

# Robert J. Valenza

## *Curriculum Vitae*

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### *Education*

Ph.D. (Mathematics), 1979, Columbia University (Adviser, H. Bass)  
M.Phil., 1979, *ibid.*; M.A., 1974, *ibid.*; B.A., 1973, *ibid.*

### *Professional History*

- 1988 – present     Dengler-Dykema Professor of Mathematics and the Humanities (2005, Emeritus 2024), Claremont McKenna College, Claremont, California; Director, *Questions of Civilization* Program (2001–08), W. M. Keck Professor of Mathematics and Computer Science (1994–2004), Associate Professor of Mathematics on the Keck Fund (1988–1994). Adjunct Professor, Claremont School of Theology (2009).
- 1987 – 1988         Adjunct Professor of Mathematics, Harvey Mudd College, Claremont, California.
- 1984 – 1988         Senior Staff Scientist/Manager Software Development, Gould Electronics, El Monte, California.
- 1981 – 1984         Staff Engineer, Computer Resources and Analysis Group, RCA Astro-Electronics, Princeton, New Jersey.
- 1979 – 1981         Assistant Professor of Mathematics, Wichita State University, Wichita, Kansas.
- 1973 – 1979         Preceptor/Teaching Assistant in Mathematics, Columbia University, New York, New York.

### *Awards and Honors*

Glen R. Huntoon Teaching Award, Claremont McKenna College, 2007 and 2011  
G. David Huntoon Senior Teaching Award, Claremont McKenna College, 1997, 2003, 2024  
Graduate Research Assistantship, Columbia University, summers 1976–77  
Columbia University Faculty Fellowship, 1973–77  
Alfred P. Sloan Scholar, Columbia College, 1969–70

### *Professional Societies*

Member, Advisory Board, Whitehead Research Project Editorial Advisory Board  
Member, Canadian Society for History and Philosophy of Mathematics  
Member, British Society for History of Mathematics  
Member, Canadian Society for History and Philosophy of Science  
(CSHPS Membership Development Committee, 2019)  
Member, Sigma Xi Scientific Research Society  
Member, American Association for the Advancement of Science

## *Publications*

*Variations on Dimension Subgroups*, Thesis, Columbia University, 1979.

“Dimension Subgroups of Semidirect Products,” *Journal of Pure and Applied Algebra*, **18/2**, 225–30, 1980.

“Strongly Determined Subgroups,” *Communications in Algebra*, **9/6**, 669–77, 1981.

*Abstract Algebra* (with Gary D. Crown and Maureen H. Fenrick), Marcel Dekker Series in Pure and Applied Mathematics, Vol. 99 (403 pages), 1986.

“Elasticity of Factorization in Number Fields,” *Journal of Number Theory*, **36**, 212–18, 1990.

“Are the Thisted-Efron Tests Valid?” *Computers and the Humanities*, **25**, 27–46, 1991.

“Shakespeare: His Moods and Modes,” American Society for Information Science, Special Interest Group on Arts and Humanities, *Newsletter*, **1/3**, June/July 1990.

“Pretenders Sound Wrong Chords” (with Ward Elliott), *Los Angeles Times* Op. Ed., April 22, 1991.

“Who Was Shakespeare?” (with Ward Elliott), *Chance Magazine*, **4/3**, 1991, 8–14.

“A Touchstone for the Bard” (with Ward Elliott), *Computers and the Humanities*, **25**, 199–209, 1991.

“Was the Earl of Oxford the True Shakespeare? A Computer-Aided Analysis” (with Ward Elliott), *Notes and Queries*, **236/4**, 501–506, 1991. Reprinted in *A Groat’s Worth of Wit*, **13/1**, 2002.

“A Representation-Theoretic Approach to the DFT with Noncommutative Generalizations,” *IEEE Transactions on Acoustics, Speech, and Signal Processing*, **40/4**, 814–22, 1992.

*Linear Algebra: An Introduction to Abstract Mathematics*, Springer-Verlag Undergraduate Texts in Mathematics Series (237 pages), 1993. Also to appear as an eBook in the Springer Book Archives (never to go out of print).

“The Dichotomy of Idempotency in Whitehead’s Mathematics” (with Granville Henry), *Philosophia Mathematica* (3) **1**, 157–72, 1993.

“Whitehead’s Early Philosophy of Mathematics” (with Granville Henry), *Process Studies*, **22/1**, 1993.

“The Principle of Affinity in Whiteheadian Metaphysics” (with Granville Henry), *Process Studies*, **23/1**, 1994.

“Process, Projection, and Consciousness” (with Granville Henry), presented at the Conference on Consciousness in Humans, Animals, and Computers (October, 1994).

“The Preprojective and the Postprojective: A New Perspective on Causal Efficacy and Presentational Immediacy” (with Granville Henry), *Process Studies*, **26/1–2**, 1997.

“And Then There Were None” (with Ward Elliott), *Computers and the Humanities*, **30**, 191–245, 1996.

- “Glass Slippers and Seven League Boots” (with Ward Elliott), *Shakespeare Quarterly*, **48/2**, 1997.
- Review: *The Becoming of Time*, by Lawrence W. Fagg, *Process Studies*, **27/3–4**, 1998.
- “The Concept of Mass in Process Theory” (with Granville Henry), *Process Studies*, **27/3–4**, 1998.
- Fourier Analysis on Number Fields* (with Dinakar Ramakrishnan of the California Institute of Technology), Springer-Verlag Graduate Texts in Mathematics 186, 1999. Republished by the Tsinghua University Press in Beijing, 2005. Republished by the World Publishing Corporation, Beijing, 2012. Also to appear as an eBook in the Springer Book Archives (never to go out of print).
- “The Professor Doth Protest Too Much, Methinks: Problems with the Foster Response” (with Ward Elliott), *Computers and the Humanities*, **32**, 425–46, 1999.
- “Revised Appendices to ‘And Then There Were None’” (with Ward Elliott), *Computers and the Humanities* **32**, 446–490, 1999.
- “Can the Oxford Candidacy Be Saved? A Response to W. Ron Hess, ‘Shakespeare’s Dates: Their Effect on Stylistic Analysis’” (with Ward Elliott), *The Oxfordian*, Volume **3** 2000, 71-98).
- Review: *Whitehead und Einstein* (in German), by Joachim Stolz, *Process Studies*, **29/2**, 2001.
- “Eternal Objects at Sea” (with Granville Henry), presented at the International Silver Anniversary Whitehead Conference, Claremont, California (August, 1998); *Process Studies*, **30/2** 2001, 55–77.
- “Smoking Guns and Silver Bullets: Could John Ford Have Written the Funeral Elegy?” (with Ward Elliott), *Journal of Literary and Linguistic Computing*, **16/3**, 2001.
- “So Many Hardballs, So Few over the Plate” (with Ward Elliott), *Computers and the Humanities* **36**, 455-460, 2002.
- “Aesthetic Priority in Science and Religion,” delivered at the Claremont School of Theology, April, 2000; revised version in *Process Studies* **31/1** (2002).
- “Sleuthing for Shakespeare by Computer” (with Ward Elliott), UPI, 6/25/2002.
- Letter: with Ward Elliott, in *The Oxfordian*, **VI**, 2003. (Response to John Shahan’s critique of our work on the Shakespeare Authorship Question.)
- Contributor: *Physics and Whitehead*, Timothy E. Eastman, ed., SUNY Press, 2003. (Participant in two dialogs on process theory and physics transcribed from the 1998 Claremont International Whitehead Conference)
- “Did Shakespeare Write *A Lover’s Complaint*? The Jackson Ascription Revisited” (with Ward Elliott), in *Words That Count: Essays on Early Modern Authorship in Honor of MacDonald P. Jackson*, Brian Body, ed., University of Delaware Press, 2004.
- “On the Structure of Certain Counting Polynomials,” *Notes on Number Theory and Discrete Mathematics*, **11/1**, 2005.
- “Oxford by the Numbers: What Are the Odds That the Earl of Oxford Could Have Written Shakespeare’s Poems and Plays?” (with Ward Elliott), *Tennessee Law Review* **72**, 2005.

- June Rain* (a philosophical romance, under the pseudonym Brandon Knightley), Inkwater Press, Portland, Oregon, 2005.
- “Breakfast with Plato,” (a short story, under the pseudonym Brandon Knightley) in the anthology *Inkwater Ink*, Inkwater Press, Portland, Oregon, 2006.
- Editor, *The Best of Civilization: An Anthology from the Questions of Civilization Program at Claremont McKenna College*, Inkwater Press, Portland, Oregon, 2007.
- “Introduction to ‘The Metaphysics of Consciousness and Evolution,’ in *Back to Darwin: A Richer Account of Evolution*, John B. Cobb, ed., Eerdmans Publishing Company, 2008.
- “The Metaphysics of Consciousness and Evolution,” in *Back to Darwin: A Richer Account of Evolution*, John B. Cobb, ed., Eerdmans Publishing Company, 2008.
- “Possibility, Actuality and Freewill,” in a special issue of *World Futures Journal*, Franz Riffert and Tim Eastman, eds., 2008.
- “Cosmos, Logos and the Limits of Science,” presented at the Conference on Cosmology and Process Philosophy in Dialogue: Fundamental Philosophical Issues in Recent Cosmology and Their Religious Significance. Claremont Graduate University, Claremont, California, October 2006. Published in *Process Studies*, **36/2**, 2007.
- “Einstein: The Covariant Universe,” in *A Handbook of Whiteheadian Process Thought*, Michel Weber and Will Desmond, eds., Ontos Verlag, Frankfurt, 2008.
- “Computer Science: Form without Content,” (with Granville Henry), in *A Handbook of Whiteheadian Process Thought*, Michel Weber and Will Desmond, eds., Ontos-Verlag, Frankfurt, 2008.
- “Vector Mathematics: Symbol versus Form,” in *A Handbook of Whiteheadian Process Thought*, Michel Weber and Will Desmond, eds., Ontos Verlag, Frankfurt, 2008.
- “Covariance and Evolution,” presented in the Biophilosophy Section at the Sixth International Whitehead Conference, Salzburg, Austria, July, 2006. Revised and expanded version to appear in *Life and Process: Towards a New Biophilosophy*, Spyridon Koutroufinis, ed., Ontos-Verlag, Frankfurt.
- “My Other Car Is a Shakespeare: A Response to Shahan and Whalen’s ‘Apples to Oranges in Bard Styometrics’” (with Ward Elliott), *The Oxfordian* **10**, 2007.
- “Shakespeare by Ear: What Can Intuition Tell Us about What He Wrote?” (with Ward Elliott), *The Shakespeare Newsletter* 57 (Winter 2007/08).
- “Two Tough Nuts to Crack: Did Shakespeare Write the ‘Shakespeare’ Portions of *Sir Thomas More* and *Edward III*? Part I” (with Ward Elliott), *The Journal of Literary and Linguistic Computing*, April 2010.
- “Two Tough Nuts to Crack: Did Shakespeare Write the ‘Shakespeare’ Portions of *Sir Thomas More* and *Edward III*? Part II” (with Ward Elliott), *The Journal of Literary and Linguistic Computing*, June 2010.

- “The Shakespeare Clinic and the Oxfordians – a Retrospective” (with Ward Elliott), *The Oxfordian* **14**, 2010.
- “The Organism of Forms in Later Whitehead,” in *Beyond Metaphysics?* Roland C. Faber, Brian Henning, and Clinton Combs, eds., Value Inquiry Book Series, Vol 220, New York: Editions Rodopi, 2010.
- “Meaning and Process,” in *Chromatikon V, Yearbook of Philosophy in Process*, Michel Weber and Ronny Desmet, eds., Presses universitaires de Louvain, 2009.
- “Metaphysical Models,” *Process Studies*, **39.1**, 2010.
- “Shakespeare’s Vocabulary: Did It Dwarf All Others?” (with Ward Elliott), Chapter Two in *Stylistics and Shakespeare’s Language: Transdisciplinary Approaches*, Mireille Ravassat and Jonathan Culpeper, eds., London: Continuum Press, 2011.
- “Did Marlowe write half of Henry VI, Part I?” with Ward Elliott, submission for the Calvin and Rose Hoffman Annual Prize, 2013.
- Editor, *New Perspectives and Reflections on The Best of Civilization: A Sequel to the Anthology from the Questions of Civilization Program at Claremont McKenna College*, Inkwater Press, 2014. (This work won an honorable mention at the Great Midwestern Book Festival in 2015.)
- “Harmony and Science: Towards a More Inclusive Scientific Worldview,” *Process Perspectives*, **36/2**, Spring, 2014.
- “What Is It Like to Be a Photon?” in *Chromatikon X, Yearbook of Philosophy in Process*, Michel Weber and Vincent Berne, eds., Presses universitaires de Louvain, 2015.
- “What Does a Particle Know? Information and Entanglement,” in *Intuition in Mathematics and Physics: A Whiteheadian Approach* (Toward Ecological Civilization, Volume 10) edited by Ronny Desmet. Process Century Press, 2016. (This is a collection of articles derived from the Physics Track of the 2015 International Whitehead Conference.)
- “Reflections on Education and Self-expression,” CMC Magazine, Spring 2016.
- “Spectacular Exponents: A Semi modular Approach to Fast Exponentiation,” *Journal of Advances in Mathematics* **16**, 2019, <https://rajpub.com/index.php/jam>.
- Under Six Eyes: A Dialog on God in the World* (with Rev. James Pike), Austin Macauley Publishers, London, 2020. (Hardcover, paperback, eBook, audiobook.)
- “Consciousness and Self-awareness.” *Academia Letters*, Article 1704, <https://doi.org/10.20935/AL1704> (2021).
- “Whiteheads Mathematik: Rezeption,” (German) in *Alfred North Whitehead: Leben – Werk – Wirkung*, Tina Röck & Michael Schramm eds., Metzler Verlag, Heidelberg, to appear 2025.
- Co-editor, *The Essays and Articles of Alfred North Whitehead, Volume One 1886-1916* (EA1, with Brian Henning and Joseph Petek), Edinburgh University Press Ltd, to appear (2025).
- “Introduction: Memoir on the Algebra of Symbolic Logic, Part I,” to appear in EA1, see above.

“Introduction: Memoir on the Algebra of Symbolic Logic, Part II,” to appear in EA1, see above.

“Introduction: Axioms of Geometry,” to appear in EA1, see above.

“Introduction: On the Motion of Viscous Incompressible Fluids,” to appear in EA1, see above.

“Introduction: Second Approximations to Viscous Fluid Motion,” to appear in EA1, see above.

“Introduction: Space, Time, and Relativity,” (with Joseph Petek) to appear in EA1, see above.

“Introduction: Mathematics,” to appear in EA1, see above.

“Introduction: On Cardinal Numbers,” to appear in EA1, see above.

“Introduction: On Mathematical Concepts of the Material World,” to appear in EA1, see above.

“Introduction: On the Geodesic Geometry of Surfaces in non-Euclidean Space,” to appear in EA1, see above.

“Introduction: Non-Euclidean Geometry,” (with Joseph Petek) to appear in EA1, see above.

“Introduction: The Logic of Relations, Logical Substitution Groups, and Cardinal Numbers,” to appear in EA1, see above.

“Introduction: Sets of Operations in Relation to Groups of Finite Order,” to appear in EA1, see above.

“Introduction: Graphical Solution for High-Angle Fire,” in *The Essays and Articles of Alfred North Whitehead, Volume Two 1917-1943*, Brian Henning and Joseph Petek, eds., Edinburgh University Press Ltd, to appear (2025).

“Introduction: Indication, Classes, Numbers, Validation,” in *The Essays and Articles of Alfred North Whitehead, Volume Two 1917-1943*, Brian Henning and Joseph Petek, eds., Edinburgh University Press Ltd, to appear (2025).

“Functoriality as an Essential Descriptor of Reality: Beyond Mathematics and Physics,” in *Unraveling the Weave of Quantum Geometry: Functorial Constellations and Algebraic Invariants via Categories, Topoi, and Differential Sheaves*, Elias Zefiris, ed., to appear 2025.

*Scripts* (a philosophical novel, under the pseudonym Brandon Knightley), revised draft completed, to be submitted.

*Fair Gifts Fairer: An Introduction to Object-Oriented Programming in C++*, course notes, Claremont McKenna College, 181 pages.

## *Blogs*

“Invitation to the Conversation,” (with James Pike), December 2020 (associated with our book *Under Six Eyes*). <http://jamesapikeandrobertyvalenza.ampbk.com/blog/invitation-to-the-conversation/>

“How Can Heartfelt Disagreement Be Constructive?” March 2021 (associated with our book *Under Six Eyes*). <https://jamesapikeandrobertyvalenza.ampbk.com/blog/how-can-heartfelt-disagreement-be-constructive/>

## *Principal Technical Reports*

“Accuracy of Orbit Determination for Geosynchronous Satellites,” RCA Astro-Electronics (ES-GST/SP-041), February, 1982.

*GSTAR Mission Analyst Training Course: Orbital Mechanics and Off-line Software*, RCA Astro-Electronics, October, 1983 (216 pages).

*Spacecraft Orbit Control Software Detailed Design Document*, RCA Astro-Electronics, May, 1984 (600 pages).

“CVSD Simulator,” Gould Technical Report EW-4056, October, 1985.

Classified technical report to U.S. Army Center for Signals Warfare, January, 1987.

## *Art Exhibitions*

*Digital Imagery*, Athenaeum Art Show at Claremont McKenna College, with Christine Kim and Sarah Junker, Spring 2001.

*Interstices: Prime Deserts*, Kellogg University Art Gallery at The California Polytechnic University (a collaborative installation with Nancy Macko, Professor of Art, Scripps College), Spring 2003.

*Prime Horizons*, Pasadena Armory Center for the Arts (a collaborative installation with Nancy Macko, Professor of Art, Scripps College), Summer, 2005.