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Curriculum Vitæ
Cosmas K. Zachos
High Energy Physics 362
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Personal: Born 1951, in Athens, Greece; dual US/Greek citizen;
married to Sue Leurgans; children: Evangelie, Timothy.

Education: A.B. in Physics, *Magna Cum Laude*, Princeton University, 1974;
Undergraduate thesis topic: "Landau-Ginsburg Formalism for Anisotropic Superfluids".

Ph. D. in Physics, *California Institute of Technology*, 1979;
Ph. D. thesis topic: "Extended Supergravity with a Gauged Central Charge".

Employment: Physicist at the High Energy Physics Division of the *Argonne National Laboratory*,
September 1986 to date; (Spokesman for the Theory Group, 1992-1994; 2000-2002);
Assistant Physicist, September 1983-1986.
Research Associate in theoretical physics, *Fermilab*, September 1981-1983.
Research Associate in theoretical physics, *University of Wisconsin-Madison*,
September 1979-1981.

Honors, Societies, and Professional Activities: Fellow of the American Physical Society, 2010.
Fellow of the Institute of Physics (UK), 2004.
Suichi Kusaka Physics Prize, 1973; ΦBK 1974; $\Sigma\Xi$ 1974, 1979; American Physical Society, 1984;
Mathematical Association of America, 1988;
Principal Organizer of Workshops, 1984, 1986, 1990, 1996, 2003, and Co-editor of their Proceedings
(q.v. attached list of Conferences);
Member of the Editorial Board of *Journal of Physics A*, 1994-1998; presently, member of the Advisory
Panel to the same journal. Member of the Editorial Board of *ISRN Algebra*.
Member of the APS Heineman Prize selection committee, 2011-2012.
Honorary Member of the Marmaris Institute for Theoretical and Applied Physics (ITAP, Turkey).
Referee of research proposals for numerous US Universities, NSF, DOE, NSERC, PSC-CUNY, and
GNSF.

Teaching: Teaching Assistant at Caltech for Particle Physics (Ph231 - R. P. Feynman); Lecture series
on Supersymmetry and Supergravity at UW-Madison, 1980; and Fermilab, 1983; Lecture series on
 σ -models and superstrings at CINVESTAV, Mexico City, 1985; Lecture series on CFT and Quantum
Groups, OSU, 1989, 1990; Lectures on particle physics to Argonne Science and Engineering Stu-
dents, 1984 to date.; Summer course on phase-space quantization, Ph580, Koç University, Turkey,
2010.

Visiting Appointments: IAS (Princeton) 1983; CINVESTAV (Mexico) 1985; Durham Univ (UK) 1987;
OSU 1990; Yukawa Institute (Kyoto) 1994.

Selected publications:

- C. K. Zachos, D. B. Fairlie, T. L. Curtright,
"Quantum Mechanics in Phase Space – an Overview with Selected Papers",
(**book**) World Scientific Publishers, 2005
- E. Braaten, T. L. Curtright, C. K. Zachos,
"Torsion and Geometrostasis in Nonlinear Sigma Models,"
Nucl. Phys. **B260**, 630 (1985).
- D. B. Fairlie, P. Fletcher, C. K. Zachos,
"Trigonometric Structure Constants for New Infinite Algebras,"
Phys. Lett. **B218**, 203 (1989).
- T. L. Curtright, C. K. Zachos,
"Geometry, Topology and Supersymmetry in Nonlinear Models,"
Phys. Rev. Lett. **53**, 1799 (1984).
- D. B. Fairlie, C. K. Zachos,
"Infinite Dimensional Algebras, Sine Brackets and SU(Infinity),"
Phys. Lett. **B224**, 101 (1989).
- T. Curtright, C. K. Zachos,
"Currents, charges, and canonical structure of pseudodual chiral models,"
Phys. Rev. **D49**, 5408-5421 (1994). [hep-th/9401006].
- T. Uematsu, C. K. Zachos,
"Structure of Phenomenological Lagrangians for Broken Supersymmetry,"
Nucl. Phys. **B201**, 250 (1982).

Citation impact on the scientific literature, from Google Scholar :

<http://scholar.google.com/citations?user=ET4Prm0AAAAJ&hl=en>

Conference Talks and Colloquia:

- Colloquium delivered at over 21 Physics Departments and Institutes,
Deformation Quantization: Quantum Mechanics Lives and Works in Phase Space.
1. Session organizing and talk at the Miami 2012 Conference, Fort Lauderdale, December 2012.
 2. Session organizing and talk at the Miami 2011 Conference, Fort Lauderdale, December 2011.
 3. Session organizing and talk at the Miami 2010 Conference, Fort Lauderdale, December 2010.
 4. Invited talk at the 6th International Symposium on Quantum Theory and Symmetries, Lexington, July 2009.
 5. Talk at the "Quantum Mechanics in the Complex Domain" Symposium (BenderFest), St Louis, March 2009.
 6. Session organizing and talk at the Miami 2008 Conference, Fort Lauderdale, December 2008.
 7. Invited talk at LT-7, VII International Workshop on Lie Theory and its Applications in Physics, Varna, June 2007.
 8. Session organizing and talk at the Miami 2006 Conference, Fort Lauderdale, December 2006.

9. Invited talk at the 26th International Colloquium on Group Theoretical Methods in Physics, New York City, June 2006.
10. Session organizing and talk at the Miami 2005 Conference, December 2005.
11. Session organizing and talk at the Miami 2004 Conference, December 2004.
12. Invited talk at the XIII International Colloquium on Integrable Systems and Quantum Groups, Prague, June 2004.
13. Principal organizing of the "Brane Dynamics Workshop", Argonne, October 2003; editing of its e-proceedings, <http://www.slac.stanford.edu/econf/C0310202/> .
14. Invited talk at the 3rd International Symposium on Quantum Theory and Symmetries, Cincinnati, September 2003.
15. Invited talk at the 8th International Wigner Symposium, New York City, May 2003.
16. Invited talk at the 31st Coral Gables Conference, "Short Distance Behavior of Fundamental Interactions", Fort Lauderdale, December 2002.
17. Invited talk at the Wigner Centennial Conference, Pécs, Hungary, July 2002.
18. Organizing and talk at the NATO ARW, "Integrable Hierarchies and Modern Physical Theories", UIC, Chicago, July 2000.
19. Invited talk at the YITP conference "Gauge Theory and Integrable Models", Kyoto, January 1999.
20. Invited talk at the UIC Workshop "Supersymmetry and Integrable Models", Chicago, June 1997.
21. Principal organizing of the "Theory Institute: Topics In non-Abelian Duality", Argonne, July 1996; editing of its e-proceedings, <http://www.hep.anl.gov/czachos/tdual.html>.
22. Talk at Pascos'94, Syracuse, May 1994.
23. Invited talk at the 2nd Prague Colloquium on Quantum Groups, June 1993.
24. Invited talk at the XXIst International Conference on Differential Geometric Methods in Physics, Tianjin, China, June 1992.
25. Invited talk at the XXth International Conference on Differential Geometric Methods in Physics, New York City, June 1991.
26. Invited talk at the Coral Gables NATO ASI on "QFT, Quantum Groups and Topology", January 1991.
27. Invited talk at the "Symmetries in Science V" Symposium, Schloss Hofen, Lochau, Austria, August 1990.
28. Principal Organizing and Talk at the Argonne Informal Spring Workshop on Quantum Groups, April-May 1990; editing of its proceedings.
29. Talk at the DPF90 Conference, Rice Univ., January 1990.
30. Talk at the *Physics and Geometry* NATO International Conference, Lake Tahoe, July 1989.
31. Talk at the Strings '89 conference, Texas, March 1989.

32. Invited talk at the IVth International Workshop in High Energy Physics, Crete, July 1988.
33. Talk at the XVIIth International Colloquium on Group Theoretical Methods in Physics, Québec, June 1988.
34. Principal Organizing and talk at the Informal Summer Institute on Superstrings, Argonne, June 1986.
35. Talk at the DPF meeting of the APS, Eugene, August 1985.
36. Invited talk at the IIIrd International Workshop in High Energy Physics, Crete, July 1985.
37. Talk at the DPF meeting of the APS, Santa Fé, November 1984.
38. Talk and Organizing Functions at the Argonne Workshop on Lattice Gauge Theory, April 1984; principal editing of its proceedings.
39. Talk at the Monopole '83 Conference, Ann Arbor, October 1983.
40. Speaker at the Ecole Normale Supérieure Summer Institute, August 1983.
41. Speaker at the Fermilab Supersymmetry Worksop, March 1983.
42. Organizing and Scientific Secretary functions at the XXth International Conference on High Energy Physics, Madison, July 1980.
43. Talk at the Stony Brook Supergravity Conference, September 1979.

Publications: See attached