

CURRICULUM VITAE

PAMELA O. LONG

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Education

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| Ph.D. | Renaissance/Reformation History
University of Maryland, College Park
Dissertation: "The Vitruvian Commentary Tradition and Rational Architecture in the Sixteenth Century: A Study in the History of Ideas," directed by Francis C. Haber | Dec. 1979 |
| M.S.W | Catholic University of America | 1971 |
| M.A | University of Maryland, College Park (history) | 1969 |
| B.A. | University of Maryland, College Park
(with honors and special honors in history) | 1965 |

Publications

Books

Engineering the Eternal City: Infrastructure, Topography, and the Culture of Knowledge in Late Sixteenth-Century Rome (Chicago: University of Chicago, 2018) [**Sidney M. Edelstein Prize from the Society for the History of Technology; The Bridge Book Award from the Casa Della Letteratura, Rome and the Center for Fiction, NYC – category American non-fiction; Howard R Marraro Prize from the American Catholic Historical Association**].

Artisan/Practitioners and the Rise of New Sciences, 1400-1600 (Corvallis, OR: Oregon State University Press, 2011)

(Co-edited and co-authored with David McGee and Alan M. Stahl), *The Book of Michael of Rhodes: A Fifteenth-Century Maritime Manuscript*, 3 vols. (Cambridge, MA: MIT Press, 2009) [**Eugene S. Ferguson Prize from the Society for the History of Technology; J. Franklin Jameson Prize awarded by the American Historical Association**]

(With Brian Curran, Anthony Grafton, and Benjamin Weiss) *Obelisk: A History* (Cambridge, MA: MIT Press, 2009)

Openness, Secrecy, Authorship: Technical Arts and the Culture of Knowledge from Antiquity to the

Renaissance (Baltimore: Johns Hopkins University Press, 2001) [**Morris D. Forkosch Prize for the best book in intellectual history published in 2001 awarded by the *Journal of the History of Ideas***]

Technology, Society and Culture in Late Medieval and Renaissance Europe, 1300-1600
(Washington, D.C.: Society for the History of Technology, and American Historical Association, 2000)

Technology and Society in the Medieval Centuries: Byzantium, Islam and the West, 500-1300
(Washington, D.C.: Society for the History of Technology, and American Historical Association, 2003)

[Editor] *Science and Technology in Medieval Society*, *Annals of the New York Academy of Sciences*, vol. 441 (New York, 1985)

Translation

(With Chiara Bariviera), *An English Translation of Agostino Steuco's De Aqua Virgine in Urbem revocanda* (Lyon: Gryphius, 1547) [*On Bringing Back the Acqua Vergine to Rome*] In Katherine W. Rinne, ed. *The Waters of Rome*, <http://www3.iath.virginia.edu/waters/first.html>

Articles

(with Tina Asmussen), "Introduction: The Cultural and Material Worlds of Mining in Early Modern Europe." Special Issue, *Renaissance Studies* 35(2020): 1-23.

(with Andrew Morrall), "Craft and Technology in Renaissance Europe," in Gordon Campbell, ed. *Oxford Illustrated History of the Renaissance* (Oxford: Oxford University Press, 2019), 338-377.

"Multi-Tasking 'Pre-Professional' Architect/Engineers and other Bricologic Practitioners as Key Figures in the Elision of Boundaries between Practice and Learning in Sixteenth-Century Europe: Some Roman Examples," in Matteo Valleriani, ed. *Structures of Practical Knowledge* (Dordrecht: Springer, 2017), 223-246.

"Architecture and the Sciences," In Alina Payne, ed., *The Companion to Renaissance Architecture* (Malden, MA: Wiley-Blackwell, 2017), 191-219.

"Trading Zones in Early Modern Europe," Karel Davids, ed., "Focus: The Relationships between Economic History, the History of Science, and the History of Technology" *Isis* 106 (December 2015): 840-847.

"Science and Technology," In Bruce R. Smith, ed. *The Cambridge Guide to the Worlds of Shakespeare*, Vol. 1: *Shakespeare's World, 1500-1660* (Cambridge: Cambridge University Press, 2015), 247-257.

"Trading Zones: Arenas of Exchange during the Late-Medieval/Early Modern Transition to the New Empirical Sciences," *History of Technology* 31 (2012): 5-25.

“Technological Transmission in China and Europe: A Comparative View,” in *Cultures of Knowledge: Technology in Premodern China*, edited by Dagmar Schäfer (Leiden: Brill Academic Publisher, 2011), 77-86.

“The Craft of Premodern European History of Technology: Past and Future Practice,” *Technology and Culture* 51 (July 2010): 698-714.

“Engineering, Patronage, and the Authorship of Practice in Early Counter-Reformation Rome,” in *Conflicting Duties: Science, Medicine, and Religion in Rome, 1550-1750*, ed. M. P. Donato and J. Krayer (London: Warburg Institute, 2009), 9-34.

“Hydraulic Engineering and the Study of Antiquity: Rome: 1557-1570,” *Renaissance Quarterly* 61(2008): 1098-1138.

“Picturing the Machine: Francesco di Giorgio and Leonardo da Vinci in the 1490s” in *Picturing Machines, 1400-1700*, ed. Wolfgang Lefèvre (Cambridge, Mass.: MIT Press, 2004), 117-141.

“The Cultural Uses of Invention in Early Modern Europe” in *Les Chemins de la nouveauté: Innover, inventer au regard de l'histoire*, ed. Liliane Hilaire-Pérez and Anne-Françoise Garçon (Paris: Comité des Travaux Historiques et Scientifiques, 2003), 293-311.

“Objects of Art/Objects of Nature: Visual Representation and the Investigation of Nature” in *Merchants and Marvels: Commerce, Science and Art in Early Modern Europe*, ed. Pamela H. Smith and Paula Findlen (New York: Routledge, 2001), 63-82.

“Invention, Secrecy, Theft: Meaning and Context in Late Medieval Technical Transmission,” *History and Technology* 16 (2000): 223-241.

“Openness and Empiricism: Values and Meaning in Early Architectural Writings and in Seventeenth-Century Experimental Philosophy” in *The Architecture of Science*, ed. Peter Galison and Emily Thompson (Cambridge: MIT Press, 1999), 79-103.

“Power, Patronage, and the Authorship of *Ars*: From Mechanical Know-How to Mechanical Knowledge in the Last Scribal Age,” *Isis* 88 (March 1997): 1-41 Reprinted in Michael H. Shank, ed., *The Scientific Enterprise in Antiquity and the Middle Ages* (Chicago: University of Chicago Press, 2000): 394-435.

(Co-authored with Alex Roland) “Military Secrecy in Antiquity and Early Medieval Europe: A Critical Reassessment,” *History and Technology* 11 (1994): 259-290.

“Invention, Authorship, 'Intellectual Property,' and the Origin of Patents: Notes toward a Conceptual History,” *Technology and Culture* 32 (October 1991): 846-884.

"The Openness of Knowledge: An Ideal and its Context in 16th-Century Writings on Mining and Metallurgy," *Technology and Culture* 32 (April 1991): 318-355.

[Abbot Payson Usher Prize by the Society for the History of Technology, 1993]

[translated into Chinese in Dagmar Schäfer and Angela N. H. Creager, eds., *History of Science Reader* (Hangzhou: Zhejiang University Press, 2018), 23-76].

"Humanism and Science" in *Renaissance Humanism: Its Sources, Forms and Legacy*, 3 vols., ed. A. Rabil, Jr. (Philadelphia: University of Pennsylvania Press, 1988), 3: 486-512.

"The Contribution of Architectural Writers to a 'Scientific Outlook' in the Fifteenth and Sixteenth Centuries," *Journal of Medieval and Renaissance Studies* 15 (Fall 1985): 265-289.

Essays and Essay Reviews

"Bricologic Practitioners and the Fluid Culture of Skilled Work in Late Sixteenth-Century Rome," *Ferrum: Nachrichten aus der Eisenbibliothek* 91 (2019): 8-15.

Essay on lecture series by Anthony Grafton, "Past Belief: Visions of Early Christianity in Renaissance and Reformation Europe," in Elizabeth Cropper, ed. *A.W. Mellon Lectures in the Fine Arts: Fifty Years* (Washington: National Gallery of Art, forthcoming).

"Bern Dibner's Way of Collecting and Its Importance for Scholars," in Lilla Vekerdy, ed. *The Era of Experiments and the Age of Wander: Scientific Expansion from the Seventeenth to the Nineteenth Centuries* (Washington, D.C.: Smithsonian Institution Scholarly Press, 2015), 61-64.

"A Crooked Path," [Publication of Talk given on the occasion of receipt of Leonardo da Vinci award from the Society for the History of Technology, October 2015], *Technology and Culture* 56 (April 2015): 498-507.

Essay Review: "Culture and Machines in Renaissance Europe." Review of Jonathan Sawday, *Engines of the Imagination: Renaissance Culture and the Rise of the Machine* (London: Routledge, 2007) in *Early Science and Medicine* 14 (2009): 549-554.

"On the Cover: Michael of Rhodes: A Fifteenth-Century Mariner and his Book," *Technology and Culture* 50 (January 2009): 103-109.

Essay Review: "Plants and Animals in History: The Study of Nature in Renaissance and Early Modern Europe," *Historical Studies in the Natural Sciences* 38 (Spring 2008): 313-323.

Essay Review: "Huguenots, Chairs, and the Occult Philosophy." Review of Neil Kamil, *Fortress of the Soul: Violence, Metaphysics, and Material Life in the Huguenots' New World, 1517-1571* (Baltimore: Johns Hopkins University Press, 2005). *Isis* 99 (March 2008): 149-153.

"On Being an Independent Historian," *History of Science Society Newsletter* 37 (January 2008).

“Medieval Europe, 500-1500: Crucible of Change” in *Technology in World History*, Vol. 3: *The Medieval World*, ed. W. Bernard Carlson (New York: Oxford University Press, 2005), 8-35
[Seven volume work of which this is a part, winner of the Sally Hacker Prize for the best book in the history of technology directed to a broad audience of readers.]

“Classics Revisited: The *Annales* and the History of Technology,” *Technology and Culture* 46 (January 2005): 177-186.

“On the Cover: Of Mining, Smelting and Printing: Agricola’s *De re metallica*,” *Technology and Culture* 44 (January 2003): 97-101.

Essay Review: “New Work on the ‘Occult’ and Natural Disciplines of the Renaissance,” *Renaissance Quarterly* 55 (winter 2002): 1323-1336.

Encyclopedia Articles and Other Short Publications

May 2019 Interview with Alev Kaynak (trans. into Turkish) published in *Ad Hoc Magazine* (September 2019), published by Kapital Medya, Istanbul.

“Technology,” and 32 other headword entries in *Oxford Dictionary of the Middle Ages* (Oxford, Oxford University Press, 2010).

“Roman Roads and Bridges,” “Sewers,” “Water Supply,” in *The Classical Tradition*, ed. Anthony Grafton, Glenn Most, and Salvatore Settis (Cambridge, Mass.: Harvard University Press, 2010).

“Scientific Communication,” “Nature,” “Scientific Method,” in *Encyclopedia of Early Modern Europe*, ed. Jonathan Dewald (New York: Charles Scribner’s Sons, 2004), Vol. 2: 20-21, Vol. 4: 253-258, Vol. 5: 339-343.

Leonardo da Vinci, “Legacy.” BBC Open University web site — www.open2.net/Leonardo/ — Click on “The Experts View,” then “Legacy.”

“Categories, disciplines, and values of transmission: A retrospective essay on *Openness, Secrecy, Authorship*,” *Intellectual News* 10 (Spring 2002): 62-69.

“Arsenali, miniere e botteghe” in *Storia della scienza*, 10 vols., ed. Sandro Petruccioli, vol. 5: *La rivoluzione scientifica*, (Rome: Istituto della Enciclopedia Italiana, 2001-2002): 223-241.

"Tudor Technology" in *Tudor England: An Encyclopedia*, ed. Arthur F. Kinney et al. (New York, Garland Publishing, 2000).

"Architecture"; "Ercker, Lazarus"; "Humanism"; "Leonardo da Vinci"; and "Mining and Metallurgy" in *Encyclopedia of the Scientific Revolution*, ed. Wilbur Applebaum (New York, Garland, 2000).

"Technology" in *Encyclopedia of the Renaissance*, ed. Paul F. Grendler (New York: Charles Scribner's Sons, 1999), vol. 6, pp 118-123.

"Mining and Ore Processing" in *Medieval Latin Studies: An Introduction and Bibliographical Guide*, ed. Frank A. C. Mantello and George Rigg (Washington, D.C.: Catholic University of America, 1996).

Book and Exhibit Reviews (excluding essay reviews)

Christiano Zanetti, *Janello Torriani and the Spanish Empire: A Vitruvian Artisan at the Dawn of the Scientific Revolution* (Leiden: Brill, 2017) in *Renaissance Quarterly* (forthcoming)

Alexander Marr, Raphaële Garrod, José Ramón Marcaida, Richard J. Oosterhoff, *Logodaedalus. Word Histories of Ingenuity in Early Modern Europe* (Pittsburgh: University of Pittsburgh Press, 2019) in *Isis* 110(December 2019): 822-823.

Michael Wintroup, *The Voyage of Thought: Navigating Knowledge across the Sixteenth Century World* (Cambridge: Cambridge University Press, 2017) in *Isis* 110 (June 2019): 396-397.

Peter Fane-Saunders, *Pliny the Elder and the Emergence of Renaissance Architecture* Cambridge: Cambridge University Press, 2016) in *Journal of Roman Studies* 108 (November 2018): 282-284.

Sven Dupré, Sachiko Kusukawa, and Karin Leonhard, eds., *Early Modern Color Worlds* (Leiden: Brill, 2016) in *Renaissance Quarterly* 70 (Winter 2017): 1520-1522.

Simone Testa, *Italian Academies and their Networks, 1525-1700: From Local to Global* (Basingstoke: Palgrave, 2015) in *Isis* 108 (December 2017): 899.

[Exhibit Review: "Decoding the Renaissance: 500 Years of Codes and Ciphers," Folger Shakespeare Library, Washington, D.C. Nov. 11, 2014 –February 26, 2015 in *SHARP* [Society for the History of Authorship, Reading, and Publishing] *News* (2015).

Jack Goody, *Metals, Culture and Capitalism: An Essay on the Origins of the Modern World* (Cambridge: Cambridge University Press, 2012) in *Journal of World History* 26 (March 2015): 167-169.

Sean Roberts, *Printing a Mediterranean World: Florence, Constantinople, and the Renaissance of Geography*, I Tatti Studies in Italian Renaissance History. (Cambridge, Mass.: Harvard University Press, 2013 in *American Historical Review* 119 (June 2014): 848.

Andrea Bernardoni, *La conoscenza dal fare: Ingegneria, arte, scienza nel De la pirotechnia di Vannoccio Biringuccio* (Rome: "l'Erma" di Bretschneider, 2011) in *Renaissance Quarterly* 65 (Winter 2012): 1228-1230.

Dagmar Schäfer, *The Crafting of the 10,000 Things: Knowledge and Technology in Seventeenth-Century China* (Chicago: University of Chicago Press, 2011) in *Metascience* 21 (March 2012) (online publication), and 22 (2013): 177-180.

Angelo Cattaneo, *Fra Mauro's Mappa Mundi and Fifteenth-Century Venice* (Turnhout, Belgium: Brepols, 2011) in *Isis* 103 (June 2012): 397-398.

Alexander Marr, *Between Raphael and Galileo: Mutio Oddi and the Mathematical Culture of Late Renaissance Italy* (Chicago: University of Chicago Press, 2011) in *Renaissance Quarterly* 65 (Spring 2012): 215-217.

Richard J. A. Talbert, *Rome's World: The Peutinger Map Reconsidered* (New York: Cambridge University Press, 2010) in *Technology and Culture* 53 (April 2012): 479-480.

Cesare S. Maffioli, *La via delle acque (1500-1700): Appropriazione delle arti e trasformazione delle matematiche* (Florence: Leo S. Olschki, 2010) in *Early Science and Medicine* 16.6 (2011): 614-616.

William Eamon, *The Professor of Secrets: Mystery, Medicine, and Italy* (Washington, D.C.: National Geographic Press, 2010) in *Bulletin of the History of Medicine* 85 (Fall 2011): 500-502.

Simon Werrett, *Fireworks: Pyrotechnic Arts and Sciences in European History* (Chicago: University of Chicago Press, 2010) in *Isis* 102 (June 2011): 361-362.

Joe Flatman, *Ships and Shipping in Medieval Manuscripts* (London: British Library, 2009) in *Technology and Culture* 52 (July 2011): 618-619.

Chandra Mukerji, *Impossible Engineering: Technology and Territoriality on the Canal du Midi* (Princeton: Princeton University Press, 2009) in *Aestimatio: Critical Reviews in the History of Science* 8 (2011): 16-22.

Antonella Romano, ed., *Rome et la science modern entre Renaissance et Lumières*. Collection de l'École Française de Rome, 403 (Rome: École Française de Rome, 2008) in *Nuncius* 24 (2009): 525-527.

Tara Nummedal, *Alchemy and Authority in the Holy Roman Empire* (Chicago: University of Chicago Press, 2007) in *American Historical Review* 114 (October 2009): 1141-1142.

Lissa Roberts, Simon Schaffer, and Peter Dear, *The Mindful Hand: Inquiry and Invention from the Late Renaissance to Early Industrialisation* (Amsterdam: Koninklijke Nederlandse Akademie van Wetenschappen, 2007) in *Nuncius* 24 (2009): 216-218.

Vincent Ilardi, *Renaissance Vision from Spectacles to Telescopes* (Philadelphia: American Philosophical Society, 2007) in *Speculum* 84 (2009): 455-456.

- Steven A. Walton, ed. *Wind and Water in the Middle Ages: Fluid Technologies from Antiquity to the Renaissance* (Tempe, AZ: Arizona Center for Medieval and Renaissance Studies, 2006) in *Early Science and Medicine* 13 (2008): 195-198.
- Mario Biagioli, *Galileo's Instruments of Credit: Telescopes, Images, Secrecy* (Chicago: University of Chicago Press, 2006) in *American Historical Review* 112 (June 2007): 947-948.
- Gerhild Scholz Williams, *Ways of Knowing in Early Modern Germany: Johannes Praetorius as a Witness to his Time* (Aldershot, Hants: Ashgate Publishing, 2006) in *Renaissance Quarterly* 60 (Spring 2007): 218-219.
- Martin Kemp, *Leonardo* (Oxford: Oxford University Press, 2004) in *Technology and Culture* 47 (January 2006): 184-186.
- Eric H. Ash, *Power, Knowledge, and Expertise in Elizabethan England* (Baltimore: Johns Hopkins University Press, 2004), in *Journal of Interdisciplinary History* 38 (Autumn 2007): 270-271.
- Alessandra Fiocca, Daniela Lamberini, and Cesare Maffioli, *Arte e scienza delle acque nel Rinascimento* (Venice: Marsilio, 2003) in *Technology and Culture* 46 (July 2005): 16-18.
- Thomas J. Misa, *Leonardo to the Internet: Technology & Culture from the Renaissance to the Present* (Baltimore: Johns Hopkins University Press, 2004) in *Journal of Interdisciplinary History* 37 (2006): 90-91.
- David Freedberg, *The Eye of the Lynx: Galileo, His Friends, and the Beginnings of Modern History* (Chicago: University of Chicago Press, 2002) in *Technology and Culture* 45 (January 2004): 171-173.
- William R. Newman and Lawrence M. Principe, *Alchemy Tried in the Fire: Starkey Boyle, and the Fate of Helmountain Chemistry* (Chicago: University of Chicago Press, 2002) in *Renaissance Quarterly* 57 (Spring 2004): 308-310.
- Luca Molà, Reinhold C. Mueller, and Claudio Zanier, eds. *La seta in Italia dal Medioevo al Seicento: Dal baco al drappo* (Venice: Marsilio, 2000) in *Technology and Culture* 43 (October 2002): 784-785.
- Paolo Rossi, *The Birth of Modern Science*, trans. Cynthia De Nardi Ipsen (Oxford: Blackwell, 2000) in *Isis* 93 (September 2002): 481-482.
- David Zaret, *Origins of Democratic Culture: Printing, Petitions and the Public Sphere in Early Modern England* (Princeton, N.J.: Princeton University Press, 2000) in *Technology and Culture* 43 (April 2002): 418-419.
- W. R. Laird, *The Unfinished Mechanics of Giuseppe Moletti: An Edition and English Translation of his Dialogue on Mechanics, 1576* (Toronto: University of Toronto Press, 2000) in *Canadian Journal of History* 43 (August 2002): 341-342.

John Block Friedman and Kristen Mossler Figg, eds. Scott D. Westrem, associate ed., Gregory G. Guzman, collaborating ed., *Trade, Travel, and Exploration in the Middle Ages: An Encyclopedia* (New York: Garland, 2000) in *Enterprise and Society* 2 (December 2001): 809-811.

David Turnball, *Masons, Tricksters and Cartographers: Comparative Studies in the Sociology of Scientific and Indigenous Knowledge* (Amsterdam: Harwood Academic Publishers, 2000) in *Isis* 93 (March 2002): 165-166.

Gerhard Arend, *Die Mechanik des Niccolò Tartaglia im Kontext der zeitgenössischen Erkenntnis- und Wissenschaftstheorie* (Munich: Institut für Geschichte der Naturwissenschaften, 1998) in *Isis* 92 (September 2001): 603-604.

Evelyn Lincoln, *The Invention of the Italian Renaissance Printmaker* (New Haven: Yale University Press, 2000) in *Technology and Culture* 42 (July 2001): 559-561.

Jim Bennett and Scott Mandelbrote, *The Garden, the Ark, the Tower, the Temple: Biblical Metaphors of Knowledge in Early Modern Europe* (Oxford: Museum of the History of Science, 1998) in *Isis* 91 (September 2000): 588-589.

Massimo Galuzzi, Gianni Micheli and Maria Teresa Monti, eds. *Le forme delle comunicazione scientifica* (Milan: FrancoAngeli, 1998) in *Bulletin of the History of Medicine* 74 (2000): 601-602.

Claus Priesner, *Bayerisches Messing: Franz Matthias Ellmayrs "Mössing-Werkh AO 1780": Studien zur Geschichte, Technologie und zum sozialen Umfeld der Messingerzeugung im vorindustriellen Bayern* (Stuttgart: Franz Steiner, 1997) in *Isis* 90 (March 1999): 124-125.

Diane Cole Ahl, ed. *Leonardo da Vinci's Sforza Monument Horse: The Art and Engineering* (Bethlehem, Pa: Lehigh University, 1995) in *Technology and Culture* 38 (October 1997): 1020-1022.

Henry Heller, *Labour, science and technology in France: 1500-1620* (Cambridge: Cambridge University Press, 1996) in *Renaissance Quarterly* 51 (Spring 1998): 233-234.

Brian J. Ford, *Images of Science: A History of Scientific Illustration* (New York: Oxford University Press, 1993) in *Bulletin of the History of Medicine* 70 (1996): 619-621.

H. Floris Cohen, *The Scientific Revolution: A Historiographical Inquiry* (Chicago: University of Chicago Press, 1994) in *Technology and Culture* 37 (July 1996): 751-753.

William Eamon, *Science and the Secrets of Nature: Books of Secrets in the Medieval and Early Modern Culture* (Princeton: Princeton University Press, 1994) in *Technology and Culture* 37 (January 1996): 170-172.

J. V. Field and Frank A. J. L. James, eds., *Renaissance and Revolution: Humanists, Scholars, Craftsmen and Natural Philosophers in Early Modern Europe* (Cambridge: Cambridge University Press, 1994) in *Technology and Culture* 36 (July 1995): 723-725.

Christoph L. Frommel and Nicholas Adams, eds., *The Architectural Drawings of Antonio da Sangallo the Younger and His Circle*, vol. 1: *Fortifications, Machines, and Festival Architecture* (Cambridge, Mass.: M.I.T. Press, 1994) in *Technology and Culture* (April 1995): 397-399.

Karen Meier Reeds, *Botany in Medieval and Renaissance Universities* (New York and London: Garland Publishing, 1991) in *Annals of Science* 51 (1994): 311-312.

Allen G. Debus, *The French Paracelsians: The Chemical Challenge to Medieval and Scientific Tradition in Early Modern France* (Cambridge and New York: Cambridge University Press, 1991), in *Annals of Science* 51 (1994): 91-93.

Astrid Schürmann, *Griechische Mechanik und Antike Gesellschaft: Studien zur staatlichen Förderung einer technischen Wissenschaft* (Stuttgart: Franz Steiner, 1991) in *Technology and Culture* 34 (October 1993): 935-936.

Gustina Scaglia, *Francesco di Giorgio: Checklist and History of Manuscripts and Drawings in Autographs and Copies from ca. 1470 to 1687 and Renewed Copies (1764-1839)* (Bethlehem, Pa. and Cranbury, N.J.: Lehigh University Press and Associated University Presses, 1992) in *Technology and Culture* 34 (July 1993): 674-675.

Bruce T. Moran, (ed.), *Patronage and Institutions: Science, Technology, and Medicine at the European Court, 1500-1750* (Rochester, N.Y./Suffolk, England: The Boydell Press, 1991) in *Isis* 84 (June 1993): 376-377.

Michael Matheus, *Hafenkrane: Zur Geschichte einer mittelalterlichen Maschine am Rhein und seinen Nebenflüssen von Strassburg bis Düsseldorf, Trierer Historische Forschungen*, Bd. 9 (Trier, Verlag Trierer Historische Forschungen, 1985), in *Mediävistik: Internationale Zeitschrift für interdisziplinäre Mittelalterforschung* 4 (1990): 451-452.

Employment, Major Grants and Fellowships

June-July 2020	Paul Oskar Kristeller Fellowship, Renaissance Society of America (for research trip to Rome)
Jan-July 2016	Visiting Professor, Villa I Tatti, Harvard University Center for Italian Renaissance Studies, Florence, Italy
2015-2020	John D. and Catherine T. MacArthur Foundation Fellowship
March-May 2015	Max Planck Institute for the History of Science, Berlin, Research Group: Art and Knowledge in Premodern Europe (led by Sven Dupré)
Sept 2013- July 2014	Folger Library Long-term Fellowship, Folger Shakespeare Library, Washington, DC

Sept 2012- May 2013	William J. Bouwsma Fellow, National Humanities Center, Research Triangle, NC
Summer 2012	Franklin Research Grant, American Philosophical Society, Two months Research in Turin and Rome
Spring 2012	Visiting Professor, History Department, Princeton University (teaching an undergraduate course on the “Scientific Revolution”)
July 2011	J. B. Harley Research Fellowship in the History of Cartography (London, UK) Doris Krieble Delmas Foundation Fellowship through Friends of the Harley Fellowship
May 2009- May 2011	NSF Grant for “Engineering the Eternal City: Power, Knowledge, and Urbanization, 1557-1590”
Feb.-March 2009	NEH Research Fellowship, Vatican Film Library, Saint Louis University
Dec. 2007- Dec. 2008	John Simon Guggenheim Memorial Foundation Fellow for “Engineering the Eternal City: Power, Knowledge, and Urbanization in Late Sixteenth-Century Rome”
April-Dec. 2007	National Endowment for the Humanities Grant for “Engineering the Eternal City: Power, Knowledge, and Urbanization in Late Sixteenth-Century Rome”
January-June 2007	Visiting Professor, Bard Graduate Center, NYC (Seminar: “Thinking with Technology in Medieval and Renaissance Europe”)
Sept. 2005 - June 2006	Getty Scholar, Getty Research Institute, Los Angeles
Sept. 2004 - Jan. 2005	Fellow, Shelby Cullom Davis Center for Historical Studies, Department of History, Princeton University
Sept. 2003 - Aug. 2004	Andrew W. Mellon Foundation Post-Doctoral Rome Prize Fellowship, American Academy in Rome
Feb. 2003 - June 2004	National Science Foundation Grant for “Engineering and Exorcism in Counter-Reformation Rome: Power, Knowledge and Urbanization, 1562-1612”
Summer 2001	NEH Summer Institute at the Folger Library, Washington, D.C. Institute co-director (with Pamela H. Smith): “Experience and Experiment in Early Modern Europe”
Sept. 2000 -	Dibner Institute for the History of Science and Technology,

July 2001	MIT, Senior Fellow Visiting Scholar, Department of the History of Science, Harvard University
July 1998-2000	National Science Foundation Grant for "Openness, Secrecy, Authorship, Ownership: Studies in the Practical, Technical, and Knowledge Traditions of Premodern and Early Modern Europe"
Spring 2000	Folger Institute of Renaissance and Eighteenth Century Studies, Folger Library, Washington, D.C. Seminar leader: "Mechanical Arts, Natural Philosophy, and Visual Representation in Early Modern Europe"
1995-1998	Dept. of the History of Science, Medicine and Technology Johns Hopkins University, Visiting Asst. Professor
1994-95	Folger Shakespeare Library, NEH long-term fellowship
Summer 1993	University of Maryland, Adjunct Asst. Professor (medieval Europe)
1991-92	National Science Foundation grant for "Openness, Secrecy, Authorship, Intellectual Property: Studies in Pre-17th Century Traditions in the Practical and Military Arts"
Spring 1991- Spring 1992	St. John's College, Annapolis, Maryland Tutor (part-time)
1989-90	St. Mary's College of Maryland, St. Mary's City, Maryland Visiting Asst. Professor (medieval and early modern European)
1987-88	National Science Foundation Grant for "Openness Versus Secrecy and the Idea of Intellectual Property: A Discourse in Pre-modern Technical Literature"
Fall 1987	University of Maryland, Adjunct Asst. Professor (Renaissance Europe)
1983-86	Library of Congress, Washington, D.C., Copyright Examiner
Fall 1983	Trinity College, Washington, D.C. Adjunct Asst. Professor (Western Civilization)
Fall 1982	Hunter College, Marymount Manhattan College, New York University Adjunct Asst. Professor
1981-82	Barnard College, New York City Visiting Asst. Professor (Renaissance/Reformation history)

- 1980-81 Society for the Humanities, Cornell University, junior post-doctoral fellowship
- 1979-80 Fulbright-Hays Award for Italy, graduate category

Honors and Smaller Grants

- Sept. 2016 Outstanding Alumni Achievement Award, College of Arts and Sciences, University of Maryland
- Nov. 2014 Leonardo da Vinci Lifetime Achievement Award from the Society for the History of Technology
- Jan. 2012 J. Franklin Jameson Prize for *The Book of Michael of Rhodes: A Fifteenth-Century Maritime Manuscript* awarded by the American Historical Association
- Fall 2011 Eugene S. Ferguson Prize (Critical editions of primary source materials in English) for *The Book of Michael of Rhodes: A Fifteenth-Century Maritime Manuscript* awarded by the Society for the History of Technology
- Spring 2002 Morris D. Forkosch Prize for the best book in intellectual history published in 2001 (for *Openness, Secrecy, Authorship: Technical Arts and the Culture of Knowledge from Antiquity to the Renaissance*, awarded by the *Journal of the History of Ideas*)
- Spring 2002 Renaissance Society of America Research Grant (for "Engineering and Exorcism in Counter-Reformation Rome")
- Spring 2002 American Historical Association, Bernadotte E. Schmitt Grant for research in European, African and Asian History (for "Engineering and Exorcism in Counter-Reformation Rome")
- August 1996 American Council of Learned Societies, Travel Grant for meeting of Society for the History of Technology, London
- Oct. 1993 Abbott Payson Usher Prize from the Society for the History of Technology, for "The Openness of Knowledge: An Ideal and its Context in 16th-Century Writings on Mining and Metallurgy," *Technology and Culture* 32 (April 1991): 318-355
- Spring 1993 Dibner Library Fellowship, National Museum of American History, Washington, D.C.
- Summer 1989 Stipend, Forschungsinstitut für Technik- und Wissenschaftsgeschichte, Deutsches Museum, Munich

August 1989 National Research Council travel grant for the International Congress of History of Science, Munich and Hamburg

1976-79 University of Maryland Graduate Fellowship

Spring 1974,
1975, 1978 Folger Institute of Renaissance and Eighteenth Century Studies, junior fellowships

Editing, Public Outreach and Professional Service

Jan 2020 Podcast interview for Society for the History of Technology

2018-2021 Series editor (with Asif Siddiqi): *Historical Perspectives on Technology, Society and Culture*, Johns Hopkins University Press

2016-2019 Ferguson Prize Committee, Society for the History of Technology

July 2016 Gastwissenschaftler, Program: Expertenkulturen des 12. bis 18 Jahrhunderts, Georg-August Universität, Göttingen, Germany

August 2015 Podcast Interview, “Artisanal Knowledge, Technological Knowledge Transfer, Openness, and Secrecy in Premodern Europe,” Chemical Heritage Foundation, Philadelphia

2015-2017 Editorial Board, *Technoculture: an Online Journal of Technology in Society*

2014-2017 Editorial Advisory Board, *Osiris*

2014 Pfizer Prize Committee, History of Science Society

June 2014 Committee Member for Evaluation of International Consortium for Research in the Humanities “Fate, Freedom and Prognostication at Nürnberg/Erlangen University, Erlangen, Germany, Bundesministerium für Bildung und Forschung

Oct. 2012 Podcast interview, New Books Network, with Carla Nappi, on *Artisan/Practitioners and the Rise of the New Sciences, 1400-1600*

May 2011 Radio interview on *Obelisk: A History* with David Levine on “Hearsay Culture,” KZSU, FM (Stanford University Radio Station)

2009-2010 Nominating Committee, History of Science Society

2006- 2009 Committee on Meetings and Programs, History of Science Society

2008-2010 Pfizer Prize Committee, History of Science Society (Chair, 2010)

- 2007-2009 Executive Council, History of Science Society
- 2000-2010 Editorial Advisor (Technology), *Oxford Dictionary of the Middle Ages*, 4 vols. General Editor, Robert E. Bjork (London: Oxford University Press, 2010)
- 2001-2009 Co-director and co-editor (with Alan Stahl and David McGee) of the Michael of Rhodes project — the study and publication of a fifteenth-century manuscript by a Venetian mariner. It resulted in a three volume edition. Sponsored by the Dibner Institute for the History of Science and Technology at MIT. Project involved co-directing a team of eight scholars; applying for grant money (more than \$450,000 raised); writing an introductory essay and editing the essays of the other scholars. A workshop and public conference were held in 2004 and 2005 respectively at the Dibner Institute.
- 2006- present Contributing editor, *Technology and Culture*
- 1999-2018 Series editor (with Asif Siddiqi and Robert C. Post): *Historical Perspectives on Technology, Society and Culture*. A booklet series co-sponsored by the American Historical Association (AHA) and the Society for the History of Technology (SHOT)
- 2004-2009 Editorial Advisory Board, *Nuncius*
(Published by the Istituto e Museo di Storia della Scienza, Florence, Italy)
- 2004-2008 Editorial Advisory Board, *Osiris* (published by the History of Science Society)
- 1992- 2020 Editorial Advisory Board, *Technology and Culture*
- 2002 Awards Committee, Society for the Study of Early Modern Women
- 2000-2002 Executive Council, Society for the History of Technology
- Spring 2000 Organizer and participant in workshop on invention and innovation, CNRS, Paris
- 1998-1999 Consultant for Public Broadcasting TV series “Building Big”
(Tunnel and Dome programs), Production Group, Inc. and WGBH-TV, Boston
- 1997-1999 Evening Colloquium Committee, Folger Shakespeare Library
- 1997-1999 Advisory Editor, *Isis*
- 1995-1999 Scholar's Committee, Library of Congress
- 1995-1999 Editorial Committee, Society for the History of Technology (Chair, 1998-1999)

- 1991-1994 Advisory Committee for *Medieval Latin Studies*, ed. Frank A.C. Mantello and George Rigg (Washington, D.C.: Catholic University of America Press, 1996)
- 1987- 2002 *AVISTA FORUM*, Association Villard de Honnecourt for the Interdisciplinary Study of Medieval Technology, Science and Art: Reviews Editor - history of science and technology (1992-2002); Board of Directors (1987-1992); Editor (1987-1988)
- 1983 Conference Coordinator, "Science and Technology in Medieval Society," Renaissance Studies Program, Barnard College

Presented Papers and Invited Lectures

October 2019—Society for the History of Technology, Milan. Paper: “The Machine Drawings of Leonardo da Vinci: Art, Technology, and Observational Mechanics”

October 2019—Basler Renaissance Kolloquium, Departement Geschichte der Universität Basel, “The Underground Renaissance. Paper: “Engineering the Eternal City: Approaches and Methodologies”

September 2019—Week in Residence, Wake Forest University, Winston-Salem, NC. Two public lectures, four seminars, other activities.

June 2019—Centre d’études supérieures de la Renaissance, UFR de l’Université de Tours, 62^e Colloque international d’études humanistes du CESR: Leonard de Vinci, Invention innovation. Paper: “Leonardo’s Observational Mechanics”

April 2019—Italian Cultural Society, Washington, DC. Talk: Engineering the Eternal City

April 2019—MacArthur Fellows Gathering, Wingspread, Racine, WI. Talk: Engineering the Eternal City

April 2019—Baltimore Cenacolo, University of Maryland. Paper: Engineering the Eternal City: Retrospective Thoughts

March 2019—Renaissance Society of America, Toronto. Panel: The Collective Enterprise of Architectural Production in Italy. Paper: “Process and Conflict in Late Sixteenth-Century Roman Bridge Repair”

Feb. 2019—Humanities West, San Francisco: Creating Leonardo: Celebrating 500 Years of Leonardo’s Legacy. Lecture: “Leonardo and the Lure of Machines”

Jan. 2019—University College, Dublin: Humanities Institute. Talk: “Bricolagic Practitioners and the Fluid Culture of Skilled Work in Late Sixteenth-Century Rome”

Jan. 2019—Osher Lifelong Learning Institute, American University. Talk: Infrastructure in the Eternal City, 1557-1590

Nov. 2018—Princeton University, Early Modern History Workshop. Talk: Engineering the Eternal City: Retrospective Thoughts

Nov. 2018—Eisenbibliothek, Schaffhausen, Switzerland. Conference: Technology's Workforce: Inventing, Operating, and Learning Technology Throughout History. Keynote Address: "Bricolagic Practitioners and the Fluid Culture of Skilled Work in Late Sixteenth-Century Rome"

May 2018—Columbia University, Making and Knowing Project, Working Group Meeting on Ephemeral Art. Paper: "Trading Zones of the BN Ms. Fr. 640"

April 2018—Yale University, Workshop: New Approaches to Preindustrial Technology: Bodies, Minds, and Machines. Paper: "Leonardo da Vinci and the Lure of the Machine"

Nov. 2017—Speaker's Series, Medieval and Renaissance Studies, University of Oklahoma. Public Lecture: "Engineering the Eternal City," and classroom lecture on Galileo's *Siderius Nuncius*

Oct. 2017—Society for the History of Technology, Philadelphia. Panel: Time Out of Joint. Paper: "Against the Teleological History of Technology: Methodological Considerations in Writing a History of Engineering in Late Sixteenth-Century Rome"

March 2017—Renaissance Society of America, Chicago. Panel: Humanism and Antiquity. Paper: "Hydraulic Engineering and the Practices of Antiquity in Late Sixteenth Century Rome"

Nov. 2016—Department Colloquium, History of Science Department, Johns Hopkins University. Pre-distributed paper: "Waters of Rome: The Acqua Vergine"

July 2016—Georg-August Universität, Göttingen, Germany, Expertenkulturen des 12 bis 18 Jahrhunderts. "Engineering, Cartography, and the Culture of Knowledge in Late Sixteenth-Century Rome"

June 2016—Society for the History of Technology, Annual Meeting, Singapore. Organizer of Session: Hydraulic Technologies in the Pre-Modern World: East and West. Paper: "Hydraulic Engineering in Late Sixteenth Century Rome"

May 2016—British Institute of Florence, Book Presentation: Emanuela Ferretti, *Acquedotti e Fontane del Rinascimento in Toscana* (Florence: Leo S. Olschki, 2016).

April 2016—Villa I Tatti, Harvard Center for Renaissance Studies, Florence, Italy: "Engineering, Cartography, and the Culture of Knowledge in Late Sixteenth-Century Rome"

Jan. 2016—Chennai, India. Workshop contributor, "Exploring Craft and Innovation." Organized by Wiebe Beijker and Annapurna Mamidipudi

Dec. 2015—Otago University, Dunedin, New Zealand, “Engineering, Topography, and the Lure of Antiquity in Late Sixteenth-Century Rome”

Oct 2015—Carlton College, Northfield, MN, “The Tiber River: Managing an Unruly Waterway in Late Sixteenth-Century Rome

Sept. 2015—Washington Area Group for Print Culture Studies, Library of Congress, “Engineering, Cartography, Antiquarianism, and the Culture of Print in Late- Sixteenth- Century Rome”

May 2015—Victoria and Albert Museum, London, “Engineering, Topography, and the Culture of Knowledge in Late Sixteenth-Century Rome”

April 2015—Max Planck Institute for the History of Science, Berlin, “Engineering, Topography, and the Culture of Knowledge in Late Sixteenth-Century Rome”

Feb. 2015—History Department, Miller Center, University of Maryland, “Engineering, Topography, and the Culture of Knowledge in Late Sixteenth-Century Rome”

Feb. 2015—Rutgers University, Rutgers Distinguished Lectures in European History, “Engineering, Topography, and the Culture of Knowledge in Late Sixteenth-Century Rome”

Nov. 2014—“A Crooked Path”—Plenary Lecture, Leonardo Da Vinci Medal, Society for the History of Technology, Dearborn, MI

Nov. 2014—Society for the History of Technology, Dearborn, MI: Panel: Whither the Past? The History of Technology’s Declining Engagement with Pre-1800 History; Paper: “The Uses of Premodern History of Technology with Examples from Engineering in Sixteenth-Century Rome, or, What SHOT has Lost”

May 2014—Folger Shakespeare Library, Washington, D.C.: “Engineering, Cartography and the Culture of Knowledge in Late Sixteenth-Century Rome”

Nov. 2013—Max Planck Institute for the History of Science, Berlin: Workshop: The Structures of Practical Knowledge; Paper: “Multi-tasking Pre-Professional Architect/Engineers and other Bricologic Practitioners as Key Figures in the Elision of Boundaries between Practice and Learning in Sixteenth-Century Europe: Some Roman Examples”

April 2013—Fordham University, Medieval Studies Program: Public Lecture: “Thinking with Technology and Material Culture in Medieval Europe”

April 2013—Renaissance Society of America, San Diego, CA: Panel: Art, Architecture and Technology in Early Modern Italy; Paper: Engineering, Topography, and Archaeology in Sixteenth-Century Rome

Nov. 2012—History of Science Society, San Diego, CA: Panel: Before Technocracy: Scientific and Technological Expertise in Early Modern Europe; Paper: “Engineer/architects between Military Engineering, Urban Construction, and Cartography in Sixteenth Century Rome: The Case of Leonardo Bufalini and Antonio Trevisi

Oct. 2012—National Humanities Center, Research Triangle, NC: Public Lecture: “Engineering, Topology, and Knowledge in Late-Sixteenth Century Rome”

Oct. 2012—Humanities Center, Miami University of Ohio, graduate seminar and Lecture: “Engineering, Topology, and Knowledge in Late-Sixteenth Century Rome”

May 2012—Columbia Renaissance Seminar: “Engineering, Topography, and Knowledge in Late Sixteenth-Century Rome”

Oct. 2011—Seminar, Renaissance and Early Modern Studies, Brown University: Artisan/Practitioners and the Rise of the New Sciences, 1400-1600

July 2011—London School of Economics, Useful and Reliable Knowledge Project. Seminar: “Hydrology in Late Sixteenth-Century Rome”

June 2011—Workshop: Circulating and Connecting Knowledge in Early Modern Europe (1450-1850), Alliance Project, Paris 1 Panthéon Sorbonne – Columbia University, Paris, France. Paper: “Trading Zones: Galison’s concept and its application to premodern Europe”

Feb. 2011—Creative Mind Humanities Lecture Series, Amarillo College, Amarillo, TX. Series Theme: “Leonardo da Vinci and His World.” Two Lectures: “Leonardo: Engineer and Investigator of Machines”; and “Leonardo, Human Anatomy, and the World of Nature.”

Jan. 2011—Economic History Department, London School of Economics, London, UK. Workshop: “Creation and Transmission of Useful Knowledge in Early Modern Europe”; Paper: “Trading Zones of Practice and Learning in Late Fifteenth-Century Italy”

Dec. 2010—Dibner Lecture, Huntington Library, San Marino, CA.: “Engineering the Eternal City: Floods, Aqueducts, and Obelisks in Late Sixteenth-Century Rome”

Sept. 2010—SUNY at Buffalo, Workshop: Knowledge in the Making, 1400-1700: Science, Art, Epistemology; Paper: “Trading Zones of Practice and Learning in Late Fifteenth-Century Italy”

July 2010—Curator’s Colloquium, Smithsonian Institution, Washington, D.C.; “The Book of Michael of Rhodes: A Fifteenth-Century Maritime Manuscript”

April 2010—Horning Visiting Scholar Series, Oregon State University, Corvallis, OR; “The Artisan/Practitioner and the Scientific Revolution” (3 Lectures)

April 2010—Renaissance Society of America, Venice; Panel: Material Culture and Learning in Renaissance Rome; Paper: “Civil Engineering and the Culture of Learning in Post-Tridentine Rome”

Feb. 2010—Keynote Speaker, Arizona Center for Medieval and Renaissance Studies (ACMRS);
Paper: “Nature and Artifice: A Changing Relationship in Medieval and Renaissance Europe”

Nov. 2009—Member of Round Table, History of Science Society, Phoenix, Arizona, Panel: “I’ve got a Ph.D. in the History of Science, Now What? Historians at Work in a Down Economy”

July-Aug. 2009—XXIII International Congress of History of Science and Technology, Budapest, Hungary; Panel: Ideas of Technology across Time and Space: Changing Concepts and Ideologies;
Paper: “The Arts and Engineering: Their Meaning and Cultural Place in Late Medieval and Early Modern Europe”

May 2009—Forty-fourth International Congress of Medieval Studies, Kalamazoo; Panel: “The Book of Michael of Rhodes: A Fifteenth-Century Maritime Manuscript”

March 2009—Center for Medieval and Renaissance Studies, St. Louis University; “Engineering the Eternal City, Rome, 1557-1590”

Oct. 2008—Organizer and Chair, Society for the History of Technology, Lisbon
Panel: Practical and Learned Culture in Premodern and Early Modern Europe

May 2008—Speaker, Rhodes Medieval Festival, Rhodes, Greece.
Paper: “Michael of Rhodes: A Fifteenth Century Mariner and his Book”

April 2008 — Keynote Speaker, Rocky Mountain Medieval and Renaissance Association, Denver Colorado. Paper: “Machines in Books: Technology as Cultural Artifact in the Early Renaissance”

Oct. 2007—Society for the History of Technology, Fiftieth Anniversary Workshop: Looking Back/Looking Beyond: Plenary Session. Paper: “The Craft of Premodern (European) History of Technology: Past and Future Practice”

July 2007—Workshop on craft transmission in early Modern China, Max Planck Institute for the History of Science, Berlin, Paper: “Transmission of Craft Knowledge in Western Europe: Methodological Issues as a Framework for comparison”

June 2007—Conference: Pollution and Propriety: Dirt, Disease and Hygiene in Rome from Antiquity to Modernity. Commenter for Panel, “Sanitation and Renovation from Early Modern Rome to Roma Capitale”

Oct. 2006—Member of Round Table, “Archaeology and the History of Technology,” Society for the History of Technology, Las Vegas

June 2006 — Science and Technology Studies Program, University of California at San Diego: Engineering the Eternal City: Knowledge, Power, and Urbanization in Late Sixteenth Century Rome

May 2006 — Medieval Studies Program and Science and Technology Studies Program, University of California at Santa Barbara: Engineering the Eternal City: Knowledge, Power, and Urbanization in Late Sixteenth Century Rome

April 2006—Getty Research Institute Seminar: Engineering the Eternal City: Knowledge, Power, and Urbanization in Late Sixteenth Century Rome.

March 2006 — Renaissance Society of America, San Francisco.
Comment on papers on Panel: “New Approaches to Galileo”

Dec. 2005—Keynote Address: Michael of Rhodes Conference, Dibner Institute for the History of Science and Technology, MIT

Nov. 2005—History of Science Society
Panel: Water Management Controversies in Early Modern Europe
Paper: “Floods, Aqueducts, and the Culture of Knowledge in Early Counter-Reformation Rome.”

Dec. 2004—Davis Center, Princeton University, “Engineering, Power, and Knowledge in Early Counter-Reformation Rome, 1560-1570”

April 2004—Public Lecture, American Academy in Rome, “Power and Hydraulics in Counter-Reformation Rome”

Jan. 2004— Invited Lecture, Bard Graduate Center seminar in cultural history
“Counter-Reformation Rome: Knowledge, Power and Urbanization”

Oct.2003—The Warburg Institute Colloquium: Scientific Culture in Early Modern Rome
Paper: “Rome, 1560-1612. Knowledge, power, and urbanization: are these three entities related and if so, how?”

Dec. 2002—Max Planck Institute, Berlin, Workshop
“Picturing the Machine: Francesco di Giorgio and Leonardo da Vinci in the 1490s”

Oct. 2002—Invited Lecture, Department of History and Philosophy of Science, Indiana University
“Picturing the Machine: Francesco di Giorgio and Leonardo da Vinci in the 1490s”

March 2002—Joint Colloquium, Princeton University Program in History of Science and University of Pennsylvania Department of History and Sociology of Science; Paper: “Picturing the Machine: Francesco di Giorgio and Leonardo da Vinci in the 1490s”

Feb. 2002—College Art Association, Philadelphia
Panel: Artist and Word in the Renaissance
Paper: “Text, Image, and the Machine: Francesco di Giorgio and Leonardo da Vinci in the 1490s”

March 2001—Renaissance Society of America, Chicago. Panel: Text and Image
Paper: “Images in Texts: Visual Representation and the Culture of Knowledge, 1490-1556”

Nov. 2000—Center for Renaissance and Baroque Studies, University of Maryland
Conference: “Attending to Early Modern Women: Gender, Culture and Change”
Plenary speaker at session: “Goods”
Paper: “Women and Technology in Early Modern Europe”

August 2000—Society for the History of Technology, Munich
Organizer of panel: Technology and Visual Representation in Early Modern Europe
Paper: “Text and Image: The Visual Language of Mechanics and Machines from Leonardo da Vinci to Georg Agricola”

March 2000—Centre Nationale de Recherche Scientifique (CNRS)
Conference: “Pratiques historiques de l’innovation, historicité de l’économie des savoirs (XII-XIXe siècles)”
Paper: “Craft Innovation and Craft Tradition: Between Cultural Value and Economic Fact”

Nov. 1999—History of Science Society, Pittsburgh
Commentator for panel: “Real Science Wars: New Approaches to a Classic Issue”

Oct. 1999—William Andrews Clark Memorial Library, UCLA
Conference: “Commerce and the Representation of Nature in Early Modern Europe”
Paper: “Objects of Art/Objects of Nature”

Oct. 1998—History of Science Society, Kansas City
Session Organizer: “Openness and Secrecy in Early Modern Knowledge Traditions”
Paper: “Openness and Secrecy in the ‘Occult’ Traditions of Early Modern Europe”

Oct. 1998—Society for the History of Technology, Baltimore
Session Organizer and Commentator: “Technology and Economy in Early Modern Europe”

May 1998—Program in the History of Science and Technology, University of Minnesota
Paper: “Openness, Secrecy, Authorship, Ownership”

March 1997—Department of the History of Science, Harvard University.
"The Authorship of Science" Conference
Paper: "Authorship in Fifteenth Century Technical Literature"

August 1996—Society for the History of Technology, London.
Organizer of Panel: "Technology/Power/Representation: Cultures of Technology in Early Modern Europe" Paper: "Power, Patronage and the Authorship of Ars"

April 1996—Department Colloquium, Dept. of the History of Science, Medicine, and Technology, Johns Hopkins University. "Power, Patronage and the Authorship of Ars: From Mechanical Know-how to Mechanical Knowledge in the Last Scribal Age"

April 1996—Guy F. Goodfellow History Lecture Series, Washington College, Chestertown, Md.
"From Empirical Know-How to Empirical Knowledge: Technical Authorship in 15th Century Europe"

April 1996—New York Academy of Sciences, Section for the History and Philosophy of Science.
"Patronage and the Authorship of *Ars*: From Empirical Practice to Empirical Knowledge in 15th-Century Technical Writings"

March 1996—Graduate Program in Science and Technology Studies, Virginia Polytechnic Institute and State College, Blacksburg, Va. "Power, Patronage, and the Authorship of *Ars*: From Empirical Practice to Empirical Knowledge in 15th-Century Europe"

Nov. 1995—Lemelson Center, Smithsonian Institution.
Symposium: "The Inventor and the Innovative Society" Commentator for: "Leonardo da Vinci and Italy"

May 1995—Dibner Institute, MIT, Cambridge, Mass. Conference: "Renaissance Natural Philosophy and the Disciplines" Commentator for panel: "Early Modern Alchemy"

April 1995—Folger Shakespeare Library.
"Fifteenth Century Technical Writing: Patronage and Authorship in the Last Scribal Age"

March 1995—Renaissance Society of America, New York City.
panel: "Renaissance Virtual Reality" paper: "Power, Patronage and the Authorship of *Ars*: From Empirical Practice to Empirical Knowledge"

Oct. 1994—History of Science Society, New Orleans.
Commentator for panel: "Cultivating Mathematics: New Directions in the History of Early Mathematics"

Oct. 1994—Society for the History of Technology, Lowell, Mass.
Commentator for panel: "Early Modern Military Engineering: Theory, Practice and Strategic Significance"

May 1994—Harvard University Conference, "The Architecture of Science."
paper: "Openness and Empiricism: Values and Meaning in Early Architectural Writings and in the New Experimental Philosophy"

May 1993—National Museum of American History, Seminar in the History of Technology.
paper: "*Techne, Praxis, Episteme*: Technical Authorship and Experimental Philosophy"

Dec. 1992—History of Science Society, Washington, D.C.
panel: "Material Understanding: Artisans and Natural Philosophers in the Scientific Revolution"
paper: "The Scholar and Craftsman Revisited"

August 1992—Society for the History of Technology, Uppsala, Sweden.
panel: "Communication between Learned and Practical People in Early Modern Europe"
paper: "Military Authorship: Informal 'Academy' of Learning and Practice in 15th and 16th Century Europe"

Oct. 1991—Folger Institute Colloquium, Washington, D.C.
"Invention, Authorship, Intellectual Property and the Origin of Patents"

Oct. 1990—Society for the History of Technology, Cleveland, Ohio.
panel: "Perspectives on the Patent Office System"
paper: "Intellectual Property and Invention: Notes toward a Conceptual History"

Dec. 1989—New York Metropolitan Seminar in the History of Technology.
"Secrecy in the Military and Practical Crafts of Classical and Late Antiquity: The Evidence vs. the Historiographic Tradition"

Aug. 1989—International Congress of History of Science, Hamburg/Munich.
panel: "Science, Medicine and Technology in the Time of Renaissance"
paper: "The Openness of Knowledge: An Ideal and its Context in Sixteenth Century Writings on Mining and Metallurgy"

Apr. 1989—Renaissance Society of America, Cambridge, Mass.
panel: "Technology and Science in the Sixteenth Century"
paper: "Openness and Authorship in 16th Century Technical Literature"

Oct. 1988—Society for the History of Technology, Wilmington, Del.
panel: "New Work in Medieval and Renaissance Technology"
paper: "Openness versus Secrecy: A Conflict of Values in Sixteenth Century Mining and Metallurgical Literature"

Dec. 1987—American Historical Association, Washington, D.C.
Organizer of panel: "Technical Literature as a Source for Cultural History"
paper: "Openness and Intellectual Property: Two related Concepts in Early Modern Technical Literature"

Dec. 1986—New York Metropolitan Seminar in the History of Technology.
"Openness and Intellectual Property: A Discourse in Pre-modern Technical Literature"

Oct. 1986—Society for the History of Technology meeting, Pittsburgh.
Commentator for panel: "Medieval and Early Modern Technology"

Dec. 1983—American Historical Association.
panel: "Artisans and Intellectuals in Early Modern Italy"
paper: " Artisan to Writer: The Marriage of Theory and Practice in the Vitruvian Tradition"

Oct. 1983—History Conference of Hudson Valley Colleges and Universities at Bard College. "The Contribution of Architectural Writers to a 'Scientific' Outlook in the Fifteenth and Sixteenth Centuries"

Mar. 1983—New York Metropolitan Seminar in the History of Technology.
"Ideologies of Technological Transmission and the Idea of Plagiarism in Pre-modern Europe"

Feb. 1982—Columbia University Seminar on the Renaissance.
"The Unity of Theory and Practice: The Emergence of an Ideal in the Vitruvian Tradition"

Oct. 1981—Sixteenth Century Studies Conference, Iowa City.
"The Vitruvian Tradition as a Source for the History of Ideas"

Nov. 1980—Renaissance Colloquium, Cornell University: "The Vitruvian Tradition in the Sixteenth Century"