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Born: Huntington, West Virginia., U. S. A., December 23, 1942 Citizenship: Canada, U. S. A.

EDUCATION:

B. A.	Haverford College	1963
A. M.	University of Chicago	1965
M. A.	Yale University	1967 (Economics)
M. Phil.	Yale University	1969
Ph. D.	Yale University	1971

EMPLOYMENT:

University of British Columbia, Assistant Professor, 1969 - 1976; Associate Professor 1976 - 1981, Professor, 1981 - 2010
Central European University, Visiting Professor, 1999, 2014
Alpen-Adria Universität of Klagenfurt, Visiting Professor, 2010

ADMINISTRATION:

UBC:

Faculty of Arts Medieval Studies Coordinating Committee, 1976-78, 1983-85, 1992-1994, 1998-2001, Chair, 2005-2007; Program Committee, Medieval Studies Workshop, 1976-78, 1980-83, 1992-1996, Program Committee Chair, 1977 and 1983 and 1993 and 2005
Department Graduate Committee, 1980-84, 1992-1994; Chair, 1983-84
Faculty of Arts, Committee on Promotion and Tenure, 1981-1985, 1993-1995
Associate Dean, Faculty of Arts, 1984-85
Member, President's Library Review Committee, 1988
Head, Department of History, 1986-1991
Chair, Committee to Review the Department of Economics, 1995-1996
Member, Executive Committee for Research of the Vice President, Research, 1994-1996
Peter Wall Institute of Advanced Study, Adjudication Committee for Major Projects, 2006-2012
Member, Council, Emeritus College, 2020-2022 and Finance Committee, 2020-2024, Chair 2021-2022

FOR LEARNED SOCIETIES, JOURNALS, GRANTING AGENCIES:

Medieval Academy of America, Chair, Program Committee, 1990 annual meeting; Nominating Committee, 1991-93(Chair, 2004-05); Council, 2000-2003; Co-ordinator, 2008 annual meeting; Second Vice-President, 2011-2012; First Vice-President, 2012-2013; President, 2013-2014; Chair, Centennial Committee, 2016-2019

Medieval Association of the Pacific, Coordinator 1978 annual meeting; Council member 1978-81; Program committee, 1981; Chair, Nominating Committee, 1981; Vice President, 1992-94; President, 1994-1996

Social Sciences and Humanities Research Council of Canada, Advisory Committee on Doctoral Fellowships Selection Process, 1992; Doctoral Fellowships Selection Committee, 1991-1995, Chair, 1992-1995; Post Doctoral Fellowship Committee, 1999; Member, Site Visit Committee for Major Research Grant, 1995

Society for the History of Technology, Advisory Council, 1996-2000

Meeting of History Department Chairs in Canada, Chair, 1991

Canadian Association for the Advancement of Netherlandic Studies, National Executive, Member-at-Large, 1987-2002

Canadian Nautical Research Society, Vice-president, 1981-87

Research Grant Assessor for: Australian Research Council, European Research Council, European Science Foundation, National Endowment for the Humanities (U. S. A.), National Humanities Center (USA), National Science Centre (Poland), Netherlands Organization for Scientific Research (NWO), Portuguese Foundation for Science and Technology (FCT), Research Support Scheme of the Open Society Institute, Social Sciences and Humanities Research Council of Canada

Editorial Board: *Brewery History Journal*, *E-Journal of Portuguese History*, *The Medieval Low Countries An Annual Review*

Reader for: *Acta medico-historica Adriatica*, *American Historical Review*, *Antiquity*, *AVISTA Forum Journal*, *Brewery History Journal*, *Economic History Review*, *E-Journal of Portuguese History*, *European Review of Economic History*, *Explorations in Economic History*, *Food and History*, *History Compass*, *International History Review*, *International Journal of Maritime History*, *Island Studies Journal*, *Jaarboek voor Ecologische Geschiedenis*, *Journal of Archaeological Science*, *Journal of Asian Studies*, *Journal of Economic History*, *Mains'l Haul*, *The Northern Mariner*, *Technology and Culture*, *Tijdschrift voor Economische en Sociale Geschiedenis*, *Viator*

Reader for: Brill Academic Publishers, Cambridge University Press, I. B. Tauris Publishers, Indiana University Press, Routledge, MIT Press, University of British Columbia Press, University of Pennsylvania Press, University of South Carolina Press

AWARDS AND FELLOWSHIPS:

Distinguished Scholar in Residence, Peter Wall Institute for Advanced Study, 2011-2012
 Donnelley Family Fellowship, National Humanities Center, 2008-2009
 Fellow, Medieval Academy of America, 2007-
 Jeannette D. Black Memorial Fellowship, John Carter Brown Library, 2006
 Visiting Fellow, All Souls College, University of Oxford, 2006
 Visitor in Sociology, Nuffield College, University of Oxford, 2004
 Fellow, Netherlands Institute for Advanced Study, 2003-2004
 Visitor, Department of Economic History, University of Amsterdam, 1994
 Visiting Research Fellow, Clare Hall, Cambridge University, 1991
 John Simon Guggenheim Fellowship, 1985-1986
 Research and Travel Grants from the American Council of Learned Societies, 1975, 1980, 1984
 Research Grants from the Canada Council and Social Sciences and Humanities Research Council of Canada, 1972, 1978, 1979, 1991-1993, 1999-2002, 2006-2009
 Hampton Fund, University of British Columbia, Research Grant, 1998-2000
 Killam Research Prize, University of British Columbia, 1993
 The John Lyman Book Award of the North American Society of Oceanic History for 1981

PUBLICATIONS:

BOOKS:

(with John Thistle) *Energy Consumption in Canada in the 19th and 20th Centuries A Statistical Outline*, Naples: Consiglio Nazionale delle Ricerche, Istituto di Studi sulle Società del Mediterraneo, 2013.

Ships on Maps: Pictures of Power in Renaissance Europe, London: Palgrave Macmillan, 2010.

Beer in the Middle Ages and the Renaissance, Philadelphia: University of Pennsylvania Press, 2004 (paperback edition 2007).

A History of Brewing in Holland 900-1900 Economy, Technology and the State, Leiden: E. J. Brill, 2001.

Ships and Shipping in the North Sea and Atlantic, 1400-1800, Basingstoke: Variorum Press, 1998.

The Art of Medieval Technology: Images of Noah the Shipbuilder, New Brunswick and London: Rutgers University Press, 1991.

The Ship in the Medieval Economy, 600-1600, London: Croom Helm and Montreal: McGill-Queen's University Press, 1980 (Reprinted, 1982).

Dutch Shipbuilding Before 1800: Ships and Guilds, Assen: Van Gorcum, 1978.

EDITED WORKS:

Shipping Efficiency and Economic Growth 1350-1850, Leiden: Brill, 2011.

(with Richard Talbert) *Cartography in Antiquity and the Middle Ages: fresh perspectives, new methods*, Leiden: Brill Academic Publishers, 2008.

(with the assistance of Jakub Basista) *Britain and Poland-Lithuania - Contact and Comparison From the Middle Ages to 1795*, Leiden: Brill Academic Publishers, 2008.

Advisory Editor, *Oxford Encyclopedia of Maritime History*. New York: Oxford University Press, 2008.

(with John Hattendorf) *War at Sea in the Middle Ages and the Renaissance*, Papers given at a conference at Arrabida, Portugal, 18-19 February, 2000, Woodbridge: The Boydell Press, 2003.

Consultant Editor, *Cogs, Caravels and Galleons*, volume 3 of *The Ship*, London: Conway Maritime Press, 1994.

(with J. A. S. Evans) *Studies in Medieval and Renaissance History*, 1978-1995, Published annually by the Committee for Medieval Studies, University of British Columbia and AMS Press, New York.

(With Susan B. M. Langley) *Nautical Archaeology: Progress and Public Responsibility, Proceedings of the Meeting held in Victoria and Vancouver, B. C., 29-30 September and 1 October, 1983*, Oxford: B. A. R., 1984.

TRANSLATION:

(With R. L. Robson-McKillop) *Commanders of Dutch East India Ships in the Eighteenth Century* [*Schippers van de VOC in de achttiende eeuw aan de wal en op zee*], Woodbridge: The Boydell Press, 2011.

WEB PUBLICATIONS:

“Het schip,” *Nieuwe Maritieme Geschiedenis van Nederland*, vol. 1, *Opkomst van de rivier- en zeehandel 1100 - 1600*, <https://beta.nmgm.huygens.knaw.nl/het-schip>, March, 2025..

“The Brewing Boom of the Middle Ages,” *Seeing the Woods*, A Blog of the Rachel Carson Center for Environment and Society, posted 14 March, 2018, <https://seeingthewoods.org/2018/03/14/the-taproom-richard-unger/>

“Brewing, Industrialization, and London Water Supplies,” *Environment & Society Portal*, Arcadia Summer 2016, no. 9. Rachel Carson Center for Environment and Society. <http://www.environmentandsociety.org/node/7618>.

(Edited) *Energy Transitions in History Global Cases of Continuity and Change*, Rachel Carson Center for Environment and Society, Munich, 2013. <http://www.environmentandsociety.org/perspectives/2013/2/energy-transitions-history-global-cases-continuity-and-change>

(with Robert Allen) Allen-Unger Database, Global Commodity Prices Database:
<http://www.gcpdb.info/>

ARTICLES IN JOURNALS:

“Beer and Taxes: the fiscal significance for Holland and England in the seventeenth and eighteenth centuries,” *TSEG – The Low Countries Journal of Social and Economic History*, 19, 1 (2022) 61–86. <https://doi.org/10.52024/tseg.11492>

“Trade in Electricity and Business Investment: Two Aspects of the Aluminium Industry in Canada/ *Le commerce de l’électricité et l’investissement des entreprises: deux aspects de l’industrie de l’aluminium au Canada*,” *Cahiers d’histoire de l’aluminium / Journal for the History of Aluminium*, 65 (2022), 72-99.

“The brewing industries in England and Holland, 1650-1800,” *Brewery History Journal*, 185, (Winter, 2020). 53-65.

“English Energy Consumption, Beer and the Impact of the Black Death,” *European Review of Economic History*, 24, 1 (February 2020), 134–156.

“Afterthoughts,” *The International Journal of Maritime History*, 31, 3 (2019), 612-623.

(with Robert Allen) “The Allen-Unger Global Commodity Prices Database.” *Research Data Journal for the Humanities and Social Sciences* (2019), 1-21.

“Channelling violence at sea: States, international trade and the transformation of naval forces from the high Middle Ages to the age of steam,” *The International Journal of Maritime History* 31, 2 (2019), 202–221.

“Shifting Energy Sources in Canada: An International Comparison, 1870-2000,” *Canadian Journal of History/Annales Canadiennes D’Histoire*, 53, 3 (Winter/Hiver, 2018), 480-514.

“Samuel Pepys and the Decline of Brewing in the late Seventeenth Century,” *Brewery History Journal*, 162 (2015), 66-75.

“Trade, Taxation and Government Policy in the High Middle Ages,” *Viator*, 46, 3 (Autumn 2015), 195-217.

“Commerce, Communication and Empire Economy, Technology and Cultural Encounters,” *Speculum*, 90, 1 (January, 2015), 1-27.

“Technology and Energy: loosening constraints on medieval economic growth,” *Quaestiones Medii Aevi Novae*, 18 (2013), 217-233.

“Gruit and the Preservation of Beer in the Middle Ages,” *AVISTA Forum Journal*, 21.1/2 (2011), 48-54.

“Dutch Nautical Sciences in the Golden Age: the Portuguese Influence,” *E-Journal of Portuguese History*, 9, 2 (Winter 2011), 68-83.

“Environmental and economic histories: Examples from pre-modern Europe,” *ПРОБЛЕМИ НА ГЕОГРАФИЯТА - Problems of Geography*, 1–2, София - Sofia (2011) , 84-96.

“Shipping and Western European Economic Growth in the Late Renaissance: Potential Connections,” *International Journal of Maritime History*, 18, 2 (2006), 85-104.

“Warships, cargo ships and Adam Smith: trade and government in the eighteenth century,” *The Mariner's Mirror*, 92, 1 (2006), 41-59.

“Prices, Consumption Patterns and Consumer Welfare in the Low Countries at the end of the Middle Ages,” *Jaarboek voor Middeleeuwse Geschiedenis*, 8 (2005), 252-282.

“Brewing Science in the Netherlands, 1815-1914,” *Brewery History Journal*, 121 (2005), 47-65.

(with Jan Lucassen) “Labour Productivity in Ocean Shipping, 1500-1850,” *International Journal of Maritime History*, XII, 2 (2000), 127-141.

"Brewing on Walcheren from the middle ages to early modern times. A survey," *Archief Mededelingen van het Koninklijk Zeeuwsch Genootschap der Wetenschappen*, 1999, 1-32

"Feeding Low Countries Towns: the Grain Trade in the Fifteenth Century," *Revue Belge de Philologie et d'Histoire*, 77, 2 (1999), 329-358.

"Beer, Wine and Land Use in the Late Medieval Low Countries," *Bijdragen tot de Geschiedenis*, LXXXI (1998), 329-337.

"Alfred Thayer Mahan, Ship Design, and the Evolution of Sea Power in the Late Middle Ages," *The International History Review*, XIX, 3 (August, 1997), 505-521.

"The Scale of Dutch Brewing, 1350-1600," *Research in Economic History*, 15(1995), 261-292.

- "Northern Ships and the late Medieval Economy: Columbus and the Medieval Maritime Tradition," *The American Neptune*, 53, no. 4 (Fall, 1993), 247-254.
- "Technical Change in the Brewing Industry in Germany, the Low Countries, and England in the Late Middle Ages," *The Journal of European Economic History*, 21, 2 (Fall, 1992), 281-313.
- "The Tonnage of Europe's Merchant Fleets 1300-1800," *The American Neptune*, 52, 4 (Fall, 1992), 247-261.
- "The Trade in Beer to Medieval Scandinavia," *Deutsches Schifffahrtsarchiv*, 11 (1988), 249-258.
- "Energy Sources for the Dutch Golden Age: Peat, Wind and Coal," *Research in Economic History*, 9 (1984) 221-253.
- "The Archaeology of Boats: Ships of the Vikings," *Archaeology*, 35, 3 (May/June, 1982), 20-27.
- "The Dutch Coal Trade in the 17th and 18th Centuries," *Mededelingen van de Nederlandse Vereniging voor Zeegeschiedenis*, 43 (December, 1981), 6-14.
- "Warships and Cargo Ships in Medieval Europe," *Technology and Culture*, XXII (1981), 233-252.
- "Dutch Shipbuilding and International Competition in the Golden Age," *History Today*, XXXI (April, 1981) 16-21. (English version of "De Nederlandse Scheepsbouw tot 1800")
- "De Nederlandse Scheepsbouw tot 1800," *Spiegel Historiae*, XV, 6 (June, 1980), 322-328.
- "Dutch Herring, Technology and International Trade in the Seventeenth Century," *Journal of Economic History*, XXXX (1980), 253-279. Reprinted in *Trade in the Pre-Modern Era, 1400-1700*, Douglas A. Irwin, ed. Cheltenham: Edward Elgar Publishing Ltd., 1996, 226-252.
- "The Netherlands Herring Fishery in the Late Middle Ages: the False Legend of William Beukels of Biervliet," *Viator*, IX (1978), 335-356.
- "Houten Scheepsbouw in Zeeland," *Zeeuws Tijdschrift*, XXVI, 4/5 (1976), 130-134.
- "Technology and Industrial Organization: Dutch Shipbuilding to 1800," *Business History*, XVII (1975), 56-72.
- "Wooden Shipbuilding at Dordrecht," *Mededelingen van de Nederlandse Vereniging voor Zeegeschiedenis*, XXX (1975), 5-19.

"Four Dordrecht Ships of the Sixteenth Century," *The Mariner's Mirror*, LXI (1975), 109-116.

"Regulations of Dutch Shipcarpenters in the Fifteenth and Sixteenth Centuries," *Tijdschrift voor Geschiedenis*, LXXXVII (1974), 503-520.

"Selling Dutch Ships in the Sixteenth Century," *Maritime History*, III (1973), 125-146.

"Dutch Ship Design in the Fifteenth and Sixteenth Centuries," *Viator*, IV (1973), 387-411.

"Dutch Shipcarpenters' Guilds, c. 1400 - c. 1600," *Mededelingen van de Nederlandse Vereniging voor Zeegeschiedenis*, XXIV (1972), 5-11.

"Note: Carvel-building in Northern Europe before 1450," *The Mariner's Mirror*, LVII (1971), 331-333.

ARTICLES IN BOOKS:

"Technologies of Exploration," *A Cultural History of Exploration in the Middle Ages*, volume 2, William D. Phillips Jr., London: Bloomsbury Academic, 2024, 15-36.

"Ships, Shipping, Technological Change and Global Economic Growth, 1400-1800," *The Knowledge Economy: Innovation, Productivity and Economic Growth, 13th to 18th Century*, Giampiero Nigro, ed., Datini Studies in Economic History, Florence: Firenze University Press, 2023, 373-395.

"Ships and Shipping Technology," *The Routledge Companion to Marine and Maritime Worlds, 1400–1800*, Claire Jowitt, Craig Lambert, and Steve Mentz. eds., Abingdon: Routledge, 2020, 221- 240.

"Ship Types in Atlantic Navigation from the Fourteenth to the Seventeenth Centuries," *Navegação no Atlântico/Atlantic Navigation*, XVIII Reunião Internacional de História da Náutica/XVIII International Reunion for the History of Nautical Science, Francisco Contento Domingues and Susana Serpa Silva, eds., Ponta Delgada, Azores: CHAM, 2019, 39-50.

"Markets and merchants: commercial and cultural integration in northwest Europe, 1300-1700," *Maritime Networks as a Factor in European Integration*, Atti delle "Settimane di Studi e altri Convegni", Florence: Firenze University Press, 2019, 431-452;
<https://fupress.com/capitoli/markets-and-merchants-commercial-and-cultural-integration-in-northwest-europe-1300-1700/4479>.

"Métabolisme social, consommation d'énergie et méthodes de mesure pour le Moyen Âge," *Sous le soleil. Systèmes et transitions énergétiques, du Moyen-Âge à nos jours*, Charles-François Mathis et Geneviève Massard-Guilbaud, eds., Paris, Éditions de la Sorbonne, 2019, 133-147.

“Shipbuilding, Knowledge, Technology And Heritage: Portuguese Shipbuilding & Low Countries Practices. Iberian Influences In The Dutch Golden Age,” *Shipbuilding Knowledge and Heritage*, Amélia Polónia and Francisco Contente Domingues, eds., Porto: Centro de Investigação Transdisciplinar Cultura, Espaço e Memória, 2018, 159-176, <https://ler.letras.up.pt/uploads/ficheiros/17286.pdf>

“The Brewing Industry and Governments in the Low Countries from the sixteenth to the nineteenth centuries,” *Entrepreneurs, Institutions and Government Intervention in Europe [13th-20th centuries] Essays in Honour of Erik Aerts*, Brecht Dewilde and Johan Poukens, eds., Brussels: Academic and Scientific Publishers NV, 2018, 177-187.

“Conclusion: accounting, money and mercantilism in European exchange, 1500-1900,” *Mercantilism, Account Keeping and the Periphery-Core Relationship*, Cheryl Susan McWatters, ed., London: Routledge, 2018, 180-194.

“The maritime war in the Mediterranean, XIIIth-XVth centuries,” *The Sea in History The Medieval World/La Mer dans l’Histoire Le Moyen Âge*, Martlesham, UK: Boydell Press and Association Océanides, 2017, 90-100.

“Ships and Sailing Routes in Maritime Trade around Europe, 1300-1600,” in *The Routledge Handbook of Maritime Trade around Europe, 1300-1600*, Wim Blockmans, Michail Krom and Justyna Wubs-Mrozewicz, eds, London: Routledge, 2017, 17-35.

“Der Bierhandel in die Niederlande und nach Skandinavien,” *Kein Bier ohne Alster Hamburg - Brauhaus der Hanse*, Ralf Wiechmann, ed., Sabrina Werner and Lara Wessendorf, trans., Hamburg: Museum für Hamburgische Geschichte, 2016, 86-101.

“Trades, Ports and Ships: the roots of differences in sailor's lives,” in *Law, Labour, and Empire: Comparative Perspectives on Seafarers, c. 1500-1800*, Maria Fusaro, Bernard Allaire, Richard Blakemore and Tijn Vanneste eds., London: Palgrave-Macmillan, 2015, 1-17.

“The Technology and Teaching of Shipbuilding 1300-1800,” *Technology, Skills and the Pre-Modern Economy in the East and the West*, Maarten Prak en Jan Luiten van Zanden, eds., Leiden: Brill, 2013, 161-204.

“Maritime Transport and the Integration of Low Countries Grain Markets in the Late Middle Ages,” *Food supply, demand and trade Aspects of the economic relationship between town and countryside (Middle Ages - 19th century)*, Piet Van Cruyningen and Erik Thoen, eds., CORN Publications Series 14, Tournhout: Brepols Publishers n. v., 2012, 101-122.

“Income Differentials, Institutions, and Religion: Working in the Rhineland or Pennsylvania in the Eighteenth Century,” *Working on Labor Essays in Honor of Jan Lucassen*, Marcel van der Linden and Leo Lucaseen, eds., Leiden: Brill, 2012, 269-295.

“Difficult Sources: Crusader Art and the Depiction of Ships,” *Shipping, Trade and Crusade in the Medieval Mediterranean Studies in Honour of John Pryor*, eds. Ruthy Gertwagen and Elizabeth Jeffrys, Farnham, England: Ashgate Publishing Limited, 2012, 85-104.

“Ships, Routes and the Discovery of the Sea in the Renaissance,” *Vom Anker zum Krähenest / From the Anchor to the Crow's Nest Nautische Bildwelten von der Renaissance bis zum Zeitalter der Fotografie / Naval Imagery from the Renaissance to the Age of Photography*, eds. Nicole Hegener and Lars U. Scholl, Deutsche Maritime Studien, Band 17, Bremen: Verlag H.M. Hauschild, 2012, 60-73.

“Changes in Ship Design and Construction: England in the European Mould,” in Richard Gorski, ed., *Roles of the Sea in Medieval England*, Woodbridge: The Boydell Press, 2012, 25-39.

“Beer Production, Profits, and Public Authorities in the Renaissance,” in Johan F. M. Swinnen, ed., *The Economics of Beer*, Oxford: Oxford University Press, 2011, 29-50.

“Ship Design and Energy Use, 1350-1875,” in *Shipping Efficiency and Economic Growth 1350-1850*, Leiden: Brill, 2011, 249-267.

(with Jan Lucassen) “Shipping, Productivity and Economic Growth,” in *Shipping Efficiency and Economic Growth 1350-1850*, Leiden: Brill, 2011, 3-44.

(with Larry Neal and Regina Grafe) “The Services Sector 1700–1870,” in Stephen Broadberry and Kevin O’Rourke, eds., *The Cambridge Economic History of Modern Europe*, vol. I: 1700-1870, Cambridge: Cambridge University Press, 2010, 187-213.

“Introduction: Richard Hoffmann in the Historiography of Environmental History,” *Ecologies and Economies in Medieval and Early Modern Europe: Studies in Environmental History for Richard C. Hoffmann*, Scott G. Bruce, ed., Leiden: Brill, 2010, 1-21.

“Thresholds for Market Integration in the Low Countries and England in the Fifteenth Century,” *Money, Markets and Trade in Late Medieval Europe Essays in Honour of John H. A. Munro*, Lawrin Armstrong, Ivana Elbl and Martin M. Elbl, eds., Leiden: Brill, 2007, 349-380.

“The Northern Crusaders: the logistics of English and other Northern Crusader fleets,” *Logistics of warfare in the age of the Crusades*, John Pryor, ed., Aldershot: Ashgate Publishing Ltd., 2006, 251-273.

“Investment and Risk: Ships Design and Investment in Port Infrastructure, 1200-1800,” *Ricchezza del mare. Ricchezza dal mare. Secc. XIII-XVIII-Atti delle "Settimane di Studi" 11-15 aprile 2005*, Simonetta Cavaciocchi (ed.), Prato: Le Monnier, 2006, 317-342.

"Power and Domination: Europe and the Sea in the Middle Ages and the Renaissance," *Maritime History as World History*, Daniel Finamore, ed. Salem and Gainesville: Peabody Essex Museum and University Press of Florida, 2004, 139-148.

"Conclusion Toward a History of Medieval Sea Power," *War at Sea in the Middle Ages and the Renaissance*, Papers given at a conference at Arrabida, Portugal, 18-19 February, 2000, John Hattendorf and Richard W. Unger, eds., Woodbridge: The Boydell Press, 2003, 249-261.

"The Economy, Technical Change, and the Environment: Theories and Applications," *People and Nature in Historical Perspective*, Jozsef Laszlovszky and Peter Szabo, eds., Budapest: CEU Department of Medieval Studies and Archaeolingua, 2003. CEU Medievalia 5, 63-80.

"Ships in the Baltic and the North Seas, and Dutch decline," *In het kielzog Maritime-historische studies aangeboden aan Jaap R. Bruijn bij zijn vertrek also hoogleraar zeegeschiedenis aan de Universiteit Leiden*, Leo Akveld *et al.*, eds., Amsterdam: De Bataafsche Leeuw, 2003, 513-522.

"The origins of navies in the Late Middle Ages," *Maritime Warfare in Northern Europe Technology, Organisation, Logistics, and Administration 500BC - 1500AD*, Anne Nørgård Jørgensen, John Pind, Lars Jørgensen and Birthe Clausen, eds., Studies in Archeology and History volume 6, Copenhagen: The National Museum of Denmark, 2002, 287-292.

"Beer: a New Bulk Good of International Trade," *Cogs, Cargoes, and Commerce Maritime Bulk Trade in Northern Europe 1150-1400*, Lars Berggren, Nils Hybel and Annette Landen, eds., Toronto: Pontifical Institute of Medieval Studies, 2002, 113-127.

"Sources of food supplies for European capitals in the eighteenth century," *Mélanges de L'École Française de Rome, Italie et Méditerranée*, volume 112, Rome: L'École Française de Rome, 2000, 577-587.

"Beer Imports into the Low Countries," *Hansekaufleute in Brügge*, volume 4, Nils Jörn, Werner Paravicini and Horst Wernicke, eds., Frankfurt am Main: Peter Lang, 2000, 205-214.

"Beer in Eastern Europe in the Middle Ages," *...The Man of many Devices, Who Wandered Full Many Ways... Festschrift in Honor of Janos M. Bak*, Balazs Nagy and Marcell Sebok, eds., Budapest: Central European University Press, 1999, 294-302.

"Dutch Brewing in the Nineteenth Century," *The Dynamics of the International Brewing Industry Since 1800*, R. G. Wilson and T. R. Gourvish, eds., London: Routledge, 1998, 13-31.

"Technology Illustrated: Problems of Sources," *Design and Production in Medieval and Early Modern Europe: Essays in Honor of Brad Blaine*, Nancy van Deusen, ed., Ottawa, The Institute of Medieval Music, 1998, 47-65.

"The Dutch trade in rye: Comparative capital requirements in the seventeenth and eighteenth centuries," *Kapitaal, Ondernemerschap en Beleid Studies over Economie en Politiek in Nederland, Europa en Azië van 1500 tot Heden Afscheidsbundel voor prof. dr. P. W. Klein*, C. A. Davids, W. Fritschy en L. A. van der Valk, eds., Amsterdam: NEHA, 1996, 121-140.

Maritime History in the Age of Discovery: An Introduction, John B. Hattendorf, ed., Malabar, Florida: Krieger, 1996, chapters 1-3, 3-49.

"Introduction," pp. 7-10, and "The Fluit: Specialist Cargo Vessels 1500 - 1650," 115-130, in *Cogs, Caravels and Galleons*, volume 3 of *The Ship*, London: Conway Maritime Press, 1994.

"De handel in levensmiddelen," in *De Wording van Europa*, volume III, *Handel, ambacht en industrie*, Hilversum: HD Uitgevers, 1992, 45-56 (English version "Trades: basic foodstuffs; meeting needs, increasing variety," *Crafts and Trades*, Volume 3 of *The Roots of Western Civilization*, Danbury, Connecticut: Grolier Education Corporation, 1994, 45-56.

"Dutch and Flemish Marine Paintings as a Source for Research on the History of Shipbuilding," *Art in History/History in Art*, D. Freedberg and J. DeVries, eds., Santa Monica: Getty Center for the History of Art and the Humanities, 1991, 75-93.

"The Technical Development of Shipbuilding and Government Policies in the Fifteenth and Sixteenth Centuries," *Atti del V Convegno Internazionale di Studi Colombiani Navi e Navigazioni Nei Secoli XV e XVI*, Genoa: Civico Istituto Colombiano, 1990, 199-211.

(with Robert Allen) "The Depth and Breath of the Market for Polish Grain 1500-1800," *Baltic Affairs Relations between the Netherlands and North-Eastern Europe 1500-1800*, J. P. S. Lemmink and J. S. A. M. van Koningsbrugge, eds., Nijmegen: Institute of Northern and Eastern European Studies, 1990, 1-18.

(with Erik Aerts) "Brewing in the Low Countries," Production, Marketing and Consumption of Alcoholic Beverages since the Late Middle Ages, Session B-14, Proceedings Tenth International Economic History Congress, Leuven, August, 1990, Erik Aerts, Louis M. Cullen and Richard G. Wilson, eds., Leuven: Leuven University Press, 1990, 92-101.

"Grain, Beer and Shipping in the North and Baltic Seas," in *Medieval Ships and the Birth of Technological Societies*, vol. I: Northern Europe, Christiane Villain-Gandossi, Salvino Busuttill and Paul Adam, eds., Malta: Foundation for International Studies, 1989, 121-135.

"Brewing in the Netherlands and the Baltic Grain Trade," *From Dunkirk to Danzig Shipping and Trade in the North Sea and the Baltic, 1350-1850. Essays in Honour of J. A. Faber on the Occasion of his Retirement as Professor of Economic and Social History at the University of Amsterdam*, W. G. Heeres, L. M. J. B. Hesp, L. Noordegraaf, R. C. W. Van Der Voort, eds., Hilversum: Verloren Publishers, 1988, 429-446.

"Portuguese Shipbuilding and the Early Voyages to the Guinea Coast," in *Vice-Almirante A. Teixeira Da Mota In Memoriam*, vol. I, Lisbon: Academia de Marinha & Instituto de Investigaçao Científica Tropical, 1987, 229-249.

"Design and Construction of European Warships in the Seventeenth and Eighteenth Centuries," *Les Marines de Guerre Européennes XVII- XVIIIe siècles*, M. Acerra, J. Merino & J. Meyer, eds., Paris: Presses de L'Université de Paris-Sorbonne, 1986, 21-34.

"Dutch Design Specialization and Building Methods in the Seventeenth Century," *Postmedieval Boat and Ship Archaeology*, Carl Olof Cederlund, ed., Oxford: B. A. R., 1985, 153-164.

"Integration of Baltic and Low Countries Grain Markets, 1400-1800," *The Interactions of Amsterdam and Antwerp with the Baltic Region, 1400-1800*, J. M. van Winter, ed., Leiden: Martinus Nijhoff, 1983, 1-10.

"Admiralties and Warships of Europe and the Mediterranean, 1000-1500", in *Changing Interpretations and New Sources in Naval History*, Robert William Love, Jr., ed., New York: Garland, 1980, 34-44.

"Regulation and Organization of Seamen in the Netherlands and Germany before the Industrial Revolution", *Seamen in Society Proceedings of the International Commission of Maritime History*, Perthes-en-Gatinais, France, 1980, 66-74.

"Scheepvaart in de Noordelijke Nederlanden 1490-1580", *Nieuwe Algemene Geschiedenis der Nederlanden*, vol. 6, J. A. van Houtte *et al.*, eds. Haarlem: Fibula-Van Dishoeck, 1979, 109-122.

"Scheepsbouw en Scheepsbouwers", *Maritieme Geschiedenis der Nederlanden*, vol. 1, G. Asaert, J. van Beylen and H. P. H. Jansen eds., Bussum: De Boer Maritiem, 1976, 155-179
[<http://resources.huygens.knaw.nl/retroboeken/mgn/#page=0&accessor=toc&view=imagePane>].

ARTICLES IN DICTIONARIES, ENCYCLOPAEDIAS, NEWSLETTERS,
EXHIBITION REPORT AND SHORT ARTICLE NOT REFEREED:

"Trials of Conference Organization: empire and economy in the pre modern Indian Ocean 1400-1800, Scholarly Activities of Members in Retirement, UBC Emeritus College, Spring Newsletter 2024, <https://emerituscollege.ubc.ca/newsletter>, 9-10.

"Brewing", "Navigation and Ships", *Routledge Medieval Encyclopedia Online*, 2024.
<https://doi.org/10.4324/9780415791182-RMEO211-1>.

In Memoriam Jacobus (Jaap) Ruurd Bruijn (1938-2022), *International Journal of Maritime History*, 35, 1 (2023), 128-130.

“Richard W. Unger Talks Ships, Beer, and Shop for Today’s Historians,” in “*Past Perfect!*: Five Years of Interviews with CEU Medieval Radio,” Christopher Mielke, Stephen Pow, Tamás Kiss, eds., Budapest: Trivent Publishing, 2020, 221-242.

“Lateen Sail,” “Portolan Charts,” “Ships, Seafaring and Navigation,” *Oxford Dictionary of the Middle Ages*, New York: Oxford University Press, 2010. 972, 1346-1347, 1528-1532.

“Barque,” “Clipper,” “East-Indiaman,” “Fluyt,” “Schooner,” “Ships Names and Naming” (with J. R. Bruijn), “Ships and Boats,” “Trading Vessels: Medieval” (with Jerzy Litwin), “Trading Vessels: Early Modern,” and “Vancouver,” *Oxford Encyclopedia of Maritime History*, New York: Oxford University Press, 2008, 1: 268-269, 418-420, 616-616, 2: 50-51, 3: 503, 606-608, 685-687, 4: 167-172, 172-179, 262.

“Vessels: Sailing Vessels,” *Oxford Companion to Exploration*, New York: Oxford University Press, 2007, 333-336.

“History and Soil Science - a discussion,” *History, Philosophy and Sociology of Soil Science*, Soil Science Society of America, *Newsletter*, 15, December, 2007, 2-6.

“Ships and Shipping,” *History of World Trade since 1450*, New York: Macmillan Reference USA, 2006, 675-679.

“Shipbuilding,” “Brewing,” *Medieval Science, Technology and Medicine: An Encyclopedia*, New York: Routledge, 2005, 102-103, 458-461.

“Shipbuilding and Navigation, 1450-1789,” and “Shipping,” *Europe 1450 to 1789: Encyclopedia of Early Modern Europe*, New York: Charles Scribner's Sons, 2004, 5: 409-413, 413-416.

“The Dutch in the Baltic in the Golden Age,” *Netherlands Institute for Advanced Study Newsletter*, 32 (Spring, 2004). 21-25.

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"Beer and Breweries," "Water Transportation: Ocean Shipping," and "Water Transportation: Technological Change," *The Oxford Encyclopedia of Economic History*, Joel Mokyr, ed., New York: Oxford University Press, 2003, I, 246-249, V, 241-247, 247-250.

“Carrack,” “Keel,” and “Ships and Shipbuilding”, *Trade, Travel, and Exploration in the Middle Ages: an Encyclopedia*, J. B. Friedman and K. M. Figg, eds., New York: Garland Publishing, Inc., 2000, 97, 317 and 553-558.

"Ships and Shipbuilding, Northern," *Dictionary of the Middle Ages*, vol. 11, Joseph R. Strayer, ed., New York: Charles Scribner's Sons, 1988, 238-245.

“Bremen Cog,” *Encyclopaedia of Underwater and Maritime Archeology*, James P. Delgado, ed., London: British Museum Press, 1997, 72-73.

"Navies, Western," *Dictionary of the Middle Ages*, Joseph R. Strayer, ed., vol. 9, New York: Charles Scribner's Sons, 1987, 78-84.

"Viking Ships," *The Viking World*, Chicago Tribune, Educational Services Department, Background Report for Exhibition at the Museum of Science and Industry, (1982), 6-7.

“Nederlandse Scheepstechnologie”, *Fibula, Orgaan van de Nederlandse Jeugdbond ter Bestudering van de Geschiedenis*, XIX, 4 (1978), 4-13.

"Report: U.B.C. History Workshop 71, The History of Science and Technology", *Technology and Culture*, XIII (1972), 622-625.

REVIEWS:

American Historical Review (4), *The American Neptune* (5), *Bijdragen en Mededelingen van de Geschiedenis der Nederlanden* (3), *The Canadian Historical Review* (2), *Canadian Journal of History* (1), *Canadian-American Slavic Studies* (5), *Economic History Review* (2), *English Historical Review* (1), *Environment and History* (1), *The Geographical Review* (1), *Imago Mundi* (1), *International History Review* (3), *International Journal of Maritime History* (3), *Isis* (1), *Journal of Archeological Sciences* (1), *Journal of Economic History* (4), *Journal of Forest History* (1), *Journal of Interdisciplinary History* (3), *Journal of Modern History* (1), *Journal of Transport History* (1), *The Mariner's Mirror* (1), *The Medieval Review* (1), *NEHA-Jaarboek voor economische, bedrijfs- en techniekgeschiedenis* (1), *The Northern Mariner/Le Marin du Nord* (4), *Pacific Affairs* (2), *Renaissance Quarterly* (1), *Renaissance Studies* (1), *Sixteenth Century Journal* (1), *Speculum* (5), *Spiegel Historiae* (1), *Studies in Medieval and Renaissance History* (1), *Technology and Culture* (3), *Tijdschrift voor Zeegeschiedenis* (4)

CONFERENCE PAPERS:

(with Sarah Spence) “Lepanto and Its Poets: Latin Versifiers and Theories of Holy League Success,” 6th Mediterranean Maritime History Network Conference, Center of Maritime History Institute for Mediterranean Studies, Rethymno, Greece,. 27-31 May, 2024.

“Melding Technologies: Shipbuilding around the Indian Ocean after the Arrival of European Ships,” Empire and Economy in the Pre-Modern Indian Ocean, University of British Columbia, Vancouver, British Columbia, 21 September, 2023.

“Is ‘Medieval Technician’ an Oxymoron?: The Metamorphosis of the Practical Arts or Thinking about Medieval Technologies,” Opening keynote address, Medieval Association of the Pacific, University of Oregon, Eugene, Oregon, 20 April, 2023.

“Supplies from Farther Afield: the Expanding Geographical Range of Raw Materials for Shipping from the Middle Ages to 1800,” World Economic History Congress, 25-29 July, 2022, Paris, France.

“The Sea, Empire & Colonies before the Rise of Steam,” Keynote address, 8th International Maritime History Association International Maritime History Conference, 28 June-2 July, 2022, University of Porto, Portugal.

“Ships, Shipping, Technological Change and Global Economic Growth, 1400-1800,” LII Settimane di Studi, Istituto Internazionale di Storia Economica F. Datini, Prato, 8-11 May, 2022.

“Sea Life in Viking Times,” Viking Life and Lore, Victoria Medieval Conference, University of Victoria, 1 February, 2020.

“Environmental Effects of Hansa Trade in the Baltic, 1200-1650,” European Society of Environmental History, Tallinn, Estonia, 21 August, 2019.

“Ship Types in Atlantic Navigation from the Fourteenth to the Seventeenth Centuries,” XVIII International Reunion for the History of Nautical Science, University of the Azores, Ponta Delgada (Azores), 12 November, 2018.

“Markets and merchants: commercial and cultural integration in northwest Europe, 1200-1700,” Maritime Networks as a Factor in European Integration, L Settimane di Studi, Istituto Internazionale di Storia Economica F. Datini, Prato, 13-17 May, 2018.

“Production, trade and development of an Atlantic Economy, 1500-1800,” V International Meeting of the Governance of Atlantic Ports (XIV-XXI centuries), Las Palmas, Gran Canaria, Spain, 1 December, 2017.

“International Trade, Economic Growth and the Transformation of Navies to the Nineteenth Century,” Economic Warfare and the Sea, 1650-1950, All Souls College, Oxford University, 13 July, 2017.

“Money, Wages, and Public Finance: The Black Death, the Foundations of Freedom and the Origins of the Modern World (according to John Munro),” Medieval Academy of America, Toronto, Ontario, Canada, 6 April, 2017.

“The Black Death and Energy Use in Late Medieval England,” Mobilising and Using Energy, from Antiquity to the Present Time, Bordeaux-Montaigne University, Bordeaux, France, 10 September, 2016.

“Portuguese Shipbuilding & Low Countries Practices: Iberian influences in the Dutch Golden Age,” Shipbuilding. Knowledge, technology and heritage, Vila do Conde, Portugal, 25 May, 2016.

Round Table Participant, XLVIII Settimana di Studi, I prezzi delle cose nell'età preindustriale / The prices of things in pre-industrial times, Istituto Datini, Prato, Italy, 11 May, 2016

“Seeing the Seas: Graphic Representations of the World's Waters in the Middle Ages and the Renaissance,” Connected Oceans - New Avenues of Research in Oceans History, University of Porto, Portugal, 12 June, 2015.

“Ships and Sailing Routes,” Maritime Trade around Europe, 1300-1600: Commercial Networks and Urban Autonomy, European University at Saint Petersburg, Russia, 5 June, 2015

(with Mar Rubio) Long run energy consumption in aluminum production: A comparison of Canada and Brazil,” Energy in the Americas: Critical Reflections on Energy and History, Calgary, Alberta, 24 October, 2014.

“Sailing the High Seas: Vikings and Other Travellers in the Middle Ages and the Renaissance,” *Mardinalia* and University of Victoria Program of Medieval Studies, 6 March, 2015.

“Beer: The Passe-Partout to All Historical Knowledge,” Qualicum History Conference 2015, Parksville, BC, January 30-31, 2015.

(with Mar Rubio) “Aluminum, Electricity and the Reshaping of Waterways in Canada and Brazil,” Second World Congress of Environmental History, Guimarães, Portugal, 9 July, 2014.

“Beer in Eighteenth Century Economies,” Conference in Honour of Bob Allen’s Retirement from Nuffield College, University of Oxford, Oxford, UK, 31 May 2014.

“Commerce, Communication and Empire Economy, Technology and Cultural Encounters.” Presidential Address, Eighty-Ninth Annual Meeting of the Medieval Academy of America, UCLA, Los Angeles, CA, 12 April, 2014.

“Societies of Medievalists: Multiplication, Division, Subtraction,” Medieval and Renaissance Studies in the Twenty-First Century: An Anniversary Celebration, University of California, Los Angeles, 24-25 January 2014.

“Trades, Ports and Ships: the roots of differences in sailor's lives,” Working lives between the deck and the dock: comparative perspectives on sailors as international labourers (16th-18th centuries), University of Exeter, England, 10-12 September 2013.

(with Mar Rubio) “Electricity and Aluminum in the Americas: A comparison of Canada and Brazil,” XVIth World Economic History Congress, Stellenbosch University, South Africa , 9-13 July 2012.

“Monarchs and Maritime Trade: promotion, taxation and effects on the economy,” XVIth World Economic History Congress, Stellenbosch University, South Africa , 9-13 July 2012.

“Contributions of Ports Construction and Port Personnel to Shipping Efficiency,” Sixth International Congress of Maritime History, Ghent, Belgium, 3-6 July, 2012

“Electricity & Aluminum: Substitutes in Canadian energy exports?,” Workshop on Energy, trade and environment in global history, 1700-2010, University of Lund, Sweden, 21 October, 2011

“Peat Digging and Changing Environments in Northwest Europe, 1300-1800,” 6th European Society of Environmental History Conference, Turku, Finland, 28 June -2 July, 2011

“The Rhetoric of Sea Power and the Decoration of Renaissance Maps,” The Language of Maps University of Oxford, Oxford, England, 23 - 25 June, 2011

“And What Was Wrong with *Gruit*? Preserving beer in the Middle Ages,” Forty-sixth International Congress on Medieval Studies, Kalamazoo, MI, May 12, 2011

“Late Medieval Energy Use, Social Metabolism and the Environmental Impact of the Black Death,” California Medieval History Seminar, Huntington Library, Pasadena, CA, 12 February, 2011

“Environmental and Economic Histories: Examples in Pre-modern Europe,” First Bulgarian Environmental History Workshop, Bulgarian Academy of Sciences, Sofia, Bulgaria, November 13, 2010

“Dutch Cartography in the Golden Age: the Portuguese Influence,” XV International Reunion for the History of Nautical Science, El Ferrol, Spain, 4-6 November, 2010

“Iberian Influence on Early Modern Dutch Shipbuilding: nothing is actually something,” In Honor of William D. Phillips and Carla Rahn Phillips, 45th International Congress on Medieval Studies, May 13-16, 2010, Western Michigan University, Kalamazoo, MI

“Ships on Maps in the Renaissance,” in From the Anchor to the Crow’s Nest: Ships and Naval Imagery in Renaissance Art, Renaissance Society of America, Venice, Italy, 8-10 April 2010.

“Ship Design and Nautical Science: Technological Interchange in Renaissance Europe,” XIV International Reunion for the History of Nautical Science, 23-25 October, 2008, Department of Mathematics, University of Coimbra, Portugal

“New Ships and Old Shipping Patterns in the Fifteenth Century Mediterranean,” 5th International Congress of Maritime History, 23- 27 June 2008, Greenwich, England, U. K.

“The Technology and Teaching of Shipbuilding 1300--1800,” Technology and Human Capital Formation in the East and the West (S.R Epstein Memorial Conference), 19-21 June, 2008, London School of Economics, London, England, U. K.

“Nautical Archaeology, Ships and Port Development: The Mediterranean in the early and high Middle Ages,” Tradition and Transition: Maritime Studies in the Wake of the Byzantine Shipwreck at Yassiada, 2-4 November, 2007, Institute of Nautical Archaeology, College Station, Texas, U. S. A.

“Benefits of Knowledge Transfer: Iberian Cartography and the Breakthrough in Baltic Mapping, 1400-1800,” Iberian and Slavonic Cultures in Contact and Comparison: *Towards Crisis and Prosperity*, April 26-28, 2007, Faculty of Letters, University of Lisbon, Portugal.

(with Jan Lucassen) “Ships and Shipping,” Shipping Efficiency and Economic Growth 1350-1800, Lagos, Portugal, April 18-22, 2007.

“Energy and Environmental Constraints in Medieval Agriculture,” Medieval Association of the Pacific, Los Angeles, California, March 2-3, 2007.

“The Northern Mediterranean. Economic contacts and cultural exchange over the North Sea and Baltic 1550-1750,” XIV International Economic History Congress, Helsinki, Finland, August 24, 2006.

“Changing Energy Regimes and Early Modern Economic Growth,” XIV International Economic History Congress, Helsinki, Finland, August 23, 2006.

“Britain and Poland-Lithuania – Points of Comparison and Contrast,” Opening address, Britain and Poland-Lithuania - Contact and Comparison From the Middle Ages to 1795, The Jagiellonian University Cracow, September 15 - 17, 2005.

“Investment and Risk: Ships Design & Investment in Port Infrastructure, 1200-1800,” Istituto Internazionale di Storia Economica “F. Datini”, XXXVII Settimana di Studi, Ricchezza del mare. Ricchezza dal mare, Secc. XIII-XVIII, Prato, 11-15 April, 2005.

“Drink Consumption and Land Use in Europe in the Middle Ages and the Renaissance,” Soil Science Society of America, Seattle, Washington, November 1-4, 2004.

“Iberian Shipbuilding in the Sixteenth Century: Designs and Developments,” Spain's Legacy in the Pacific, San Diego Maritime Museum, San Diego, California, September 23-26, 2004.

Participant, Colloquium on Energy, Economic Growth and Pollution, King’s College, Cambridge University, 24-26 October, 2003.

“The Myth About Coal: Energy in England before the Industrial Revolution,” European Society of Environmental History, Prague, September 4-6, 2003

“Energy Sources and Technology in Early Modern Europe,” International Committee for the History of Technology XXX, Saint Petersburg and Moscow, 20-27 August, 2003

“Transportation and Urbanization in Medieval England,” 38st International Congress on Medieval Studies, Western Michigan University, Kalamazoo, Michigan, 8-11 May, 2003.

“Ships on Maps and European Exploration,” Medieval Academy of America, Minneapolis, Minnesota, 10-12, April, 2003

“Cartography and Navigation in the Late Middle Ages,” Medieval Association of the Pacific, Portland, Oregon, 28-29 March, 2003

“The Northern Crusaders: the logistics of English and other Northern Crusader fleets,” Crusading Warfare, University of Sydney, Sydney, Australia, September 29 - October 3, 2002.

“Ports and Relative Productivity Growth in Shipping from the Renaissance to the Industrial Revolution,” Congress of the International Economic History Association, Buenos Aires, Argentina, 22-26 July, 2002.

“Craft Guilds' Archives in the North in the late Middle Ages,” Medieval Association of the Pacific, San Diego, California, 22-24 March, 2002

“New Approaches to international trade c. 1000-1500: Ships and Navigation,” Seventh Anglo-American Seminar on the medieval economy and society, Dublin, Ireland, 13-16 July, 2001.

"The Origins of Navies in the Late Middle Ages," Maritime Warfare in Northern Europe, Technology, organisation, logistics and administration 500 BC-1500 AD, Copenhagen, Denmark, 3-5 May, 2000.

"Power and Domination: Europe and the Sea in the Middle Ages and the Renaissance," World Marine Millennial Conference, Session "The Sea as an Arena for Conflict," commissioned plenary address, Peabody Essex Museum, Salem, Massachusetts, 30 March-1 April, 2000.

Closing Summary, Power and Domination: Europe and the Sea in the Middle Ages and the Renaissance, Arrabida, Portugal, 18-19 February, 2000.

"The Grain Trade: Commercial and Cultural Contact around the North and Baltic Seas, 1300-1800," Seascales: Economic and Social Exchanges within Maritime Regions, Netherlands Institute for Advanced Study, Wassenaar, The Netherlands, 27 January, 2000 [in absentia].

"Navies, Seapower and International Trade in the 15th and 16th Centuries," Merchants and Mariners in Northern Seas, Association for the History of the Northern Seas, Sir Wilfrid Grenfell College, Corner Brook, Newfoundland, 8 - 14 August, 1999.

"Sources of Food Supplies for European Capitals in the Eighteenth Century," Séminaire Capitales Européennes (XVIIe-XXe siècle), Ravitaillement et ordre public dans les villes capitales, Rome, 18-19 June, 1999.

"The Sea," Constructing and Deconstructing Frontiers A Cross-Disciplinary Workshop, Central European University, Budapest, 19-21 February, 1999.

"Maps, Charts, Navigation and Command of the Oceans in the Middle Ages," Cartography and Imperial Entitlement, Vancouver Maritime Museum, 8 December, 1998.

"The Technology of Portuguese Seafaring in the Fifteenth Century," International Committee for the History of Technology 98, Lisbon, 17 - 22 August, 1998.

"The Myth of Late Medieval Trade: Long Distance Shipment of Grain and Its Effects in Northern Europe, 1250-1600," Sixth Anglo-American Seminar on the Medieval Economy and Society, Witham, Essex, England, 24-26 July, 1998.

"Navies and Trade in northern Europe in the late Middle Ages," Canadian Nautical Research Society, Calgary, Alberta, 26 June, 1998.

"The Origins of the Global Economy," The Evolution of International Relations Facing Fears of Globalization, Simon Fraser University, Vancouver, Canada, 11 June, 1998.

"Public Authority and Feeding the People: Low Countries Towns in the Fifteenth Century," Medieval Academy of America, Stanford, California, 26-28 March, 1998.

"Nautical Archeology, Museums and Technology: Northern Europe in the Late Twentieth Century," Society for the History of Technology Annual Meeting, Pasadena, California, 16-19 October, 1997.

"Cogs, Carracks and Command of the Mediterranean Sea in the Fourteenth and Fifteenth Centuries," Medieval Academy of America, Toronto, Ontario, 17-19 April, 1997.

"Exploration, Sea Power and Governments at the End of the Middle Ages," Medieval Association of the Pacific, Honolulu, Hawaii, 14-16 March, 1997.

"Beer: a new bulk good of international trade," Seminar on New Markets for New Goods - the emergence of large scale trade in Northern Europe 1150-1400, Fridhemsborg, Malmö, Sweden, 19-21 February, 1997.

"Commerce, Empire and Late Medieval Ships in the North and Baltic Seas," American Historical Association, New York, New York, 2-5 January, 1997.

"Feeding Low Countries Towns at the End of the Middle Ages", International Medieval Congress, University of Leeds, 8-11 July, 1996.

"Urbanization, Beer and the Grain Trade in the Late Middle Ages", 31st International Congress on Medieval Studies, Western Michigan University, 9-12 May, 1996.

"Beer Imports into the Low Countries", Kolloquium Hansekaufleute in Brügge in 13. und 14. Jahrhunderts, Bruges, Belgium, 26-28 April, 1996.

Respondent to all papers, Humans and Ecosystems Before Global Development: Problems, Paradigms and Prospects for Early Environmental History, York University, Toronto, 18-20 April, 1996.

"Brewing and Women in France and the Low Countries at the End of the Middle Ages", Medieval Association of the Pacific 30th Annual Meeting, San Diego, California, 15-17 March, 1996.

"Demon Drink or why Dutchmen have red faces or Beer Drinkers in Dutch Art of the Seventeenth Century", ESTER Seminar - Trade and Industry in Early Modern Europe, Alphen aan den Rijn, 5-8 November, 1994.

"Technology Illustrated: Problems of Sources", Design and Production in Medieval and Early Modern Europe, Claremont Graduate School, 29-30 October, 1993.

"Ships and Navigation in the High Middle Ages", New Directions in Maritime History, International Commission of Maritime History Conference, Fremantle, Australia, 6-10 December, 1993

"Northern Ships and the late Medieval Economy", Columbus and the Medieval Maritime Tradition: European and Islamic Traditions, Peabody Museum, Salem, Massachusetts, 23-25 October, 1992.

"Feeding Flemish and Dutch Towns: The Grain Trade in the Low Countries in the Fifteenth Century", 27th International Congress on Medieval Studies, Western Michigan University, 7 May, 1992.

"Sailing to the Holy Land: travel by sea in the Middle Ages," Travel in the Middle Ages, University of Victoria, 15 February, 1992.

"Beer - Foods in the European Middle Ages," 26th International Congress on Medieval Studies, Western Michigan University, 9-12 May, 1991.

"Beer and Beer Drinkers in Dutch Art," 17th-Century Dutch Art and Life, Interdisciplinary Symposium, Hofstra University, 7 May, 1991.

"Brewing in the Low Countries," (with Erik Aerts), Tenth International Economic History Congress, Leuven, Belgium, 20-24 August, 1990 (in absentia).

"Ships of the Vikings," XIX Medieval Workshop - The Vikings in Anglo-Saxon England, University of British Columbia, 17-18 November, 1989.

"Brewing in the Low Countries," The Medieval Academy of America, 64th Annual Meeting, Madison, Wisconsin, 13-15 April, 1989.

"The Technical Development of Shipbuilding and Government Policies in the Fifteenth and Sixteenth Centuries," V° Convegno Internazionale di Studi Colombiani Navi e Navigazioni Nei Secoli XV e XVI, 26-28 October, 1987.

"The Beer Trade in Medieval Scandinavia," Sixth Annual Meeting of the Association for the Advancement of Scandinavian Studies in Canada, Hamilton, Ontario, 30-31 May, 1987.

"Dutch and Flemish Marine Paintings as a Source for Research on the History of Shipbuilding," Art in History: History in Art, Dutch Studies Workshop, The Getty Center for the History of Art and the Humanities, Santa Monica, California, 1-2 May, 1987.

"Grain, Beer and Shipping in the North and Baltic Seas," Medieval Ships and the Birth of Technological Societies, Rostock, DDR, 9-11 January, 1987.

"Ship Archaeology in the IJsselmeerpolders," Canadian Association for the Advancement of Netherlandic Studies Annual Meeting, Montréal, 1-2 June, 1985.

"Guilds, Government and the Church: the Brewing Industry in the Towns of the Low Countries," Medieval Studies Conference, University of Toronto, 1-2 March, 1985.

"Design and Construction of European Warships," Les marines de guerre européennes XVII-XVIIIe siècles, Colloque, Université de Paris-Sorbonne, 25-27 September, 1984.

"The Shipowner and Technological Change, 1200-1800," Shipowner in History Symposium, National Maritime Museum, Greenwich, London, 17-21 September, 1984.

"Dutch Design Specialization and Building Methods in the Seventeenth Century", International Symposium on Boat and Ship Archaeology, Stockholm, 6-8 September, 1982.

"Integration of Baltic and Low Countries Grain Markets, 1400-1800", Association Internationale d'Histoire des Mers Nordiques de l'Europe, Third International Conference, Utrecht, 30 August-3 September, 1982.

"Dutch Coal Merchants, 1650-1850", Congress, International Economic History Association, Budapest, 16-20 August, 1982.

"The Iconography of Noah and Medieval Shipbuilding", College Art Association, New York, 24-27 February, 1982.

"Medieval Dutch Brewing", Medieval Association of the Pacific, Claremont, California, 19-20 February, 1982.

"Shipbuilders and Ship Design: Illustrations of Noah in the Middle Ages", American Historical Association - Pacific Coast Branch, Eugene, Oregon, 17-19 August, 1981.

"Technology, Trade and the International Economy: Golden Age of the Netherlands in History and Legend", American Historical Association, Washington, D. C., 27-30 December, 1980.

"Regulation and Organization of Seamen in the Netherlands and Germany before the Industrial Revolution", *Colloque International d'Histoire Maritime*, under the auspices of the International Congress of Historical Sciences, Bucharest, 13-14 August, 1980.

"Dutch Herring and Polish Rye, an International Exchange 1400-1800", Association International d'Histoire des Mers Nordiques de l'Europe, Second International Conference, Tvärminne, Finland, April, 1978.

"Navies and Warships of Europe and the Mediterranean, 1000- 1500", Third Naval History Symposium, United States Naval Academy, Annapolis, Maryland, 27-28 October 1977.

"Guilds and Technical Change in Dutch Shipbuilding in the 15th and 16th Centuries", Eighth Conference on Medieval Studies, the Medieval Institute of Western Michigan University, Kalamazoo, Michigan, 2-5 May, 1973.

"Ship Design and the Economy in the Fifteenth Century", Medieval Association of the Pacific, February, 1973.

"Dutch Shipbuilding, 1350-1600", Medieval Association of the Pacific, Fresno, California, 27 February, 1971.

LECTURES OR SEMINARS GIVEN AT THE FOLLOWING COLLEGES,
UNIVERSITIES & INSTITUTES:

Amsterdam, The Netherlands (1989, 1994, 2004)
Antwerp, Belgium (1994, 2003, 2012)
Brown, U. S. A. (2001, 2006)
Calgary, Canada (1982)
California Institute of Technology, U. S. A. (2001)
Cambridge, U. K. (2004)
Central European, Hungary (2016)
Copenhagen, Denmark (1993)
Dublin, University College, Ireland (1999)
Exeter, UK (2007)

Fordham, U. S. A. (1986)
 Göteborg, Sweden (1978)
 Guilford College, U. S. A. (2009)
 Haverford College, U. S. A. (1987)
 Hull, U. K. (2008)
 International Institute of Social History, Amsterdam, The Netherlands (1999, 2004)
 Leiden, The Netherlands (1979, 1989, 1991, 2003)
 Klagenfurt, Vienna campus, Austria (2008, 2017)
 Leuven, Belgium (1986)
 Lisbon, Portugal (2000)
 London, Institute of Historical Research, U. K. (1991, 2002, 2006)
 London, King's College, U. K. (1991) - David Proctor Memorial Lecture (2003)
 London School of Economics, U. K. (1999)
 New Europe College, Institute for Advanced Study, Bucharest, Rumania (2018)
 Nijmegen, The Netherlands (1989)
 Ohio State, U. S. A. (2012)
 Ohio Wesleyan, U. S. A. (2012)
 Oxford, U. K. (2004)
 Rachel Carson Center, Munich University (2019)
 San Diego, U. S. A. (1998)
 Scripps College, U. S. A. - John Kemble Memorial Lecture (1992)
 Skidmore College, U. S. A. (1996)
 Stellenbosch, South Africa (2012)
 New York, U. S. A. (2001)
 Toronto, Canada (1987)
 Vancouver Community College, Canada (1986, 1987, 1989)
 Victoria, Canada (1987, 1988, 1990, 1991, 1993)
 Western Washington, U. S. A. (1971, 1981, 1982, 1989)
 Warwick, U. K. (1991)

LECTURES OR SEMINARS GIVEN AT THE FOLLOWING MARITIME MUSEUMS:

Australian Maritime Museum, Sydney, Australia
 Maritime Museum of British Columbia, Victoria, Canada
 San Diego Maritime Museum, San Diego, California, U. S. A.
 Vancouver Maritime Museum, Vancouver, Canada

PUBLIC SERVICE:

Coordinator, "Beyond the Memory of Man" Television Program for Vancouver cablevision, and co-producer (1973-74 and 1975-77) including seven appearances in one-half hour programs. Lectures to local chapters, Archaeological Institute of America: Vancouver (1976), Houston, Austin, Dallas, Lubbock, Santa Fe, Spokane, Eugene (1980), Winnipeg, Minneapolis, Milwaukee, Rockford (1981), Chicago (1982), Oxford (Ohio), Cincinnati, Springfield, Pittsburgh (1988).

Consultant, BBC Television, UK (1977, 1996)

Consultant, PBS Television, USA (1980)

Vancouver Maritime Museum, Member, Board of Trustees, 1980-84, 1997-98.

Canadian Association for the Advancement of Netherlandic Studies, Vancouver Chapter, Coordinator, Monthly Lecture Series, 1981-2010.

Three interviews on nautical archaeology, CBC, Canada, 1982.

Vancouver Maritime Museum, Coordinator, "Nautical Archaeology: Progress and Public Responsibility," meeting held in Victoria and Vancouver, B. C., 29-30 September and 1 October, 1983.

Vancouver Maritime Museum and University of British Columbia, Coordinator, "Spain and the North Pacific Coast A Symposium to recognise the Bicentennial of the Malaspina Expedition's visit to the West Coast of Canada, 1791-1792," 11-13 April, 1991.

Chair, Conference "Trade and Industry Entrepreneurs, Entrepreneurship and the Netherlands in the Preindustrial Era from the Late Middle Ages to Industrialisation (16th to 19th Centuries)", University of Amsterdam, 9-11 Nov., 1994.

University of British Columbia and Consulate General of the Netherlands, Organizer, "Canada and the Liberation of the Netherlands 1945-1995," a one-day symposium, Vancouver, 6 May, 1995.

Vancouver Maritime Museum and Consulate General of the Netherlands, Organizer, "Cartography and Imperial Entitlement," 8 Dec., 1998.

Consulate General of the Netherlands, Organizer, "The Liberation of the Netherlands: Historical Perspectives 1945-2005," a half-day symposium, Vancouver, 4 May, 2005.

Interview, Panavideo for Discovery Channel, Portugal (2006)

Interview, Discovery Channel, Australia (2010)

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