

**EDWARD S. SLOWIK  
VITA**

Department of Philosophy  
Winona State University  
325 Minne Hall  
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**Education**

- Ph. D. (Philosophy), The Ohio State University, June 1994.  
Dissertation: "Newton's *De Gravitatione* Argument: Cartesian Relationalist Dynamics and the Structure of Space and Time."  
Dissertation Committee: Mark Wilson (advisor), Calvin Normore, Ronald Laymon.
- M. A. (Philosophy), The Ohio State University, March 1991.
- B. A. summa cum laude (Philosophy), University of Illinois at Chicago, June 1988.

**Areas of Specialization**

History and Philosophy of Science (including Twentieth Century Analytic Philosophy of Science, and Science, Technology, and Society Studies), Space and Time, Early Modern Philosophy.

**Areas of Competence**

Epistemology, Metaphysics, Analytic Philosophy, Philosophy of Religion, Logic, Existentialism, Aesthetics, Ethics.

**Current Position**

Professor (Philosophy), Winona State University, 2005-present.  
Resident Fellow, Minnesota Center for Philosophy of Science, University of Minnesota

**Teaching Experience**

- 1988-1991; Recitation Instructor/Graduate Teaching Associate (Philosophy), The Ohio State University.
- 1991-1994; Course Instructor (with full course responsibilities)/Graduate Teaching Associate (Philosophy), The Ohio State University.
- 1994-1997; Visiting Assistant Professor (Philosophy), Ohio University, Athens.

1997-Spring 1998; Visiting Assistant Professor (Philosophy), University of Alaska, Fairbanks.

1998-2002; Assistant Professor (Philosophy): Winona State University.

2002-2005; Associate Professor (Philosophy): Winona State University.

### **Publications (in AOS)**

#### **Books:**

*The Deep Metaphysics of Space: An Alternative History and Ontology beyond Substantivalism and Relationism.* (Dordrecht: Springer, October 2016).

*Cartesian Spacetime: Descartes' Physics and Relational Theory of Space and Motion.* (Dordrecht: Kluwer, February 2002)

#### **Articles:**

“Situating Kant’s Pre-Critical Monadology: Leibnizian Ubeity, Monadic Activity, and Idealist Unity”, *Early Science and Medicine*, vol. 21, 2016, 332-349.

“An Historical Defense of Non-Spacetime Hypotheses: Non-Local Beables and Leibnizian Ubeity”, *Philosophia Scientiae*, vol. 20, 2016, 149-166.

“Earth, Motion of”; “Gravity”; “Motion”; “Plenum”; in *The Cambridge Descartes Lexicon* (Cambridge: Cambridge University Press, 2016), edited by L. Nolan.

“The ‘Space’ at the Intersection of Platonism and Nominalism”, *Journal for General Philosophy of Science*, vol. 46, 2015, 393-408.

“Space and the Extension of Power in Leibniz’ Monadic Metaphysics”, *History of Philosophy Quarterly*, vol. 32, 2015, 253-270.

“Hobbes and The Phantasm of Space”, *Hobbes Studies*, vol. 27, 2014, 61-79.

“Leibniz and the Metaphysics of Motion”, *Journal of Early Modern Studies*, vol. 2, 2013, 56-77.

“The Deep Metaphysics of Quantum Gravity: The Seventeenth Century Legacy and an Alternative Ontology beyond Substantivalism and Relationism”, *Studies in History and Philosophy of Modern Physics*, vol. 44, 2013, 490-499.

“Newton’s Neo-Platonic Ontology of Space”, *Foundations of Science*, vol. 18, 2013, 419-448.

- “The ‘Properties’ of Leibnizian Space: Whither Relationism?”, *Intellectual History Review*, vol. 22, 2012, 107-129.
- “On Structuralism’s Multiple Paths through Spacetime Theories”, *European Journal for the Philosophy of Science*, vol. 2, 2012, 45-66.
- “Newton, the Parts of Space, and the Holism of Spatial Ontology”, *HOPOS: The Journal of the International Society for the History of Philosophy of Science*, vol. 1, 2011, 249-272.
- “The Fate of Mathematical Place: Objectivity and the Theory of Lived-Space from Husserl to Casey”, in *Space, Time, and Spacetime* (Dordrecht: Springer-Verlag, 2010), edited by Vesselin Petkov, 291-312.
- “Newton’s Metaphysics of Space: A ‘*Tertium Quid*’ betwixt Substantivalism and Relationism, or merely A ‘God of The (Rational Mechanical) Gaps’?”, *Perspectives on Science*, vol. 17, 2009, 429-456.
- “Another Go-Around on Leibniz on Rotation”, *Leibniz Review*, vol. 19, 2009, 131-138.
- “The ‘Dynamics’ of Leibnizian Relationism: Reference Frames and Force in Leibniz’s Plenum”, *Studies in History and Philosophy of Modern Physics*, vol. 37, 2006, 617–634.
- “On the Cartesian Ontology of General Relativity: Or, Conventionalism in the History of the Substantival/Relational Debate”, *Philosophy of Science*, vol. 72, 2005, 1312-1323.
- “Spacetime, Ontology, and Structural Realism”, *International Studies in the Philosophy of Science*, vol. 19, 2005, 147-166.
- “Descartes’ Physics”, *Stanford Encyclopedia of Philosophy*, 2005, <http://plato.stanford.edu/entries/descartes-physics/>
- “Natural Laws, Universals, and the Induction Problem”, *Philosophia: Philosophical Quarterly of Israel*, vol. 32, 2005, 241-251.
- “Hume and the Perception of Spatial Magnitude”, *Canadian Journal of Philosophy*, vol. 34, 2004, 355-373.
- “Conventionalism in Reid’s ‘Geometry of Visibles’”, *Studies in History and Philosophy of Science*, vol. 34, 2003, 467-489.
- “Spatiotemporal Analogies: Are Space and Time Similar?”, *Southern Journal of Philosophy*, vol. 40, 2002, 123-134.
- “Descartes’ Forgotten Hypotheses on Motion: Kinematic Logic and Relational Transfer”, *Journal of Philosophical Research*, vol. 27, 2002, 431-446.

“Rouse-ing Out the Legitimation Project: Scientific Practice and the Problem of Demarcation”, *Ratio*, vol. 14, 2001, 171-185.

“Descartes and Individual Corporeal Substance”, *British Journal for the History of Philosophy*, vol. 9, 2001, 1-17.

“Descartes and Circular Inertia”, *The Modern Schoolman*, vol. 77, 1999, 1-11.

“Descartes’ Quantity of Motion: ‘New Age’ Holism meets the Cartesian Conservation Principle”, *Pacific Philosophical Quarterly*, vol. 99, June 1999, 178-203.

“Descartes, Space-Time, and Relational Motion”, *Philosophy of Science*, vol. 66, 1999, 117-139.

“Cartesianism and the Kinematics of Mechanisms: Or, How To Find Fixed Reference Frames in a Cartesian Space-Time”, *Noûs*, vol. 32, 1998, 364-385.

“Huygens’ Center-of-Mass Space-Time Reference Frame: Constructing a Cartesian Dynamics in the Wake of Newton’s ‘*De Gravitatione*’ Argument”, *Synthese*, vol. 112, 1997, 247-269.

“Perfect Solidity: Natural Laws and the Problem of Matter in Descartes’ Universe”, *History of Philosophy Quarterly*, vol. 13, 1996, 187-204.

### **Publications (in AOC and Philosophy Teaching)**

“The Philosophy of Music and Radiohead”, in *Philosophy and Radiohead* (Chicago: Open Court, 2009), edited by George Reisch and Brandon Forbes, 41-52.

“The Structure of Musical Revolutions” (adapted from Slowik 2003, below), *Philosophy Now*, Issue 59, 2007, 9-12.

“Existentialism and Monty Python: Nietzsche, Sartre, and Camus”, in *Monty Python and Philosophy* (Chicago: Open Court, 2006), edited by Gary Hardcastle and George Reisch, 173-186.

“Myth, Music, and Science: Teaching the Philosophy of Science through the Use of Non-Scientific Examples”, *Science & Education*, vol. 12, 2003, 289-302.

“Moral and Scientific Explanation: Re-examining the Harman/Sturgeon Debate”, *Cogito*, vol. 13, 1999, 39-45.

“Reflections on the ‘Mirror-Image’ Theory of Platonic Particulars”, *Cogito*, vol. 11, 1997, 199-205.

### **Co-Authored Articles**

“Locke and Newton on Space and Time and Their Sensible Measures” (with Geoffrey Gorham, Macalester College), in *Newton and Empiricism* (Oxford: Oxford University Press, 2014), edited. by Z. Biener and E. Schliesser, 119-137.

“Newton’s Ontology of Omnipresence and Infinite Space” (with J. E. McGuire, University of Pittsburgh), *Oxford Studies in Early Modern Philosophy*, vol. 6, 279-308, 2012.

### **Co-Edited Volumes (Book/Journal)**

*The Language of Nature: Reassessing the Mathematization of Natural Philosophy in the Seventeenth Century*, *Minnesota Studies in the Philosophy of Science*, vol. 20 (Minneapolis: University of Minnesota, 2016), with Geoffrey Gorham, Benjamin Hill, and Ken Waters as co-editors.

“Absolute Space and Time”, with Geoffrey Gorham (Macalester College). Special issue, *Intellectual History Review*, vol. 22, issue 1, 1-129.

### **Book Reviews**

*Descartes on Causation*, T. Schmaltz (Oxford: Oxford University Press, 2008). *HOPOS: The Journal of the International Society for the History of Philosophy of Science*, vol. 1, no.1, 2011, 165-169.

*Mechanics from Aristotle to Einstein*, M. Crowe (Santa Fe: Green Lion Press, 2007). *Annals of Science*, vol. 68, 2011, 142-144.

*Matter Matters: Metaphysics and methodology in the Early Modern Period* (Oxford: Oxford University Press, 2008). *Notre Dame Philosophical Reviews* (2010.12.06)

*Leibniz’s Metaphysics of Time and Space*, M. Futch (Springer, 2008). *Metascience*, vol. 19, 2010, 395-397.

*Space, Time, and Theology in the Leibniz-Newton Controversy*, E. Khamara (Ontos, 2006). *Notre Dame Philosophical Reviews* (2007.01.03).

*Descartes’ System of Natural Philosophy*, S. Gaukroger (Cambridge: Cambridge U. Press, 2002). *Notre Dame Philosophical Reviews* (2002.9.01).

*The Cosmos of Science: Essays of Exploration*, John Earman and John D. Norton, eds. (Pittsburgh: University of Pittsburgh Press, 1997). *Philosophia: Philosophical Quarterly of Israel*, vol. 28, 2001, 573-576.

*Logic, Language, and the Structure of Scientific Theories: Proceedings of the Carnap-Reichenbach Centennial, University of Konstanz, 21-24 May 1991*, Wesley Salmon and

Gereon Wolters, eds. (Pittsburgh: University of Pittsburgh Press, 1994). *Philosophia: Philosophical Quarterly of Israel*, vol. 27, 1999, 673-676.

*In and About the World: Philosophical Studies of Science and Technology*, Hans Radder (Albany, SUNY Press, 1996). *Philosophia: Philosophical Quarterly of Israel*, vol. 26, 1998, 569-573.

*Conjuring Science: Scientific Symbols and Cultural Meanings in American Life*, Christopher P. Toumey (New Brunswick: Rutgers University Press, 1996). *Skeptical Inquirer*, vol. 21, no. 4, July/August 1997, 53.

### **Presentations**

#### Philosophy of Science Association (Biennial Meetings)

“A Pre-History of Quantum Gravity: Newton, Leibniz, and the Deep Metaphysics of Space”, PSA 2010, Montreal, Nov. 2010; also, Radboud University, Nijmegen, Netherlands, June 2013.

“Spacetime and Structure: Structural Realism, Neo-Kantian Idealism, or Relativized A Priorism?”, PSA 2006, Vancouver, Nov. 2006.

“On the Cartesian Ontology of General Relativity: Or, Conventionalism in the History of the Substantial/Relational Debate”, PSA 2004, Austin, Nov. 2004.

“Descartes' Science, Holism, and the Mechanical Philosophy”, PSA 2000, Vancouver, Nov. 2000.

#### International Society for the History of Philosophy of Science (Biennial Meetings)

“Between Newton and Neo-Kantians: The Evolution of Absolute and Relational Space in the 18<sup>th</sup> and 19<sup>th</sup> Centuries”, Tenth HOPOS, University of Ghent, Belgium, July 2014.

“Hobbes and the ‘Phantasm’ of Space”, Ninth HOPOS, King’s College, Halifax, June 2012.

“The Emergence of Leibnizian Space”, Eighth HOPOS, Central European University, Budapest, Hungary, June 2010.

“Newton’s Metaphysics of Space”, Seventh HOPOS, University of British Columbia, June 2008.

“The (Meta)Physics of Leibnizian Space, Relational Motion, and Force”, Fifth HOPOS, University of San Francisco, June 2004.

“Descartes and the Relational Theory of Space and Motion: A Reexamination”, Second HOPOS, U. of Notre Dame, March 1998.

#### Other Philosophy of Science and Early Modern Presentations

“English Theories of Space before Newton: Hobbes, More, Barrow”, Midwest

Conference on British Studies, 63<sup>rd</sup> Meeting, Iowa State University, September 2016.

“The Waning Fortunes of Scholastic Ubeity in Seventeenth Century England: Barrow and Locke as Exemplars”, Max Planck Institute for History of Science, Berlin, Germany, June 2015.

“Situating Kant’s Pre-Critical Monadology: From Leibnizian Ubeity and Geometric Holism to the Subjectivist Turn”, University of Bucharest, Bucharest, Romania, May 2015.

“A Note on Kant as Precursor of Mach: Reconsidering Kant’s *Metaphysical Foundations of Natural Science* from a Huygensian Frame”, University of Bucharest, Bucharest, Romania, May 2015.

“Locke on Space and Time: Combining Empiricism and Absolutism” (with Geoff Gorham). Mid-West Seminar in Early Modern Philosophy, University of Wisconsin-Milwaukee, Sept. 2014; Locke workshop, Western University, London, ON, May 2015.

“Space and the Extension of Power in Leibniz’ Monadic Metaphysics”, Leibniz Society of North America Conference, Montreal, Oct., 2012; Radboud University, Nijmegen, Netherlands, June 2013; Western University, London, Ontario, June 2013; Max Planck Institute, Leipzig, Germany, July 2014; Princeton-Bucharest Seminar in Early Modern Philosophy, Bran, Romania, July 2014.

“Leibniz and Space”, Princeton-Bucharest Seminar in Early Modern Philosophy, Bran, Romania, July 2010.

“Newton on the Structure and Parts of Space”, Second International Conference on Integrated History and Philosophy of Science, Notre Dame University, March 2009; Minnesota Center for Philosophy of Science, U. of Minnesota, Sept. 2008.

“Place and Lived-Space from Husserl to Casey”, Third International Conference on the Ontology and Nature of Spacetime, Concordia University, Montreal, June 2008.

“The Fate of Mathematical Place”, Center for Philosophy of Science, University of Pittsburgh, April 2008.

“Newton on the Metaphysics of Space”, NY/NJ Research Group in Early Modern Philosophy, John Jay College, New York, March 2008; Center for Philosophy of Science’s 6th Quadrennial Fellows Conference (University of Pittsburgh), Athens, OH, July 2008.

“Newton, Neo-Platonism, and the Substantialist Ontology of Space”, Center for Philosophy of Science, University of Pittsburgh, Sept. 2007.

“Newton’s Ontology of Space”, Mid-Atlantic Seminar in Early Modern Philosophy, Princeton University, Princeton, April 2007.

“Hume on the Spatial Geometry of Visible Length”, Mid-Atlantic Seminar in Early Modern Philosophy, Johns Hopkins University, Baltimore, May 2003.

“Space and Geometry in Eighteenth Century Scotland: Reid’s ‘Geometry of Visibles’, Conventionalism, and a bit of Hume”, Minnesota Center for the Philosophy of Science, Studies in Science and Technology, University of Minnesota, Twin Cities, Nov. 2001.

“Music, Science, and Analogies: Teaching the Philosophy of Science with Non-Scientific Examples”, Twentieth World Congress of Philosophy, Boston, August 1998.

“Descartes: Philosopher/Scientist”, Department of Physics and Astronomy, Ohio University, Athens, May 1996.

“Motion and Matter in Descartes’ Plenum”, Department of Philosophy, University of Texas at El Paso, March 1996.

“The Structure of Theories of Space and Time in the Seventeenth Century”, Department of Philosophy, Ohio University, Fall 1994.

American Philosophical Association Meetings

“Newton’s Ontology of Omnipresence and Infinite Space” (with J. E. McGuire), Central Division Meeting, Chicago, Feb. 2010.

“Descartes, Substance, and Individual Corporeal Bodies”, Central Division Meeting, New Orleans, May 1999.

“Descartes, Newton, and Huygens’ Center-of-Mass Frame: Or, How to Build Your Own Cartesian Dynamics”, Central Division Meeting, Chicago, May 1998.

“Cartesian Bodies and the Plenum: Or Can Quantity of Motion be Conserved?”, Eastern Division Meeting, Atlanta, Dec. 1996.

“Perfect Solidity, Quantity of Motion, and The Problem of Matter in Descartes’ Universe”, Central Division Meeting, Chicago, April 1995.

Minnesota Philosophical Society Meetings:

“Did Descartes’ Physics Go Around in Circles: Or, The Shocking Truth Revealed about Cartesian Circular Inertia”, University of Minnesota, Twin Cities, Sept. 2002.

“Holism and the Mechanism in Descartes’ Natural Philosophy”, College of St. Benedict, St. Cloud, MN, Sept. 2001.

“Rouse-ing Out the Legitimation Project: Scientific Practice and the Problem of Demarcation”, U. of Minnesota-Duluth, Oct. 1999.

“Descartes and Individual Corporeal Bodies”, University of St. Thomas, Oct. 1998.



### **Conference/Workshop/Master Class Co-Organizer**

Mid-West Seminar in Early Modern Philosophy, Spring 2010 Conference (with Geoff Gorham), Macalester College, May 2010.

“The Language of Nature: Reconsidering Mathematization in the Scientific Revolution”, workshop in the series, *Minnesota Studies in the Philosophy of Science* (with Geoffrey Gorham, Benjamin Hill, and Ken Waters), University of Western Ontario, October 2012.

“Space, Time, and Motion in the Early Modern Period”, Master Class, Institute for Research in the Humanities, University of Bucharest (Romania), May 18-22, 2015.

### **Awards, Seminars, Workshops, & Fellowships**

Visiting Fellow, Department of Philosophy, Princeton University, Spring 2009 Academic Term.

Visiting Fellow, Minnesota Center for Philosophy of Science, University of Minnesota, Fall 2008 Academic Term.

Visiting Fellow, Center for Philosophy of Science, University of Pittsburgh, 2007-2008 Academic Year.

National Endowment for the Humanities (NEH) Summer Seminar for College Teachers, Princeton University, Summer 2010. Topic: Galileo, Descartes, and Hobbes on Science, Religion and Society. Directors: D. Garber and R. Ariew.

“Newton on the Structure and Parts of Space”, Leiden Workshop on Early Modern Philosophy and Science (invited participant), Leiden University, Nov. 2008.

Pittsburgh-Princeton: Descartes Day II, Center for Philosophy of Science (invited participant), University of Pittsburgh, May 6, 2006; Organizing Committee: D. Garber, P. K. Machamer, J. E. McGuire.

National Endowment for the Humanities (NEH) Summer Institute for College Teachers, University of Wisconsin-Madison, Summer 2004. Topic: Philosophy, Science, and Theology in the Seventeenth Century. Directors: Steven Nadler and Don Rutherford.

National Endowment for the Humanities (NEH) Summer Seminar for College Teachers, Virginia Tech, Summer 2003. Topic: G. W. Leibniz's Philosophy. Directors: Daniel Garber and Roger Ariew.

Visiting Thomas Reid Scholar, University of Aberdeen, Scotland, May-June, 2002.

National Endowment for the Humanities (NEH) Summer Seminar for College Teachers, Brown University, Summer 2000. Topic: Thomas Reid's Philosophy. Director: James Van Cleve.

National Endowment for the Humanities (NEH) Summer Seminar for College Teachers, Syracuse University, Summer 1996. Topic: Early Modern Rationalists (Descartes, Spinoza, Leibniz). Director: Jonathan Bennett.

Professor of the Year Nominee, 1999, Winona State University Student Senate.

### **Courses Taught**

#### Introduction to Philosophy:

(Ohio State U.) Fall 1988, Winter 1991, Fall 1992, Spring 1993, Fall 1993, Spring 1994; (Ohio U.) Fall 1995-Spring 1997 (all terms); (WSU) 1998-2006, 2009-2016 (all terms).

#### Introduction to Ethics:

(Ohio State U.) Spring 1989, Fall 1991, Winter 1992, Winter 1993, Winter 1994; (Ohio U.) Fall 1994, Winter 1995, Fall 1995, Spring 1996, Fall 1996, Winter 1997, Spring 1997; (U. of Alaska) 1997-1998 (all terms).

#### Introduction to Logic:

(Ohio State U.) Winter 1989, Fall 1989, Winter 1990 (twice), Spring 1990 (twice), Summer 1990, Fall 1990, Spring 1992; (Ohio U.) Winter 1997; (U. of Alaska) 1997-1998 (all terms). (WSU) Fall 2006

#### Philosophy of Technology/Sociology of Science (graduate-level course):

(Ohio U.) Winter 1996, Spring 1997.

#### Philosophy of Science:

(U. of Alaska) Spring 1998; (WSU) Fall 1998-2006, 2009-2016.

#### Space and Time:

(WSU) Spring 2001, 2003, 2010.

#### Existentialism (or Meaning of Life):

(WSU) Spring 2003-2005, 2009, 2011.

#### Aesthetics:

(U. of Alaska) Fall 1997; (WSU) Spring 2002-2004, 2005-2007, 2011-2013.

#### Symbolic Logic:

(WSU) Spring 1999, Spring 2003, Fall 2003-2004.

#### Early Modern Philosophy:

(U. of Alaska) Spring 1998; (WSU) Fall 1998-2006, 2009-2016.

#### Aristotle and Medieval Philosophy:

(WSU) Spring 1999, Spring 2000, Spring 2001.

Classical Philosophy:  
(WSU) Spring 2012, 2014-2015.

Independent Research (graduate-level course), Undergraduate and M.A.-Thesis Advising:  
(Ohio U.) 1994-1995, 1996-1997, (U. of Alaska) 1997-1998.

### **Committee Experience**

Graduate Student Representative; Philosophy, Ohio State University, 1992-1993.  
Humanities Council Representative; Ohio State University, 1991-1992, 1993-1994.  
Undergraduate Philosophy Club Committee; Ohio University, 1994-1997.  
Socratic Society, Undergraduate Philosophy Club, U. of Alaska Fairbanks, 1997-1998.  
Undergraduate Philosophy Club (Advisor), WSU, 1998-2003, 2009-2012.  
Academic Affairs and Curriculum Committee (Representative), WSU, 1999-2005, 2009-2011.  
Department Chair, Philosophy, WSU, 2004-2007, 2012-present.

### **Professional Affiliations**

American Philosophical Association, 1993-present.  
Philosophy of Science Association, 1992-present.  
Steering Committee, International Society for the History of Philosophy of Science (HOPOS), 2011-13.

### **Additional Experience**

Airframe and Powerplant Mechanic (F. A. A. Certificate), Lewis University, Romeoville, IL, 1983; Private Pilot (F. A. A. Certificate), Single-engine Land.

### **Journal Referee**

*Philosophy of Science, Studies in History and Philosophy of Science, Studies in History and Philosophy of Modern Physics, Erkenntnis, Foundations of Science, HOPOS, Early Science and Medicine, British Journal for Philosophy of Science*

### **References**

Prof. Daniel Garber  
Department of Philosophy, Princeton University, Room 112, 1879 Hall, Princeton, NJ, 08544

Prof. Mark Wilson  
Department of Philosophy, University of Pittsburgh, 1009-G Cathedral of Learning, Pittsburgh, PA, 15260

Prof. Peter Machamer, Department of History and Philosophy of Science, University of Pittsburgh, 1017 Cathedral of Learning, Pittsburgh, PA, 15260

Prof. J. E. McGuire  
Emeritus faculty, Department of History and Philosophy of Science, University of  
Pittsburgh, Pittsburgh, PA, 15260