1998-2002)

Responsible for organizing and managing academic symposia, conferences, and lectures. Events include: “The Mind of the Universe” by Mariano Artigas, Professor of Natural Science, The University of Navarra, Spain; “Fides et Ratio”: a symposium featuring Archbishop Joseph Zycinski of Lublin, Poland, Professor of Philosophy of Science, the Pontifical Academy of Theology, Cracow, Poland; Jean-Luc Marion of the University of Chicago and the University of Paris, Sorbonne; and Francis Cardinal George, Archbishop of Chicago.

RESIDENT HEAD

OFFICE OF STUDENT HOUSING, THE UNIVERSITY OF CHICAGO, Chicago, IL

1998 - 2004

Responsible for fostering the safety, health, and academic success of seventy undergraduate students, including residence with them in the university housing system. Duties include reviewing student academic grade reports received quarterly, conferences with student academic advisors, and 24 hour emergency availability.

PROFESSIONAL AFFILIATIONS:

American Philosophical Association
 American Theological Society
 American Academy of Religion