

Robert Goulding
Program of Liberal Studies
University of Notre Dame
Notre Dame IN 46556

Education

- 1999** Warburg Institute, University of London: Ph.D. in Historical Studies. Dissertation: *Studies on the Mathematical and Astronomical Papers of Sir Henry Savile (1549–1622)*. Director: Jill Kraye.
- 1992** Warburg Institute, University of London: M.A. with Distinction in Historical Studies. Dissertation: *The Mathematical Sciences at Oxford in the Second Half of the Sixteenth Century*. Director: Jill Kraye.
- 1990** University of Canterbury, NZ: B.A. with First-Class Honors in Classics (Latin).
- 1989** University of Canterbury, NZ: B.Sc. in Mathematics.

Employment

- 2010-present** University of Notre Dame: Associate Professor, Program of Liberal Studies. Concurrent appointment in History Department; Fellow, Medieval Institute; Member, History and Philosophy of Science.
- 2003-2010** University of Notre Dame: Assistant Professor, Program of Liberal Studies. Concurrent appointment in History Department; Fellow, Medieval Institute; Member, History and Philosophy of Science.
- 1999-2000** Open University: Tutor in History of Mathematics.
- 1994-96** British Academy: Researcher contributing to catalogue *Medieval British Manuscripts containing Commentaries on Aristotle*.
- 1993** Morley College, London: Adjunct Lecturer in Latin.
- 1991** University of Canterbury, NZ: Adjunct lecturer in Latin.

Fellowships, Grants and Awards

Major Honors and Awards

- 2021-24** Co-PI on NEH/AHRC New Directions in Digital Scholarship grant, in partnership with Bodleian Library and other UK institutions. (\$150,000 for Notre Dame component)
- 2020-23** Co-PI on NEH/Teagle Foundation grant for transforming core education in technology and pre-health (\$250,000).

2016-17	Member, Institute for Advanced Study (Princeton).
2013	American Council of Learned Societies Fellowship.
Fall 2012	National Endowment for the Humanities Fellowship, Newberry Library.
2012-13	Dibner Fellowship (NEH), Huntington Library (declined).
2006-07	National Endowment for the Humanities Faculty Fellowship.
2006-07	NEH Fellowship, Folger Institute (declined).
2000-03	Cotsen Fellow (Society of Fellows in the Liberal Arts), Princeton University.
1999-2000	Caird Senior Research Fellow, National Maritime Museum, Greenwich.
1996-99	Elizabeth Wordsworth Junior Research Fellow, St. Hugh's College, University of Oxford.
1991-94	Commonwealth Scholarship (British Council) for postgraduate study in UK.

Other Grants and Awards (recent)

2024	Large Henckels grant (ISLA): John Green visit (\$20,000) Grant from Provost's Office, Kathleen Cannon, OP, Distinguished Lecture series. Small Henckels grant (ISLA): Conference at Kylemore Abbey on Irish Medicine.
2023	Grant from Provost's Office, Kathleen Cannon, OP, Distinguished Lecture series Small Henckels grant (ISLA): Platform Capitalism conference.
2021	Grant from ISLA: for biennial History of Astronomy conference.
2019	Grant from ISLA: for biennial History of Astronomy conference.
2018	Grant from ISLA: for reproductions for refraction project; and another for Educating Whole Physician conference.
2014	Grants from ISLA, Nanovic Institute and the History Department, towards the costs of conference in UK.
2012	Grant from Institute for Scholarship in the Liberal Arts (Notre Dame) for research assistant.
2007, 10, 12	Grant from Institute for Scholarship in the Liberal Arts (Notre Dame) for travel to international conference.
2005	Research Travel Grant from Institute for Scholarship in the Liberal Arts (Notre Dame), for research in Europe towards completion of monograph.
2005	Subvention from Thomas Harriot Society (UK) for publication of <i>Artis analyticae praxis</i> translation.

Publications

Monographs

- 2010** *Defending Hypatia: Ramus, Savile, and the Renaissance Rediscovery of Mathematical History*. Published by Springer, in the series *Archimedes*.
- 2007** Muriel Seltman & Robert Goulding, *Thomas Harriot's Artis analyticae praxis: A translation and commentary*. New York: Springer, 2007. (Responsible for edition and translation of text).

Articles in Refereed Journals

- 2022** “The Harvest of Optics: Descartes, Mydorge, and Their Paths to a Theory of Refraction.” *Annals of Science* 79, no. 2 (April 2022): 164–214.
- 2022** “Geometry and the Gods: Theurgy in Proclus’s *Commentary on the First Book of Euclid’s Elements*.” *Perspectives on Science* 30, no. 3 (2022): 358–406.
- 2018** “Binocular vision and image location before Kepler.” *Archives for History of Exact Sciences* 72 (2018): 497–546.
- 2014** “Thomas Harriot’s Optics, between Experiment and Imagination: The Case of Mr Bulkeley’s Glass.” *Archive for History of Exact Sciences* 68, (2014): 137–78.
- 2009** “Pythagoras in Paris: Petrus Ramus Imagines the Prehistory of Mathematics.” *Configurations* 17 (2009): 51–86.
- 2006** “Histories of Science in Early-Modern Europe.” *Journal of the History of Ideas* 67 (2006): 33–40.
- 2006** “Method and Mathematics: Petrus Ramus and the History of the Sciences.” *Journal of the History of Ideas* 67 (2006): 63–85.
- 2000** “Who Wrote Themistius’ Twelfth Oration?” *Journal of the Warburg and Courtauld Institutes* 63 (2000): 1–23.
- 1995** “Henry Savile and the Tychonic World System.” *Journal of the Warburg and Courtauld Institutes* 58 (1995): 152–79.

Articles in Refereed Collections

- 2025** “Henry Savile and the Early Professors.” In press, in *Oxford’s Savilian Professors of Astronomy: The first 400 years*, ed. Steve Balbus and Robin Wilson, Oxford: Oxford University Press.
- 2021** “Anachronism in the Renaissance Historiography of Mathematics.” In *Anachronisms in the History of Mathematics: Essays on the Historical Interpretation of Mathematical Texts*, ed. Niccolò Guicciardini. Cambridge: Cambridge University Press, 2021:

167–195.

- 2020** “Numbers and Paths: Henry Savile’s Manuscript Treatises on the Euclidean Theory of Proportion.” In *Reading mathematics*, ed. Philip Beeley, Benjamin Wardhaugh, and Yelda Nasifoglu. Abingdon-on-Thames: Routledge, 2020: 33–61.
- 2019** “Illusion.” In *The Routledge History of Medieval Magic*, edited by Sophie Page and Catherine Rider. Abingdon-on-Thames: Routledge, 2019: 312–30.
- 2017** “Five versions of Ramus’s *Geometry*.” In *Et amicorum: Essays on Renaissance Humanism and Philosophy in honour of Jill Kraye*, ed. A. Ossa-Richardson and Margaret Meserve, Leiden: Brill, 2018 (Dec. 2017): 355–387.
- 2016** “Henry Savile reads his Euclid.” In *For the Sake of Learning: Essays in Honor of Anthony Grafton*, ed. A. Blair and A. Goeing, Leiden: Brill, 2016: 780–797.
- 2012** “Chymicorum in morem: Refraction, matter theory and secrecy in the Harriot-Kepler correspondence.” In *Thomas Harriot and his World: Mathematics, exploration, and natural philosophy in early-modern England*, ed. R. Fox, London: Ashgate, 2012.
- 2006** “Deceiving the Senses in the Thirteenth Century: Trickery and Illusion in the *Secretum philosophorum*.” In *Magic and the Classical Tradition*, ed. C. Burnett and W. F. Ryan, London: The Warburg Institute, 2006.
- 2005** “Polemic in the Margin: Henry Savile and Joseph Scaliger on Squaring the Circle,” in *Scientia in Margine: Études sur les marginalia dans les manuscrits scientifiques du moyen âge à la Renaissance*, ed. D. Jacquart and C. Burnett, Geneva: Librairie Droz, 2005: 241–59.
- 2002** “Humanism and Science in the Elizabethan Universities.” In *Reassessing Tudor Humanism*, ed. J. Woolfson, Basingstoke & New York: Palgrave Macmillan, 2002: 223–42.

Articles in other edited volumes

- 2006** “John Dee and Thomas Digges on the New Star of 1572.” In *John Dee: Interdisciplinary Studies in English Renaissance Thought*, ed. S. Clucas, New York: Springer, 2006: 41–63.
- 2000, 13** “Renaissance Oxford” (co-written with John Fauvel), in *Oxford Figures: 800 Years of the Mathematical Sciences*, ed. J. Fauvel, R. Flood & R. Wilson, Oxford: Oxford University Press, 2000: 40–61. Revised version for new edition, 2013.
- 1999** “Testimonia humanitatis: The Early Lectures of Henry Savile.” In *Sir Thomas Gresham and Gresham College: Studies in the intellectual history of London in the sixteenth and seventeenth centuries*, ed. F. Ames-Lewis, Aldershot: Ashgate, 1999: 125–45.

Works in progress

Under contract Book-length translation and commentary upon Plotinus, *Enneads* II.7 (“On Complete Blending”) and II.8 (“On Sight”). Parmenides Press.

Other publications

- 2010** Articles on “Optics” and “Squaring the Circle” for *The Classical Tradition*, ed. A. Grafton, S. Settis & G. Most, Cambridge MA: Harvard University Press, 2010.
- 2006** “Real, Apparent and Illusory Necromancy: Lamp Experiments and Historical Perceptions of Experimental Knowledge,” *Societas Magica Newsletter*, 2006: 1–7.
- 2005** Microfiche units on “Science,” in series *Incunabula: The Printing Revolution in Europe* Units 41–44 (Reading and Woodbridge CT: Primary Source Microfilm, 2005). Selected 360 fifteenth-century books on science for filming, and wrote introductory pamphlet.
- 2004** Major new entry on “Henry Savile,” and short new entry on “Adam Burley” for *Oxford Dictionary of National Biography*. Oxford: Oxford University Press, 2004–.
- 2004** Entry on “Henry Savile” for *Dictionary of British Classicists*, ed. R. B. Todd and H. W. Benario, Bristol: Thoemmes Continuum, 2004.

Book Reviews

- 2023** Shapiro, Alan C., ed.. *Optical Papers of Isaac Newton*. Vol. II: The Opticks and Related Papers. Cambridge: Cambridge University Press, 2021. Reviewed in *Annals of Science* 80 (2023): 299–302.
- 2019** Kupfer, Marcia Ann. *Art and Optics in the Hereford Map: An English Mappa Mundi, c. 1300*. New Haven, CT: Yale University Press, 2016. Reviewed in *Isis* 110 (2019): 154–5.
- 2017** A. Mark Smith, *From Sight to Light: The Passage from Ancient to Modern Optics*. Chicago: University of Chicago Press, 2014. Reviewed in *Renaissance Quarterly* 70 (2017): 1522–3.
- 2012** Euan Cameron, *Enchanted Europe: Superstition, Reason, & Religion, 1250-1750*. Oxford: Oxford University Press, 2010. Reviewed in *Magic, Ritual and Witchcraft* 7 (2012): 112.
- 2011** Alexander Marr, ed., *The Worlds of Oronce Fine: Mathematics, Instruments and Print in Renaissance France*. Donington: Shaun Tyas, 2009. Reviewed in *Renaissance Quarterly* 64 (2011): 222–4.
- 2007** Steven J. Williams, *The Secret of Secrets: The Scholarly Career of a Pseudo-Aristotelian Text in the Latin Middle Ages*. Ann Arbor, MI: University of Michigan Press, 2003. Reviewed in *Speculum* 82 (2007): 494–5.
- 2005** Jessica Wolfe, *Humanism, Machinery and Renaissance Literature*. Cambridge:

Cambridge University Press, 2004. Reviewed in *Renaissance Quarterly* 58 (2005): 1051--3.

Other scholarly activities leading to publication

- 2013-** Member of three-person editorial team, “The manuscripts of Thomas Harriot (1560–1621)”: project based at Max-Planck-Institut for Wissenschaftsgeschichte (Berlin), to put the entirety of Harriot’s manuscripts online as high-resolution images, with transcription, translation and several layers of commentary. See http://echo.mpiwg-berlin.mpg.de/content/scientific_revolution/harriot.

Invited Papers (while at ND)

- 2025** “Reconstructing Thomas Harriot’s Treatise *De infinitis*.” Invited presentations at *A Genetic Criticism for Mathematics*, Treilles, France, March 10–15, 2025.
- “Intimations of Infinity: Thomas Harriot on Degrees of the Infinite.” Invited presentation at the Centre National de la Recherche Scientifique (CNRS), March 7, 2025.
- “Harriot as a reader of Proclus’ *De motu*.” Invited presentation (Director’s Seminar) at the Warburg Institute, London, March 5, 2025.
- 2024** “Harriot’s *De infinitis*.” Keynote presentation at *Visualizing Hidden Meanings: Symbolism and Cryptography in the Writings of Thomas Harriot and Galileo Galilei*, Hesburgh Library, University of Notre Dame, June 6, 2024.
- “Plotinus: Two Neglected Natural Philosophical Treatises.” Invited presentation at *Elements of Reasoning; Elements of Nature*, Notre Dame Rome Global Gateway, June 17–20, 2024.
- Presentation on first two chapters of Roy Scranton, *Ethical Pessimism*, as invited member of his public manuscript workshop, University of Notre Dame, May 2–3, 2024.
- 2023** “If the Image Never Lies”: Ramist Optics and Snell’s Measure of Refraction.” Keynote address at *Consonances I*, Maynooth University (Ireland), August 30–September 1, 2023.
- 2022** “Parabolic Mirrors and Infinity: Harriot’s Discovery of a New Convergent Infinite Series.” At *De infinitis Workshop*, Hesburgh Library, University of Notre Dame, September 15, 2022.
- 2021** “Walter Warner, Custodian of Harriot’s Secret of Refraction.” Keynote address at *Thomas Harriot in Global and Local Contexts: A Quatercentenary Conference*, Birkbeck College and the Warburg Institute (University of London), 9-10 and 16-17 September, 2021 (held online).
- 2019** “Images of Broken Light: Experiment and Mathematics in the Hunt for a Law of Refraction 1597-1637.” Invited presentation at the Centre National de la Recherche Scientifique (CNRS), Paris, January 11, 2019 (3-hour presentation).

- 2018** “Henry Savile and the Theory of Proportion.” *Reading Mathematics in the Early Modern World*, All Souls College, Oxford, April 18-19, 2018.
- 2017** “Ramus and Euclidean Arithmetic.” *Reading Euclid in the Early Modern World*, All Souls College, Oxford, December 14-15, 2017.
- “The birth of a physical law: Harriot’s path to refraction.” *Thomas Harriot Seminar*, University of Durham, UK, July 8-9, 2017.
- “The Specter in the Garden: Thomas Harriot confronts optics.” Medieval Working Group, Institute for Advanced Study, Princeton, January 24, 2017.
- 2016** “The Optical Object in the Renaissance.” Medieval Working Group, Institute for Advanced Study, Princeton, November 14, 2016.
- “Marvelous mathematics: della Porta’s elusive *De refractione* (1593) and its (few) early readers.” Committee for the Study of Books and Media Seminar, Princeton University, October 4, 2016.
- 2015** “Through a glass, darkly: shadows, light, and prismatic colours.” *Thomas Harriot Seminar*, University of Durham, UK, July 6-7, 2015.
- 2014** “Della Porta’s Refraction Models: Ray Tracing or Black Boxing?” *The Optics of Giovan Battista Della Porta (1535–1615): A Reassessment*, Technische Universität Berlin, October 24-25th 2014
- “Henry Savile’s Euclid: From School Text to the Foundation of the Professorships.” *Scholarship, Science, and Religion in the Age of Isaac Casaubon (1559-1614) and Henry Savile (1549-1622)*. Merton College, Oxford, July 2014.
- 2013** “Proclus, who lived before Theon’: Understanding and Misunderstanding Proclus’s Commentary on Euclid in the European Renaissance.” *Proclus in Byzantium*, Notre Dame London Center, June 1, 2013.
- “Ramus among the Atoms: Corpuscular anti-Aristotelianism, from the Athenian Academy to the Parisian Collège.” *Chicago Renaissance Seminar*, February 19, 2013.
- 2012** “Thomas Harriot’s Optics, between experiment and imagination.” *Thomas Harriot Seminar*, University of Durham, UK, December 15-17, 2012.
- “Harriot’s Optical Papers: A case study in the scientific imagination.” *Newberry Library Fellows’ Seminar*, November 5, 2012.
- “Pythagoras and Atomism: Reading against Aristotle in the sixteenth century.” *Workshop on Genres of Ancient Greek and Roman Scientific, Medical and Technical Texts*, TOPOI, Berlin, March 23, 2012.
- 2010** “The Mathematical Narratives of Peter Ramus and Henry Savile.” *The History of the History of Mathematics*, All Souls College, Oxford, December 16-17, 2010.
- “Deciphering Thomas Harriot’s Optical Manuscripts: The Case of Mr Bulkeley’s Glass.” *History and Philosophy of Science Seminar*, Indiana University, Bloomington IN,

December 10, 2010.

“Mr Bulkeley's Bulky Glass: Thomas Harriot and the Role of Evidence in Experimental and Imaginary Optics.” *The Temper of Evidence: From Antiquity to the Renaissance*, California Institute of Technology, May 28-9, 2010.

- 2009** “Good Will Hunting: Peter Ramus’s Posthumous Influence on the Teaching of Mathematics.” *Making Science*, William Andrews Clark Memorial Library, UCLA, February 5-6, 2009.
- 2006** “Optical Powers: Harriot on the Efficacy of Burning Glasses.” *Durham Thomas Harriot Seminar*, University of Durham, UK, December 18-20, 2006.
- “Everard Digby and the *ars notoria*.” *Hermetism and Rationalism in an Era of Cultural Change*, University of Groningen, February 23-24, 2006.
- 2005** “Logic, necromancy and swimming: the marvelous arts of Everard Digby.” *Renaissance Magic: Performance, Technology, Theater*, Princeton University, February 9-11, 2005.

Conference Papers (while at ND)

- 2019** “Walter Warner and the Secret of Refraction.” Scientiae conference, Belfast, June 2019.
- 2015** “Reading to Atomism: The Natural Philosophy of Petrus Ramus.” Scientiae conference, Toronto, May 2015.
- 2015** “Petrus Ramus’s Atomic Theory of Matter.” Renaissance Society of America, Berlin, March 2015.
- 2014** “‘A point is the minimum of magnitude’: Peter Ramus’s atomic theory, and an unnoticed early edition of his *Geometry*.” Sixteenth Century Studies Conference, New Orleans, October 2014.
- 2013** “Pythagoras among the atoms: Ramus and the History of Indivisible Lines.” Renaissance Society of America, San Diego, April 2013.
- 2010** “Pythagoras in Vetulonia? The Academic Imagination of Jacobus Middelendorpius.” Renaissance Society of America, Venice, April 2010.
- 2009** “Seeing Stars in Broad Daylight: the History of an Optical myth.” Renaissance Society of America, Los Angeles, March 2009
- 2008** “Rending Hypatia: Euclidean Criticism and the Origins of the *Elements*.” Renaissance Society of America, Chicago, April 2008.
- 2007** “Tearing Hypatia: Petrus Ramus and the Beginnings of Euclidean Criticism.” History of Science Society, Washington DC, November 2007.
- 2005** “Logic, necromancy and swimming: the marvelous arts of Everard Digby.” Renaissance Society of America, Cambridge, UK, April 2005.
- 2004** “How can we bring Alexandria to Oxford?” Henry Savile’s History of Mathematics and

his Program of Institutional Reform," History of Science Society, Austin TX, November 2004.

- 2004** "Illumination and Illusion: Lamp Experiments in Medieval Magical Manuscripts." International Congress on Medieval Studies, Kalamazoo MI, May 2004.
- 2004** "*Chymicorum in morem*: Harriot, Refraction and Secrecy." Renaissance Society of America, New York, April 2004.
- 2003** "Astrology and Magic in the Philosophy of Everard Digby." History of Science Society, Cambridge MA, November 2003

Work with Graduate Students

- Graduated:** *Primary co-advisor* (with Jamil Ragep, McGill University): Moiz Hasan (HPS). Awarded degree April 2017.
- Primary advisor*: Laura Bland (HPS). Awarded degree July 2016.
- Primary advisor*: Richard Oosterhoff (HPS). Awarded degree July 2013.
- Primary advisor*: Yvonne Gaspar (HPS). Awarded degree Nov. 2012.
- On committee*: Tomás Valle (History; graduated 2023.; Janice Martin (HPS; graduated 2022); Joseph Baxley (HPS; graduated 2021); Adam Foley (History; graduated 2016), Eleanor Pettus (History; graduated 2015). Nahyan Fancy (HPS; graduated 2006); Darin Hayton (HPS; graduated 2003).
- Current students:** Primary advisor: Linyuan Li. On committee: Thomas Meyers (History); Sam Paek (HPS).
- Fields examiner** Sam Paek (HPS), 2023; Eileen Morgan (MI), 2021. Tomás Valle (History), 2019. Joseph Baxley (HPS), 2018. Janice Gunther (History), 2014. Greg Macklem (HPS), Moiz Hasan (HPS), 2013. Laura Bland (HPS), Jorge Escobar (HPS), 2012. Brian Long (MI), 2010. Yvonne Gaspar (HPS), Richard Oosterhoff (HPS), 2009. Cheryl Jones (MI), 2004-5.

Graduate courses taught at ND

- 2023** Fall: HPS 83601: *History of Science, Medicine and Technology to 1750*
- 2022** Spring: HPS 80043: *Topics in Ancient and Late-antique Natural Philosophy*
- 2020** Spring: HPS 60168: *Early Modern Scientific Latin*
- 2019** Fall: HPS 83601: *History of Science, Technology, and Medicine to 1750*
- Spring: HPS 60899: *Magic, Causation, and Scientific Explanation*
- 2015** Fall: HPS 93614-01: *Ancients, Medievals, and Moderns: A Short History of Science and Philosophy to 1750*

2014	Spring: HPS 93634: <i>English Universities in the Scientific Revolution</i>
2011	Fall: HPS 83601: <i>History of Science, Medicine and Technology to 1750</i> Spring: HPS 93671: <i>Latin Scientific Literature</i>
2009	Fall: HPS 93713: <i>History of Optics</i>
2007	Fall: HPS 93631: <i>The Universities and the Scientific Revolution</i>
2006	Spring: HPS 93632: <i>Francis Bacon and his Intellectual World</i>
2004	Fall: HPS 83601: <i>History of Science, Medicine and Technology to 1750</i>

Graduate directed readings at ND

2023	<i>Early Modern Science</i>
2021	<i>Early Modern Science</i>
2020	<i>Medieval Science</i>
2019	<i>Early Modern Science</i>
2018	<i>Euclid and Ptolemy: Ancient and medieval mathematics</i>
2012	<i>Platonism and Natural Philosophy</i>
2009	<i>History of Optics</i>
2008	<i>Early-modern Scientific Literature</i>
2004	<i>Magic and Science</i>

Service to University and College

2023-	Member of Technology Ethics Working Group, Notre Dame Ethics Initiative
2021-	Chair, Integration Subcommittee, University Core Curriculum Committee (2021-present)
2018-	Director, John J. Reilly Center for Science, Technology, and Values
2017-2023	Director of Program in History and Philosophy of Science.
2014-2016	Director of University Seminars program.
2014-2016	Fall 2014, elected to College Council.
2010-11	Academic Council (Faculty Affairs committee).

Other Service to HPS Program

On Steering Committee: 2014-16; 2009-11; 2004-6.

Service to PLS

Member of Committee on Appointments 2022-

CAP: 2017-18; 2014-2016; 2010-12

Organizing Summer Alumni Symposium, 2015

Led session(s) at symposium: 2004, 2006, 2008, 2011, 2012, 2013, 2015, 2018, 2019.

Service to Profession

Recent article manuscript reviews for *Annals of Science*, *History of Universities*, *Archive for History of Exact Sciences*, *Journal for the History of Ideas*, *Journal of the Warburg and Courtauld Institutes*.

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| 2023 | External examiner for PhD candidate Alvaro Bo (University College, Dublin) |
| 2021 | External examiner for PhD candidate Paolo Rossini (Scuola normale superiore, Pisa) |

Conferences organized

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| 2023 | “Science and Platform Capitalism: The New Organization of Knowledge Production” April 12–14 at University of Notre Dame. |
| 2020 | “John Ruskin: Prophet of the Anthropocene” February 7–8 at University of Notre Dame. |
| 2019 | “Educating the Whole Physician” April 4–6 at University of Notre Dame. |