

**CURRICULUM VITAE**  
**Bert S. Hall**

**Office:** Institute for the History and Philosophy of Science and Technology  
316 Victoria College 91 Charles Street West  
University of Toronto Toronto, ON M5S 1K7  
CANADA  
Email: bert.hall@utoronto.ca

**PERSONAL DATA:**

**Birthdate:** January 6, 1945

**Citizenship:** USA & Canadian (1989)

**EDUCATION:**

BA(History) University of California, Los Angeles 1966  
Ph.D.(History) University of California, Los Angeles 1971

**PROFESSIONAL EMPLOYMENT:**

Professor, IHPST 1999-  
Associate Professor, IHPST 1992-1999  
Assistant Professor, IHPST 1987-1992  
Senior Tutor, University of Toronto  
Institute for the History and Philosophy of Science and Technology 1982-1987  
Assistant Professor, (Term Appointment) University of Toronto  
Institute for the History and Philosophy of Science and Technology  
jointly with Centre for Medieval Studies 1977-1982  
Assistant Professor, State University of New York, Buffalo  
Department of History 1972-1977

**MAJOR FELLOWSHIPS:**

National Humanities Institute Fellow, University of Chicago 1976-1977  
Visiting Postdoctoral Fellow, Smithsonian Institution 1971-1972  
Dibner Fellow, Huntington Library 2010

## **PUBLICATIONS: [R] = Refereed**

### **Books:**

4. Weapons and Warfare in Renaissance Europe: Gunpowder, Tactics, and Technology (Baltimore: Johns Hopkins University Press, 1997). [R] Please note: A Japanese translation of this work has appeared (Tokyo: Heibonsha, 2000), and Hopkins produced a paperback edition in spring, 2002.
3. With Sheila Campbell and David Klausner, eds., Health, Disease and Healing in Medieval Culture (New York: St. Martins Press; 1991). [R]
2. With D.C. West, Studies in Pre-Modern Technology and Science. 232 pp. (Los Angeles: Undena Publications, 1976).
1. The Technological Illustrations of the “Anonymous of the Hussite Wars”: Codex latinus monacensis 197, Part I. 221 pp. indices, 94 plates. (Weisbaden: Reichert, 1979). [R]

### **Articles:**

33. “Metals, metallurgy, and mining in Shakespeare,” in Bruce R. Smith (ed.) The Cambridge Shakespeare Encyclopedia, Volume I: Shakespeare’s World (Cambridge: Cambridge University Press, FORTHCOMING)
32. “Firearms and Sport: Militias, Marksmanship and Hunting,” in John McClelland (ed.) Athletes and Athletics in the Early Modern Period, 1000-1650 (Toronto: University of Toronto Press, 2010) [R]
31. “Foreword,” in Brenda J. Buchanan (ed.), Gunpowder, Explosives and the State: A Technological History (Reading, UK: Ashgate-Variorum, 2006).
30. “White, Lynn,” Article in Oxford Encyclopedia of Economic History, ed. Joel Mokyr (New York: Oxford, 2003).
29. With Steven A. Walton. Chapter: “Science, Technology and Health,” in Jeremiah Hackett (ed.), World Eras: Volume 4: Medieval Europe, 814-1350 (Detroit, MI: Gale Group, Thompson Learning, 2002). Pp. 431-478.
28. “Scientific Archeology and the Military Historian: The Case of Early Modern Firearms,” History of Medieval Life and the Sciences: Proceedings of an International Round-Table-Discussion, Krems an der Donau, September 28-29, 1998 (“Forschungen des Instituts für Realienkunde des Mittelalters und der frühen Neuzeit, Diskussionen und Materialien,” Krems [Austria], 1999). [R]
27. “Thorndike, Lynn,” Article in revised ed. American National Biography (New York: Oxford University Press, 1999).
26. With Ranald MacKenzie McLeod, “Technology, Ecology and Religion: Thoughts on the Views of Lynn White,” in Nancy van Deusen (ed.), Design and Production in Medieval and Early Modern Europe: Essays in Honor of Bradford Blaine (“Claremont Cultural Studies;” Ottawa: The Institute of Medieval Music, Musicological Studies, vol. LXII/4, 1998), pp. 149-162. [R]

25. "Introduction" to J.H. Partington, History of Greek Fire and Gunpowder (Reprint Edition; Baltimore; Johns Hopkins, 1998), pp. xiv-xxix.
24. "Weapons of War and Late Medieval Cities: Technological Innovations and Tactical Changes," in E.B. Smith and M. Wolfe (eds.) Technology and Resource Use in Medieval Europe (Aldershot [Hamps.]: Ashgate, 1997), pp. 185-208. [R]
23. Field Editor, "Science and Technology," in F.A.C. Mantello and A.G. Rigg (eds.), Medieval Latin Studies: An Introduction and Bibliographical Guide (Washington, D.C.: Catholic University of America Press, 1996). Member of Advisory Committee; wrote introductory essay, "Technology and Crafts," (pp. 427-30); coordinated contributions in this field. [R]
22. "The Didactic and the Elegant: Some Thoughts on Scientific and Technological Illustrations in the Middle Ages and Renaissance," in Brian Baigrie (ed.), Picturing Knowledge: Historical and Philosophical Problems Concerning the Use of Art in Science (Toronto: University of Toronto Press, 1996), pp. 3-39. [R]
21. "Lynn White's Medieval Technology and Social Change After Thirty Years," in Robert Fox (ed.), Technological Change (London: Harwood, 1996), pp. 85-101. [R]
20. "The Corning of Gunpowder and the Development of Firearms in the Renaissance," in B. Buchanan (ed.) Gunpowder: The History of an International Technology (Bath: University of Bath Press, 1996), pp. 87-120. Paperback re-issued. [R]
19. "Material Culture and Military History: Test-Firing Early Modern Small Arms," Material History Review, **42** (Fall, 1995), pp.101-109. [R]
18. American Historical Association, Guide to Historical Literature (Washington, D.C. A.H.A., 1995), "Medieval and Early Modern Technology," "Clocks and Chronometers."
17. Articles, "Astronomical and Navigational Instruments," "Clocks and Timekeeping," and "Mining and Metals," in William W. Kibler (ed.), Medieval France: An Encyclopedia (New York: Garland, 1995), pp. 79, 235, and 622-23.
16. "The Changing Face of Siege Warfare: Technology and Tactics in Transition," in I. Corfis and M. Wolfe (eds.) The Medieval City Under Siege (London: Boydell and Brewer, 1995), pp. 257-275. [R]
15. "'So Notable Ordynance': Christine de Pizan, Firearms and Siegecraft in a Time of Transition," in C. De Backer (ed.), Culturhistorisch Kaleidoskoop: Een Huldealbum aangeboden aan Prof. Dr. Willy L. Braekman. (Brussels: Stichting Mens en Cultuur, 1992), pp. 219-240.
14. "Memorial: Lynn White, jr. (1907-1987)," Memoirs of the American Philosophical Society, (Winter 1988-89), pp. 257-264.
13. "Lynn Townsend White, jr. (1907-1987) [with bibliography]," Technology and Culture, **30** (1989), pp. 194-213.
12. "Eloge: Lynn White jr. (1907-1987)," Isis, **79** (1988), pp. 478-481.
11. "Military Acculturation: A Comment," Avista Forum, **3**, No. 1 (Fall, 1988), pp. 8-10.

10. "Cast Iron in Late Medieval Europe: A Re-Examination," reprinted in Michael L. Wayman (ed.) All That Glitters: Readings in Historical Metallurgy (Montréal: Canadian Institute of Mining and Metallurgy, 1989)
9. "Cast Iron in Late Medieval Europe: A Re-Examination," CIM Bulletin: The Canadian Mining and Metallurgical Bulletin, **76** no. 855 (July, 1983), pp. 86-91. [R]
8. "Editing Texts in the History of Technology," in T.H. Levere (ed.), Editing Texts in the History of Science and Medicine: Proceedings of the 17th Annual Conference on Editorial Problems, (New York 1982), pp. 69-100. [R]
7. "Production et diffusion de certains traités de techniques au Moyen Age," in Les arts mécaniques au Moyen-Age (8e Colloque de l'institut d'études mdievales; Montréal: 1982), pp. 147-170. [R]
6. "Guido da Vigevano's Texaurus Regis Francia, 1335," Scripta, **6** (March, 1982), 33-44. [R]
5. "Der meister sol auch kennen schreiben und lesen: Writings About Technology, ca.1400 - ca.1600, and Their Cultural Implications," in D. Schmandt-Besserat (ed.), Early Technologies: Invited Lectures on the Middle East at the University of Texas, Austin, (Los Angeles: Undena, 1979), 47-58. [R]
4. "Giovanni de'Dondi and Guido da Vigevano: Notes Toward a Typology of Medieval Technological Writings," Annals of the New York Academy of Sciences, **314** (1978), pp. 127-142. [R]
3. "The Scholastic Pendulum," Annals of Science, **35** (1978), pp. 441-462. [R]
2. With Ian Bates, "Leonardo, the Chiaravalle Clock and Epicyclic Gearing: A Reply to Antonio Simoni," Antiquarian Horology, **9** (1976), pp. 910-917. [R]
1. "A Revolving Bookcase by Agostino Ramelli," Technology and Culture, **11** (1970), pp. 389-400. [R]

#### Review Articles:

5. "Rowing Toward Success: A Fifteenth-Century Venetian Oarsman's Commonplace Book." [Reviewing Pamela O. Long, David McGee, and Alan M. Stahl (eds.), Michael of Rhodes, The Book of Michael of Rhodes], Isis, **103** (2012): 151-154.
4. With Kelly DeVries, "The Military Revolution Revisited," Reviewing Geoffrey Parker, The Military Revolution: Military Innovation and the Rise of the West 1500-1800 (Cambridge: Cambridge University Press, 1988), Technology and Culture, **31** (1990), pp. 500-507. [R]
3. "Leonardo da Vinci: Engineer and Architect," Review of Exhibit at the Montreal Museum of Fine Arts (22 May - 8 November, 1987) and the catalogue edited by Paolo Galluzzi, Technology and Culture, **29** (1988), pp. 606-612 and 663-666.
2. "The New Leonardo," Reviewing Reti, L., (ed.) Leonardo da Vinci, The Madrid Codices (5 vols.; New York: McGraw-Hill, 1974) and Reti, L., The Unknown Leonardo (New York: McGraw-Hill, 1974), Isis, **67** (1976), pp. 463-475.

1. “Crossbows and Crosswords: E.W. Marsden's Greek and Roman Artillery (2 vols., Oxford: 1970-71,” Isis, **64** (1973),pp. 529-33.

### **Book Reviews:**

39. Horst Kranz (ed. & trans.), Johannes Fontana: "Liber instrumentorum iconographicus" / Ein illustriertes Maschinenbuch, Isis, [forthcoming].
38. David Parrott, The Business of War: Military Enterprise and Military Revolution in Early Modern Europe, Renaissance Quarterly, **67** (2014), pp. 621-22.
37. C. A. Davids, Religion, Technology, and the Great and Little Divergences. Great and Little Divergences: China and Europe Compared, c. 700–1800, Isis, **104** (2013), pp. 819–820.
36. Kenneth C. Mondschein, Camillo Agrippa: Fencing: A Renaissance Treatise, Renaissance Quarterly, **63**, (2010), pp. 630-631.
35. Dietrich Lohrmann, Horst Kranz and Ulrich Alertz (ed. & trans.) Konrad Gruter von Werden, De machinis et rebus mechanicis: Ein Maschinenbuch aus Italien für den König von Dänemark, 1393-1424, Isis, **101** (2010), pp. 209–211.
34. Slade, Giles, Made to Break: Technology and Obsolescence in America, Isis, **98** (2007) pp. 879–880.
33. “Chase, Kenneth, Firearms : A Global History to 1700”, The International History Review, **27**, No. 2 (June, 2005).
32. “Alfred Crosby, Throwing Fire: Projectile Technology Through History,” Canadian Journal of History, **38**, No. 2 (August, 2003), p. 367.
31. “Paolo Squatriti, Working with Water in Medieval Europe: Technology and Resource-Use,” Annals of Science , **61** (2004), pp. 496-97.
31. “Roberta J. Magnusson, Water Technology in the Middle Ages: Cities, Monasteries and Waterworks after the Roman Empire,” Isis **95** (2004), pp. 115-116.
30. “Sydney Anglo, The Martial Arts of Renaissance Europe,” Isis **94** (2003), p. 368.
29. “Philippe Contamine, ed. War and Competition between States,” Renaissance Quarterly **56**, (Summer, 2003), pp. 502-503.
28. “Paolo Squatriti, Water and Society in Early Medieval Italy, AD 400-1000,” Canadian Journal of History **35** (April 2000), pp. 117-118.
27. “Philip Butterworth, Theatre of Fire: Special Effects in Early English and Scottish Theatre,” Technology and Culture, **42** (2001), pp. 192-193.
26. “Christopher Duffy, Siege Warfare: The Fortress in the Early Modern World, 1494-1660,” Sixteenth Century Journal **29** (1998), pp. 900-901.
25. “Henry Heller, Labour, Science and Technology in France: 1500-1620,” Renaissance and Reformation **21** (1997), 81-82.
24. “Robert McCormick Adams, Paths of Fire: An Anthropologist’s Inquiry into Western Technology,” Canadian Journal of History **33** (1998), pp. 147-149.

23. “Bernard Bachrach, The Anatomy of a Little War,” Technology and Culture , **39** (1998), pp. 135-137.
22. “Ian Friel, The Good Ship: Ships, Shipbuilding, and Technology in England, 1200-1520,” Albion, **28** (1996), pp. 673-674.
21. “Gerhard W. Kramer, Berthold Schwarz: Chemie und Waffentechnik im 15. Jahrhundert,” Technology and Culture, **37** (1996), pp. 342-343.
20. “Richard W. Unger, The Art of Medieval Technology: Images of Noah the Shipbuilder,” Isis, **85** (1994), pp. 320-321.
19. “Michele Renee Salzman, On Roman Time: The Codex-Calendar of 354 and the Rhythms of Urban Life in Late Antiquity,” Isis, **83** (1992), pp. 478-79.
18. “Elspeth Whitney, Paradise Restored: The Mechanical Arts from Antiquity through the Thirteenth Century,” Isis, **83** (1992), pp. 312-313.
17. “Isabelle Rouaze, Un Atalier de Distillation du Moyen Age,” Isis, **83** (1992), pp. 122-123.
16. “Héron d'Alexandrie, Les Mécaniques ou l'Élevateur des Corps Lourds. Texte arabe de Qusta Ibn Luqa établi et traduit par B. Carra de Vaux. Introduction par D. R. Hill. Commentaires par A. G. Drachmann,” Isis, **81** (1990), pp. 756-757.
15. “Michael Matheus, Hafenkrane: Zur Geschichte einer mittelalterlichen Maschine am Rhein und seinen Nebenflüssen von Straßburg bis Düsseldorf,” Speculum, **64** (1989), p. 186.
14. “Reinhold Hammerstein, Macht und Klang: Tönende Automaten als Realität und Fiktion in der alten und mittelalterlichen Welt,” Speculum, **63** (1988), pp. 939-40.
13. “Pamela O. Long (ed.), Science and Technology in Medieval Society,” Isis, **78** (1987), pp. 122-124.
12. “Norman Smith (ed.), History of Technology: Ninth Annual Volume, 1984,” Applied Mechanics Reviews, **39**, (December, 1986), pp. 1894-1895.
11. “Nan L. Hahn, Medieval Mensuration: Quadrans Vetus and Geometrie Due Sunt Partes Principales,” Speculum, **60** (1985), pp. 409-412.
10. “J.G. Landels, Engineering in the Ancient World,” Isis, **70** (1979), pp. 301-302.
9. “Jean Gimpel, The Medieval Machine,” Speculum, **53** (1978), pp. 366-368.
8. “C.S. Smith and J. G. Hawthorne, Mappae Clavicula: A Little Key to the World of Medieval Techniques,” Isis, **67** (1976), pp. 123-124.
7. “F.D. Prager and G. Scaglia, Mariano Taccola and His Book De Ingeniis,” American Historical Review, **80** (1975), pp. 98-99.
6. “R. Payne Gallwey, The Projectile-Throwing Engines of the Ancients,” Isis, **65** (1974), pp. 530-531.

5. "J.H. Leopold, The Almanus Manuscript," Speculum, **49** (1974), pp. 128-130.
4. "C. Wehmer, Deutsche Buchdrucker des 15. Jahrhunderts," Technology and Culture, **13** (1972), pp. 627-629.
3. "F. Dressler and G. Zimmerman, Scriptorum opus: Schreiber-Monche am Werk," Technology and Culture, **13** (1972), pp. 494-495.
2. "U.M. Schwob, Kulturelle Beziehungen zwischen Nürnberg und den Deutschen im Südosten in 14. bis 16. Jahrhundert," Technology and Culture, **13** (1972), pp. 309-310.
1. "Ansgar Stöcklein, Leitbilder der Technik: Biblische Tradition und technischer Fortschritt," Technology and Culture, **12** (1971), pp. 495-498.

**Videotapes and Web-Based Material:**

"Tools in Medieval Life" (Colour; 30 minutes; Toronto: University of Toronto, 1981). Note: Series under the auspices of the Centre for Medieval Studies, University of Toronto.

**HONOURS AND AWARDS:**

Chancellor's Teaching Fellowship, UCLA	1966-70
Woodrow Wilson Dissertation Fellowship	1970-71
National Science Foundation Dissertation Grant	1970-71
SUNY-Research Foundation Summer Fellowship and Grant	1973
National Endowment for the Humanities Summer Fellowship	1974
Connaught Research Foundation Grant, University of Toronto	1978-80
Social Sciences and Humanities Council of Canada Research Grant	1983-84
Hagley Library Visiting Fellow	1997
Honourable Mention, W.K Ferguson Prize for Best Book, Canadian Historical Association	1998
Dibner Fellow, Huntington Library	2010

**PROFESSIONAL SOCIETIES MEMBERSHIPS (Since):**

Phi Beta Kappa	(1967)
American Historical Association	(1968)
Medieval Academy of America	(1969)
Society for the History of Technology	(1969)
History of Science Society	(1971)
Canadian Historical Association	(1987)
AVISTA (Member of Board of Directors, 1991-1999)	(1989)

**OTHER DUTIES**

Elected Member, University of Toronto Faculty Association Council	(2003 - 2005)
Graduate Coordinator, IHPST	(2003- 2008)
Graduate Coordinator, IHPST	(1997 - 2000)
Member, Program Committee, Museum Studies Program,	(1997 - present)
Member, Decanal Search Committee, IHPST Chair	(2003)
Local Arrangements Chair, SHOT Annual Meeting 2002	(2000 - 2002)
Colloquium Coordinator, IHPST	(2000 - 2001)



## TEACHING EXPERIENCE:

History; History of Technology: Current major courses include History of Modern Technology for engineering students, History of Pre-Modern Technology for Arts & Science students and for School of Graduate Studies students.

Undergraduate courses: Western Civilization, Medieval History, Renaissance and Reformation History, Historiography of the Renaissance, History of Technology (Undergraduate Seminar), The Scientific Revolution (Undergraduate Seminar), Technology in Western Society (Year-long Survey), War and Society, Various Special Studies and Directed Readings.

Graduate seminars: Topics in Medieval History, History of Technology (Core seminar at IHPST), Medieval Technology and Society, Technology and War, Various Special Studies and Directed Readings.

### **Student Supervisions: Theses Completed: [S=Supervisor; A=Advisor; E= Examiner]**

Fr. Gerald Cassidy, 2000 Paper "Seventeenth- and Eighteenth-Century Encyclopedists," Fall, 1987. [S]

Lois Ayoub, Ph.D. Dissertation "John Crophill's Books : An Edition of British Library, MS Harley 1735," (Centre for Medieval Studies), Fall, 1987. [E]

Kelly DeVries, Ph.D. Dissertation "Perceptions of Victory and Defeat in Low Countries 1300-1320," (Centre for Medieval Studies), Fall, 1987. [A]

Lesley Cormack, Ph.D. Dissertation "Geography as an Interactive Science: The Teaching of Geography at Oxford and Cambridge, 1560-1640," Fall, 1988. [Co-Supervisor]

Melitta Weiss-Amer, Ph.D. Dissertation "Food and Drink in Medical-Dietetic 'Fachliteratur' from 1050-1500," (Department of Germanic Languages), Spring, 1989. [Co-Supervisor]

Sally McKee, Ph.D. Dissertation "Uncommon Dominion: The Latins and Greeks of Fourteenth-century Venetian Crete," (Centre for Medieval Studies), Spring, 1989. [E]

Marshall Bastabel, Ph.D. Dissertation "Arms and the State: A History of Sir William G. Armstrong and Company, 1854-1914," (Department of History), Spring, 1990 [A]

William Rawling, Ph.D. Dissertation "Tactics and Technics: Technology and the Canadian Corps, 1914-1918," (Department of History), Fall, 1990. [A]

W. Ted Szwejkowski, 2000 Paper "The Traction Trebuchet: Reconstruction and Performance," Sept., 1991. [S]

Peter Burkholder, 2000 Paper "The Siege of Saint-Saveuer-le-Vicomte: Technology and Siegecraft in Transition," Fall, 1992. [S]

Jennifer Hubbard, Ph.D. Dissertation "An Independent Progress: The Development of Marine Biology on the Atlantic Coast of Canada, 1898-1939," Fall, 1992. [E]

Benjamin Olshin, Ph.D. Dissertation "A Sea Discovered: Conceptualizing the Atlantic Ocean before Columbus," Fall, 1993. [S]

David McGee, Ph.D. Dissertation "Floating Bodies, Naval Science: Science, Design, and the *Captain* Controversy, 1860-1871," Fall, 1994. [A]

Wilfred Lockett, Ph.D. Dissertation "Jakob Leupold and the *Theatrum Machinarum*," Fall, 1994. [S]

Erik Lund, Ph.D. Dissertation "The Generation of 1683: War and Knowledge in the Holy Roman Empire of the German Nation 1658-1741," (Department of History), Fall, 1997. [S]

- Lucile Wakelin, Ph.D. Dissertation “Standards of Living in the Commune of Namur, 1263-1429,” (Centre for Medieval Studies), Spring, 1998. [A]
- Michael Huarte, 2000 Paper “Computer Security: Information Technologies and the Changing Military Environment,” Fall, 1998. [S]
- Steven Walton, “The Art of Gunnery in Renaissance England,” January, 1999 [S]
- Frank Klaassen, “Religion, Science, and the Transformations of Magic: Manuscripts of Magic 1300-1600,” (Department of History), February, 1999 [S]
- Rudolf Kraus, 2000 Paper “Francis Malthus” *Practique de la Guerre*,” Fall, 1999 [S]
- Daryn Lehoux, PhD Thesis “Parapegmata or Astrology, Weather, and Calendars in the Ancient World,” Spring, 2000 [A]
- Shana Worthen, 2000 Paper “A Medieval History of Classical ‘Scientific’ Discoveries as Told Though Eleventh and Twelfth Century Encyclopedias,” Fall, 2000 [S]
- Patricia Grimshaw, (Museum Studies) MA Paper “Military Museums in Canada,” Fall, 2001 [S]
- Nicholas Gunz, (Trinity College), Honours Paper “The Dreadnought Myth: A Re-evaluation,” Spring, 2003 [S]
- Charlotte Masemann, (Centre for Medieval Studies) “Garden Produce in Medieval Ghent and Lübeck,” Fall, 2004 [A]
- Tibor Szalontay, (Near and Middle Eastern Civilizations) “The Art of War During the Ottoman-Habsburg Long War (1593-1606) According to Narrative Sources,” Fall, 2004 [A]
- Jennifer Keelan, (IHPST) “The Canadian Anti-Vaccination Leagues, 1872-1892,” Summer, 2004 [A]
- Vera Pavri, (IHPST) “Technological Doublespeak”: Metaphors, Public Policy and the Development of Canada’s First Domestic Communications Satellite System, 1966-1970,” Spring, 2005 [A]
- Jean-Louis Trudel, (UQAM) “Avant l’invention: Le passage d’une technologie imagée à une science appliquée théorique,” Spring, 2005 [Co-S]
- Shana Worthen, (IHPST) “The Memory of Medieval Inventions, 1200-1600: Windmills, Spectacles, Mechanical Clocks, and Sandglasses,” Spring, 2006 [S]
- David Lawrence, (History Department), “The Complete Soldier: Military Books and Military Culture in Early Stuart England, 1603-1645” Spring, 2006 [S]
- John Christopoulos, (IHPST) “Abortion in Renaissance Italy” Spring, 2013 [A]
- Adam Gwyndalf Garbutt, (IHPST) Assessing the Exotic: Authority, Reason, and Experience on the Construction of Medieval Natural Knowledge” Spring, 2013 [S]

## MISCELLANEOUS

- ~~Public Lectures, Professors, and other Professional Services, MISCELLANEOUS~~ “Saltpeter Interview, “As It Happens,” CBC Radio One, Technological Change in the Present, Air date 4 January, 2000.
- Lecture, Hamilton Steam Museum, “Why Does Tuesday Follow Monday? Astronomy and the Common Calendar, 19 January, 2000.
- Lecture, Ontario Science Centre, *Timescape* Series “Why Does Tuesday Follow Monday? Astronomy and the Calendar,” 23 January, 2000.
- Lecture, Lifelong Learning Unlimited (U of T Alumni & Affiliates), “Warmaking and Peacekeeping: The Future of Armed Conflicts and Efforts to Resolve Them,” 10 February, 2000.
- On-air appearance, Global TV Evening News, re: Leap Year, 29 February, 2000.
- What Role Should the History of Technology Play in the Construction of Military History?” Paper given at the sessions “Jean Gimpel: Five Decades of Medieval Technology, Science, and Art I: Medieval Technology” 35<sup>th</sup> International

Congress on Medieval Studies, Western Michigan University, Kalamazoo, MI, 4 May 2000. .

“More Bang for Your Ducat: Evaluating Ballistic Performance in Gunpowder’s First Two Centuries,” paper given at International Medieval Congress, University of Leeds, 11 July, 2000.

Commentator on J. Langins, “Ordnance Officers as Progressive Conservatives: Reforming Artillery in the 18th Century,” A paper given at the meeting of the Society for the History of Technology, Munich, August 18, 2000.

Chair and Commentator, Session: “Mechanics and Imagery,” History of Science Society, Annual Meeting, Vancouver, BC, 4 November, 2000.

TV appearance: Discovery Channel, February, 2001, as expert on calendars.

Radio interviews, 29 February, 2001, CBC national syndication, concerning leap year. Six appearances.

Chaired Session: “Epistemological Tensions and the Rise of Science,” at conference, Shell Games: Scams, Frauds, and Deceit (1300-1650), Centre For Reformation and Renaissance Studies, Victoria College, 28-29 April, 2001.

“The Mystery of Serpentine Powder,” Paper presented at the International Medieval Congress, University of Leeds, 11 July, 2001.

“Technical Drawings and Other Representations of Material Culture in The Late Middle Ages and Early Modern Era: Examples from the German-Speaking World,” Paper Presented at an invited Workshop on Visual Representation in Science and Technology, Max-Planck-Institut, Berlin, 26 July, 2001. .

Chaired Session, SHOT Conference, San Jose, California, 5 October, 2001

Invited Lecturer, "Gunpowder and Historians: Did Firearms Change History?" Pennsylvania State University, Program in Pre-Modern Technology and Material Culture, 19-22 February, 2002. .

Invited Lecture, “European Gunpowder 1250-1600: From Oriental Curiosity to Critical War Materiel,” Society for the History of Medieval Science and Technology, Asmolean Museum, Oxford University, 1 June, 2002. .

Invited Participant, Workshop on Medieval Gunpowder, The Medieval Center, Nykøbing F. Denmark, 1-5 September, 2002. .

Invited Lecture, “Timekeeping and Calendars,” Continuing Education, University of Toronto Scarborough, 14 November, 2002. .

Invited Lecture, “Exploring the History of Technology,” Later Life Learning, Innis College, 25 November, 2002. .

Television Appearance: TVO, Studio One, Discussant regarding Space Shuttle *Columbia* Disaster, 7 February, 2003.

“Saltpetre Refining and Gunpowder Production: 1250-1540,” Paper presented at the International Medieval Congress, University of Leeds, 15 July, 2003.

Session Chair: Bâtir de nouveaux ponts: sources, méthodes et interdisciplinarité / Building New Bridges: Sources, Methods, and Interdisciplinary, University of Ottawa, 8-9 May, 2004.

“Firearms and Festivals: Urban Elites, the Right to Bear Weapons, and Sport,” Paper presented at Athletes and Athletics in the Early Modern Period, 1000-1650 A.D., Victoria College, 18 June, 2004.

21 June, 2004. Interviewed as part of History Television documentary on Leonardo da Vinci. Aired in USA, fall, 2005.

Invited Participant, Workshop on Medieval Gunpowder, The Medieval Center, Nykøbing F. Denmark, 21-27 August, 2004. Consulted in preparation of research grant for Danish government and EU funding.

Invited Participant, Workshop on Medieval Gunpowder, Akureyri, Iceland, 10 – 26 July, 2005.

Guest Lecturer, “The Politics of Space,” University of Toronto Scarborough, 30 March, 2006.

- “Sulfur - An Experimental Approach” 33rd Symposium of the International Committee for Cooperation in the History of Technology (ICOHTEC), Leicester, UK, 18 August, 2006.
- “What Was ‘Serpentine’ Gunpowder?” 34th Symposium of the International Committee for Cooperation in the History of Technology (ICOHTEC), Copenhagen, Denmark, 18 August 2007.
- “The Gunpowder Plot,” Invited Lecture, University of Victoria, February, 2008.
- “What Underlay Improvements in 18th-Century French Artillery?” 35th Symposium of the International Committee for Cooperation in the History of Technology (ICOHTEC), Victoria, BC, 5-10 August, 2008.
- Commentator, Society for the History of Technology (SHOT), Lisbon, Portugal, 11-14 October, 2008.
- “*De re metallica* and All That; Georgius Agricola and His Contemporaries,” Invited Presentation, Huntington Library, 18 March, 2009.
- “Children of Mars, Children of mercury,” 36th Symposium of the International Committee for Cooperation in the History of Technology (ICOHTEC), Budapest, Hungary, 28 July- 2 August, 2009.
- “The Saiger Process, the Judgment of Jove and Renaissance Ecology,” Society for the History of Technology (SHOT), Pettsburgh, PA 15-18 October, 2009.
- "Silver Mining Goes on Trial: *Judicium Jovis* and Renaissance Ecology," Renaissance Society of America Annual Meeting, Montreal, 25 March, 2011.

### **Works in Progress**

- The *Judicium Jovis*: The First Expression of Ecological Consciousness in the Renaissance  
A book length translation and study of a Renaissance Latin dialogue concerning silver mining and its ecological consequences.
- “Children of Mars: Astrology and the mage of the Soldier in the Renaissance” Under submission.