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Research/ teaching home pages:

<http://sites.google.com/site/williamkallfelz/>

<http://www.csus.edu/cpns/about.html>

<http://www.philosophyandreligion.msstate.edu/faculty/kallfelz.php>

I. Education

- **Ph.D., Committee of Philosophy and the Sciences (CPaS) (admitted: Fall 2003), Department of Philosophy, University of Maryland at College Park.** Advisor & Chair of dissertation committee: Dr. Jeffrey Bub. **Dissertation Title:** *Clifford Algebra: A Case for Geometric and Ontological Unification.* **Graduation date:** May 23, 2008.
- **Ph.D. student, Physics, Georgia Institute of Technology (1995-2001).** Advisor: Dr. David Finkelstein.
- **Master of Science, Applied Mathematics, Georgia Institute of Technology,** area of specialty: discrete mathematics. Awarded December 1996.
- **Master of Theological Studies (*cum laude*), Emory University.** Advisor: Dr. David Pacini. Awarded December 1996.
- **Master of Science, Physics, Georgia Institute of Technology.** Awarded June 1993.
- **Master of Science, Department of Geophysical Sciences, Georgia Institute of Technology:** Awarded: September 1991
- **Bachelor of Science in Physics (with honor), Georgia Institute of Technology.** Awarded: June, 1989.

II. Areas of Specialization/Competence

- **Areas of Specialization:** Philosophy of physics, philosophy of science.
- **Areas of Competence:** Philosophy of language, logic, process philosophy, ethics.
- **Other areas of competence/specialization:** Mathematical physics (research & teaching since 1995), mathematics (teaching since 1995).

III. Recent Employment: ¹

- **Lecturer (August 15, 2010 – present) Department of Philosophy & Religious Studies, Mississippi State University, Starkville, MS. Effective August 17, 2011: Lecturer of**

¹ Post-Ph.D.

Philosophy and Mathematics, Department of Philosophy & Religious Studies and Department of Mathematics & Statistics, Mississippi State University.

- **Adjunct Faculty (August 24, 2010 – present) Department of Philosophy & Department of Mathematics, Bevill State Community College, Fayette, AL.**
- **Visiting Assistant Professor (August 20, 2009 – June 2, 2010) Department of Philosophy, New Mexico State University, Las Cruces, NM.**
- **Lecturer (Sept 24, 2008 – June 20, 2009), Department of Philosophy and Religious Studies, University of Central Washington, Ellensburg, WA.**
- **Instructor, Johns Hopkins University- Center for Talented Youth Summer Program:** Instructor, Logic (Sessions I & II) June-August, 2010– Loyola Marymount University site, Los Angeles, CA. Instructor, Fast-Paced Physics (Sessions I & II) June-August, 2006-2009 – Skidmore College site, Saratoga Springs, NY. Instructor, Fast-Paced Physics (Session II) July-August, 2005 – Franklin & Marshall College site, Lancaster, PA. Instructor, Discrete Mathematics (Session I) June-July, 2004 –Roger Williams University site, Bristol, RI.

IV. Distinctions, Publications, and Professional Affiliations:

Books

- Kallfelz, William M. *Clifford Algebra: A Case for Geometric and Ontological Unification*. Saarbruecken: VDM Verlagsservicegesellschaft mbH, 2009. Available on Amazon: <http://tinyurl.com/kallfelz-Clifford-Alg>

Papers²

- Kallfelz, William M., "Teaching Environmental Ethics at Mississippi State University: Some Reflections," (in press) *Mississippi's Journal of Sustainable Living*, Daniel Doyle, ed., Spring 2013. Gaining Ground Sustainability Institute of Mississippi <http://www.ggsim.org>
- Kallfelz, William M., "A Response to G.B. Bagci's 'Ghirardi-Rimini-Collapse Theory and Whiteheadian Process Philosophy'," *Process Studies, Natural Sciences Focus Section*, Pete Gunter, ed., vol. 38 n.2, 2009, pp. 394-411.
- Kallfelz, William M., "Physical Emergence and Process Ontology," *World Futures: The Journal of General Evolution*, special issue on process thought and natural science, special editors: Franz Riffert and Timothy Eastman, vol. 65 issue 1, 2009, pp. 42-60. <http://www.informaworld.com/smpp/title~content=g906996133~db=all>
- Kallfelz, William M: "The History of Physics in Georgia" *The New Georgia Encyclopaedia (on-line)* published 9/01/2005 <http://www.georgiaencyclopedia.org/nge/Article.jsp?id=h-2776>
- David R Finkelstein & W. M Kallfelz, "Organism And Physics," *Process Studies*, Fall-Winter 1997, vol 26/ 3-4, pp. 279-292.
- Kallfelz, William M., *Process Studies (Book Review)* "Sunny Auyang's 'How is Quantum Field Theory Possible?'" Fall-Winter 1997, vol 26/ 3-4, pp. 324-326.

Papers (publicly archived)

² Full text versions of all these papers are available on-line, in the **Books and Papers** section of my homepage: <http://sites.google.com/site/williamkallfelz/>

- Kallfelz, William M., "Modal Rationalism and Constructive Realism: Models and Their Modality," (posted: July 27, 2010) <http://philsci-archive.pitt.edu/archive/00005489/>
- Kallfelz, William M., "Embedding Fundamental Aspects of the Relational Blockworld Interpretation in Geometric (or Clifford) Algebra" (posted: April 5th, 2007) <http://philsci-archive.pitt.edu/archive/00003278/>
- Kallfelz, William M., "Methodological Fundamentalism: or Why Batterman's Different Notions of 'Fundamentalism' may not Make a Difference" (posted: June 16, 2006) <http://philsci-archive.pitt.edu/archive/00002801/>
- Kallfelz, William M. "[Getting Something Out of Nothing: Towards a Future Information Theory Based on Vacuum Microtopology](#),"³ *Proceeding to the International Congress of Nanotechnology 2005. October 31, 2005-November 4, 2005, San Francisco.* (CD Rom) Presentation materials also posted at: <http://www.ianano.org/Presentation-ICNT2005/Lectures.html>
- Kallfelz, William M., "Contracting Batterman's Asymptotic 'No-Man's Land:' Reduction Rejoins Explanation." (posted: August 15, 2005) <http://philsci-archive.pitt.edu/view/confandvol/91.html>

Conference Presentations & Colloquia⁴

- **Mississippi Academy of the Sciences, History and Philosophy of Science Division**, Hattiesburg, MS. "Ontic Structural Realism and Information," accepted December 17th, 2012- to be presented February 21, 2013.
- **Department of Mathematics and Statistics, Graduate Statistics Colloquium, Mississippi State University**, Starkville, MS. "[Structural Realism and the Foundations of Physics](#)" January 26, 2012.
- **American Philosophical Association-Eastern Division Meeting**, "[Whitehead's Natural Philosophy: A Meta-Physical Framework for Productive Physics.](#)" –Dec. 28, 2011. (Session GIII-8, *Proceedings and Addresses of the American Philosophical Association*, Sept., 2011, vol. 85, Issue I, p. 53) Preliminary Program also posted at: <http://web02.gonzaga.edu/faculty/henning/sspp/meetings.html>
- **Philosophy and Religion Club, Mississippi State University**, "Does Conceivability Entail Possibility?" April 21st, 2011.
- **Shackouls Honors College Forum, Mississippi State University**, Panel discussion co-hosted with Dr. Jonathan Edelmann, (Department of Philosophy and Religion)— "Philosophical and Religious Implications of Films Involving Dreams," Feb. 25th, 2011.
- **[Philosophy of Scientific Experimentation: A Challenge to Philosophy of Science Center for Philosophy of Science, University of Pittsburgh](#)**⁵ October 16, 2010, Presented: "Clifford Algebraic Computational Fluid Mechanics: A New Class of Experiments." Paper available (volume 640) Phil Sci Archive:

³ The title is the live link to the paper.

⁴ Powerpoints of most of these talks are available on-line, in the **Books and Papers** section of my homepage: <http://sites.google.com/site/williamkallfelz/>. They can also be accessed via clicking hyperlinked titles, for the electronic version of this document.

⁵ For the detailed program, please visit:

http://www.pitt.edu/~pittcntr/Events/All/Conferences/others/other_conf_2010-11/Experimentation_15-15_Oct_2010/experimentation_I5_17-Oct-10_program.html

If the above link will not work, please visit:

<http://www.pitt.edu/~pittcntr/Events/All/Conferences/conferences.htm>

and click on the appropriate year(s) of the event(s) listed.

- <http://philsci-archive.pitt.edu/8348/>
- **Department of Physics, and Philosophy & Religion (joint colloquium), Mississippi State University, Starkville, MS.** "[The Bohr-Einstein Debate, and What Stephen Yablo Has to Do with It](#)" September 27th, 2010.
 - **Department of Philosophy, University of Texas at El Paso,** "[Structural Realism Meets Contextual Realism: Bridging the Gap in Foundations of Mathematics and Physics,](#)" March 4th, 2010.
 - **Emergence and Reduction in the Sciences, Center for Philosophy of Science, University of Pittsburgh,** [Pitt-Paris II](#),⁶ December 11-13, 2009, invited discussant.
 - **New Mexico State University, Department of Philosophy Talk, September 23, 2009.** "Transformation Reduction 'Precisified' Through Structuralism" .
 - **Philosophy & Religious Studies Colloquium, University of Central Washington, February 17, 2009.** "[Models and Asymptotes: A Dialogue between Pre-Modern and Post-Modern Epistemic Modes](#)" _
 - **Natural Science Seminar Series, University of Central Washington, October 10, 2008.** "[Response to Jay Bachrach's 'Physics and Time'](#)"
 - **Philosophy Department Colloquium, University of Maryland, December 7, 2007.** "[Methodological Fundamentalism.](#)"
 - **"New Directions in the Foundations of Physics," American Center for Physics, College Park, Maryland.** Invited discussant to this annual conference from 2003-2008. <http://carnap.umd.edu/philphysics/conference.html>
 - **CPaS Colloquium, University of Maryland, December 5, 2007.** "Geometric-Algebraic Approaches to Quantum Physics"
 - **International Congress of Nanotechnology: Building Infrastructure for the Next Frontier, October 31, 2005-November 4, 2005, San Francisco.** "Getting Something Out of Nothing: Towards a Future Information Theory Based on Vacuum Microtopology" Presentation slides: <http://www.ianano.org/Presentation-ICNT2005/Lectures.html>
 - **Department of History and Philosophy University of Virginia's College at Wise Medieval-Renaissance Conference XIX,** "The Character of Asymptotic Thought in the Works of Nicholas of Cusa." http://www.wise.virginia.edu/college_relations/documents/medrensched05.pdf
 - http://www.glue.umd.edu/~wkallfel/Asymptote_Cusa_Kallfelz.pdf **1999 Centennial Meeting of the American Physical Society,** "Some Correspondence Principles between Clifford Quantization and Spacetime Topology." Abstract posted at <http://flux.aps.org/meetings/YR99/CENT99/abs/S7900006.html>

Distinctions-Grants

- **Fetzer-Franklin Fund,** quantum praxiology research fund (\$190,000) awarded March 24, 2008. "Logical Causality in Quantum Mechanics." Research team: Dr. Michael Epperson (Philosophy of Science Specialist and Team Leader and Principal Investigator), Dr. Timothy Eastman (Space Physicist and Project Manager and Principal Co-Investigator), Dr. David R.

⁶ For the detailed program, please see:

http://www.pitt.edu/~pittcntr/Events/All/Conferences/others/other_conf_2009-10/pitt-paris_II_11-13_Dec_2009/pitt-paris_II_12-11-09_program_format.htm

If the above link will not work, please visit:

<http://www.pitt.edu/~pittcntr/Events/All/Conferences/conferences.htm>

and click on the appropriate year(s) of the event(s) listed.

Finkelstein (Senior Quantum Physicist), Dr., Henry Stapp (Senior Quantum Physicist). Consultants: Dr. Efstraitios Manousakis (Physicist), Dr. Jorge Nobo (Philosopher), Dr. George W. Shields (Philosopher), Dr. Mohsen-Shiri Garakani (Mathematical Physicist), William Kallfelz (Physics and Philosophy of Science). Research team homepage:

<http://www.csus.edu/cpns/research.html>

- **Science and Transcendence Advanced Research Series (STARS) Research Planning Grant** (\$20,000), awarded June 15, 2007. “Quantum Physical Investigations into the Causal and Logical Orders and the Physical Basis of Possibility.” Research team: Dr. Timothy Eastman (Space Physicist and Project Manager), Dr. Michael Epperson (Philosophy of Science Specialist and Team Leader), Dr. David R. Finkelstein (Senior Quantum Physicist), Dr. Mohsen-Shiri Garakani (Mathematical Physicist), William Kallfelz (Mathematical Physicist), Dr. Henry Stapp (Senior Quantum Physicist).
http://www.ctns.org/stars_planning.html
- **Participant, Center for Quantum Studies, George Mason University, (Fairfax, Virginia).** Workshop/Seminar: “Non-Locality in Quantum Dynamics,” hosted by Drs. Yakir Aharonov and Sandu Popescu, February 12-13, 2007.
- **National Science Foundation Grant Recipient;** for attending IQSA 2004 (International Quantum Structures Association Biennial Meeting) meeting, held July 17-22, at the University of Denver, Colorado. (<http://www.vub.ac.be/CLEA/IQSA/conferences.html> .)
- **Georgia Council of the Humanities:** Commission to write “The History of Physics in Georgia” to appear in the on-line *NewGeorgia Encyclopedia*. Originally commissioned: March 1, 2003. <http://www.georgiaencyclopedia.org/nge/Home.jsp>
- **KIRA 2002/1998:** Recipient, alumni fellowship (2002 conference). Recipient of graduate/post-graduate fellowship interdisciplinary program in sciences and humanities (held at Amherst College MA August 1 1998-August 15, 1998.) <http://www.kira.org/>

Distinctions-Other

- **Reviewer, *Synthese***, April 2010.
- **Textbook reviewer, Wadsworth Publishing (December 2009)**, of Barbara McKinnon’s. *Ethics: Theory and Practice*, (6th edn.) Belmont, CA.: Wadsworth Learning (Cengage), 2009.
- **Textbook reviewer, Oxford University Press (November 2009)**, Steven M. Cahn, *Exploring Ethics: An Introductory Approach*. Oxford, U. K.: Oxford University Press, 2009.
- **SRT (Small Radio Telescope)** Constructed, maintained & supervised the Small Radio Telescope project at Piedmont College (Academic year 2002-2003.)
- **IDS 300 Science and Religion (Piedmont College)** Assisted in design of course conceived and directed by Dr Carlton Adams, winner of **Templeton Grant 2001**.
- **NASA Group Achievement Award** for contributions of the Global Tropospheric Western Pacific Science and Project Teams (GTE/PEM-West) Jan 1992-Sept 1992.

Professional Affiliations

- **American Philosophical Association**, Student membership (August, 2007-May, 2008), professional membership (August, 2008-present). <http://www.apaonline.org/>
- **Center for Philosophy and the Natural Sciences**, Research Fellow (August, 2008 – present) <http://www.csus.edu/cpns/about.html>
- **Mississippi Academy of Sciences**, professional membership (November, 2012-present) <http://msacad.org/>

V. Previous Employment:

- **Teaching Assistant (2005 - 2008), Department of Philosophy, University of Maryland at College Park.**
- **Adjunct Professor, Department of Engineering, Computer Science & Technology. (2004 –2008), Capitol College, Laurel, MD.**
- **Undergraduate Advisor and Graduate Administrative Assistant (2004 - 2005), Department of Philosophy, University of Maryland at College Park.**
- **Graduate Research Assistant (Level II) *Committee of Philosophy and the Sciences* (CPaS) (2003 –2004) University of Maryland at College Park.**
- **Assistant Professor of Mathematics and Physics: Piedmont College, Departments of Mathematics & Natural Sciences: August 2000-July 2003.**
- **Visiting Lecturer, Georgia State University, Department of Mathematics and Computer Information Sciences, June 1999-June 2000.**
- **Instructor (mathematics), Atlanta College of Art, Department of Liberal Arts and Sciences (Spring & Fall 2001, Fall 1997)**
- **Instructor (mathematics), Georgia State University, Department of Mathematics and Computer Information Sciences, April 1995-May 1999.**
- **Instructor (physics) Clayton State University, Department of Arts and Sciences, January 1997-March 1997.**

V. Dissertation Topic, Advisor, Abstract:

Title of Document: CLIFFORD ALGEBRA: A CASE FOR GEOMETRIC AND ONTOLOGICAL UNIFICATION

William Michael Kallfelz, PhD., 2008

Directed By: Distinguished University Professor and Chair of the Committee for Philosophy and the Sciences, Jeffrey Bub, Department of Philosophy

Robert Batterman’s ontological insights (2002, 2004, 2005) are apt: Nature abhors singularities. “So should we,” responds the physicist. However, the *epistemic* assessments of Batterman concerning the matter prove to be less clear, for in the same vein he writes that singularities play an essential role in certain classes of physical theories referring to certain types of critical phenomena. I devise a procedure (“methodological fundamentalism”) which exhibits how singularities, at least in principle, may be avoided *within the same classes of formalisms* discussed by Batterman. I show that we need not accept some divergence between explanation and reduction (Batterman 2002), or between epistemological and ontological fundamentalism (Batterman 2004, 2005).

Though I remain sympathetic to the ‘principle of charity’ (Frisch (2005)), which appears to favor a pluralist outlook, I nevertheless call into question some of the forms such pluralist implications take in Robert Batterman’s conclusions. It is difficult to reconcile some of the pluralist assessments that he and some of his contemporaries advocate with what appears to be a countervailing trend in a burgeoning research tradition known as Clifford (or geometric) algebra.

In my critical chapters (2 and 3) I use some of the demonstrated formal unity of Clifford algebra to argue that Batterman (2002) conflates central aspects of a physical theory’s ontology with its purely mathematical content. Carefully distinguishing the two, and employing Clifford algebraic methods reveals a symmetry between reduction and explanation that Batterman overlooks. I refine this point by indicating that geometric algebraic methods are an active area of research in computational fluid dynamics, and applied in modeling the behavior of droplet-formation appear to instantiate a “methodologically fundamental” approach.

I argue in my introductory and concluding chapters that the model of inter-theoretic reduction and explanation offered by Fritz Rohrlich (1988, 1994) provides the best framework for accommodating the burgeoning pluralism in philosophical studies of physics, with the presumed claims of formal unification demonstrated by physicists choices of mathematical formalisms such as Clifford algebra. I show how Batterman’s insights can be reconstructed in Rohrlich’s framework, preserving Batterman’s important philosophical work, minus what I consider are his incorrect conclusions.

*VI. Recent Courses Presently Teaching and Taught*⁷

- **Business Ethics (PHI 3013) Department of Philosophy and Religion, Mississippi State University, Spring Semester, 2013.** Lecturer.
- **Introduction to Philosophy (PHI 1103) Department of Philosophy and Religion, Mississippi State University, Spring Semester, 2013.** Lecturer.
- **Introduction to Religion (REL 1103) (two sections) Department of Philosophy and Religion, Mississippi State University, Spring Semester, 2013.** Lecturer.
- **Environmental Ethics (PHI 3313) Department of Philosophy and Religion, Mississippi State University, Fall Semester, 2012.** Lecturer.
- **Medical Ethics (PHI 2123) Department of Philosophy and Religion, Mississippi State University, Fall Semester, 2012.** Lecturer.
- **Ethics and Society (PHL 206) Department of Philosophy, Bevill State Community College, Fall Semester, 2012.** Adjunct Instructor.
- **Intermediate College Algebra (MTH 100) Department of Mathematics, Bevill State Community College, Fall Semester, 2012.** Adjunct Instructor.
- **Introduction to Logic (PHI 1113) Department of Philosophy and Religion, Mississippi State University, Summer Semester, 2012.** Lecturer.

⁷ Full text versions of the syllabi are available on-line (in pdf), in the **Courses Taught and Presently Teaching** section of my homepage: <http://sites.google.com/site/williamkallfelz/>

- **Introduction to Modern Abstract Algebra (MA 3163) Department of Mathematics and Statistics, Mississippi State University, Spring Semester, 2012.** Lecturer.
- **Foundations of Modern Geometry (MA 3463) Department of Mathematics and Statistics, Mississippi State University, Spring Semester, 2012.** Lecturer.
- **Introduction to Logic (PHI 1113), Department of Philosophy and Religious Studies, Mississippi State University, Spring Semester, 2012.** Lecturer.
- **Calculus III (MA 2733), Department of Mathematics and Statistics, Mississippi State University, Spring Semester, 2012.** Lecturer.
- **Medical Ethics (PHI 2123), (two sections) Department of Philosophy and Religion, Mississippi State University, Fall Semester, 2011.** Lecturer.
- **Calculus III (MA 2733), (two sections) Department of Mathematics and Statistics, Mississippi State University, Fall Semester, 2011.** Lecturer.
- **Ethics and Society (PHIL 206), IITS⁸ evening session, Bevill State Community College, Fall Semester-2011, Adjunct Instructor.**
- **Introduction to Logic (PHI 1113), Department of Philosophy and Religious Studies, Mississippi State University, Summer Semester(II)-2011.** Lecturer.
- **Environmental Ethics (PHI 3313), Department of Philosophy and Religious Studies, Mississippi State University, Spring Semester-2011.** Lecturer.
- **Introduction to Ethics (PHI 1123), (two sections)⁹ Department of Philosophy and Religious Studies, Mississippi State University, Spring Semester-2011.** Lecturer.
- **Ethics and Society (PHIL 206), two sections, Bevill State Community College, Spring Semester-2011, Adjunct Instructor.**
- **Business Ethics (PHI 3013), Department of Philosophy and Religious Studies, Mississippi State University, Fall Semester-2010.** Lecturer.
- **Medical Ethics (PHI 2123), Department of Philosophy and Religious Studies, Mississippi State University, Fall Semester-2010.** Lecturer.
- **Introduction to Logic (PHI 1113), Department of Philosophy and Religious Studies, Mississippi State University, Fall Semester-2010.** Lecturer.
- **Ethics and Society (PHIL 206), Bevill State Community College, Fall Semester-2010, Adjunct Instructor.**
- **Philosophy of Science (PHIL 351), Department of Philosophy, New Mexico State University, Spring Semester-2010.** Visiting Assistant Professor.
- **Business Ethics (PHIL 302), Department of Philosophy, New Mexico State University, Fall Semester-2009.** Visiting Assistant Professor.
- **Ethics (PHIL 223G), Department of Philosophy, New Mexico State University, Fall Semester-2009 & Spring Semester, 2010.** Visiting Assistant Professor.
- **The Art of Wondering (PHIL 101G) Department of Philosophy, New Mexico State University, Fall Semester-2009.** Visiting Assistant Professor.
- **Current Ethical Issues (PHIL 210: 1 section), Department of Philosophy and Religious Studies, Central Washington University, Fall & Winter Quarters, 2008-2009.** Lecturer.
- **Introduction to Logic (PHIL 201: 2 sections), Department of Philosophy and Religious Studies, Central Washington University, Winter and Spring Quarters, 2008-2009.** Lecturer and Primary Instructor.

⁸ Remote video-based instruction and face-to-face.

⁹ Section 3 is split-level (Honors/Regular)

- **The Meaning of Life (PHIL 115: 2 sections), Department of Philosophy and Religious Studies, Central Washington University, Fall Quarter, 2008 & Spring Quarter, 2009** Lecturer and Primary Instructor.
- **Philosophy of Science (PHIL 250), Department of Philosophy, University of Maryland, Fall Semester, 2007.** Primary Instructor.
- **Calculus I, II (MA 261-262), Department of Engineering, Computer Science & Technology, Fall 2007-Spring 2008.** Adjunct Professor of Mathematics.
- **Contemporary Moral Issues (PHIL 140), Department of Philosophy, University of Maryland, Spring Semesters, 2007 & 2008.** Teaching Assistant.
- **Laplace and Fourier Analysis (MA 360), Department of Engineering, Computer Science & Technology, Fall 2007-Spring 2008.** Adjunct Professor of Mathematics.
- **Numerical Analysis (MA 355) Department of Engineering, Computer Science & Technology, Fall 2007-Spring 2008.** Adjunct Professor of Mathematics.
- **Introduction to Cognitive Science (PHIL 280), Department of Philosophy, University of Maryland, Spring Semesters, 2006.** Grader.
- **Introduction to Philosophy (PHIL 100), Department of Philosophy, University of Maryland, Fall 2005, Spring & Fall 2006.** Teaching Assistant.
- **Logic-The Principles of Reasoning (LOGC) Center for Talented Youth, Johns Hopkins University Summer Programs, Summer Sessions I & II¹⁰ 2010.** Instructor. Text: Patrick Hurley *A Concise Introduction to Logic* (10th Edn.) For more information, see: <http://cty.jhu.edu/summer/summer-programs.html>
- **Fast-Paced Physics (PHYW-A) Center for Talented Youth, Johns Hopkins University Summer Programs, Summer Sessions I & II¹¹ 2009, 2008, 2007, 2006, 2005 (Session II only).** Instructor. Text: Giancoli, *General Physics* (a college-level trigonometry based text). For more information, see: <http://cty.jhu.edu/summer/summer-programs.html>
- **Discrete Mathematics (DMAT) Center for Talented Youth, Johns Hopkins University Summer Programs, Summer 2004 (session II only).** Instructor. Text: Grimaldi, *Discrete Mathematics and Applications* (a college-level text). For more information, see: <http://cty.jhu.edu/summer/summer-programs.html>
- **General Physics I, II (Phys 211-212), Department of Natural Sciences, Piedmont College, Demorest, GA, Fall 2000-Spring 2003.** Assistant Professor of Mathematics and Physics.
- **Modern Abstract Algebra (Math 315) Department of Mathematics, Piedmont College, Demorest, GA, Fall 2000-Spring 2003 (selected semesters).** Assistant Professor of Mathematics and Physics.
- **Discrete Mathematics (Math 200) Department of Mathematics, Piedmont College, Demorest, GA, Spring 2001, 2002, 2003.** Assistant Professor of Mathematics and Physics.
- **Elementary Statistics (Math 210) Department of Mathematics, Piedmont College, Demorest, GA, 2000-2003 (selected semesters).** Assistant Professor of Mathematics and Physics.
- **Interdisciplinary Studies (IDS 300), Science and Religion, Piedmont College, Demorest, GA, Spring 2002.** Co-Instructor. Visit here for: [lecture notes](#).

¹⁰ For a total of six weeks (each session lasts three weeks) , seven hours a day of contact time = 105 contact hours per session

¹¹ For a total of six weeks (each session lasts three weeks) , seven hours a day of contact time = 105 contact hours per session

