

Tom Archibald

William Thomas Archibald
Department of Mathematics
Simon Fraser University
Burnaby BC V5S1A6 Canada

Phone: 778-782-3379

Fax: 778-782-4947

email: tarchi@sfu.ca

URL: <http://www.math.sfu.ca/~tarchi>

Education

- 1987 Ph.D. History of Mathematics, University of Toronto.
Thesis: *Eine sinnreiche Hypothese: Aspects of action-at-a-distance electromagnetic theory 1820-1880.*
- 1980 M.A. History of Science, Institute for the History & Philosophy of Science, University of Toronto.
- 1978 M.A. Pure Mathematics, York University.
- 1971 B. Math Hons. Honours in Pure Mathematics, University of Waterloo.
- 1967-68 Studies toward B.A. (Linguistics and English Literature), Glendon College, York University

Current position

Professor, Department of Mathematics, Simon Fraser University

Academic Appointments

- 2005-Present Professor, Mathematics, SFU
- 2005-2010 Department Chair, Mathematics, SFU
- 1997-2005 Professor, Mathematics and Statistics, Acadia University.
- 1998-2003 Department Head, Mathematics and Statistics, Acadia University.
- 1989-1997 Associate Professor, Mathematics and Statistics, Acadia University.
- 1987-1989 Assistant Professor, Mathematics and Statistics, Acadia University.
- 1984-1987 Lecturer, Mathematics and Statistics, Acadia University.

Visiting and Research Appointments

- June 2015 Professeur en visite, Archives Henri Poincaré, Université de Lorraine, Nancy, France.
- Oct.Dec. 2010 Professeur en visite, Archives Henri Poincaré, Université de Nancy II, Nancy, France.
- Mar -Apr 2005 Professeur en visite, Institut mathématique de Jussieu, University of Paris VI-VII, Paris.
- Aug 2004-Apr 05 Senior Fellow, Dibner Institute for History of Science and Technology, Massachusetts Institute of Technology, Cambridge, MA.
- May-June 2001 Professeur invité, Université des sciences et technologies de Lille.
- May - June 2000 Maître de conférences and chercheur invité, Institut national de recherche pédagogique, Paris (In

- association with the Université de Paris V).
- Sept. 1997 - June 1998 Chercheur adjoint, Centre de Recherche en Histoire des Sciences et Techniques, Cité des Sciences et de l'industrie, La Villette, Paris. (CNRS).
- June 1997 Short course, Mathematics in the Nineteenth Century, American University, Washington DC, part of the NSF-Sponsored Summer Institute in the History of Mathematics.
- 1995 - 2006 Adjunct professor, Dept. of Mathematics, Statistics and Computing Science, Dalhousie University, Halifax, N. S. (renewed through 2005)
- May 1995 Visiting Researcher, National Museum of American History, Smithsonian Institution, Washington, D. C., May 1995.
- July 1994 Visiting Researcher, Forschungsinstitut, Deutsches Museum, Munich, July 1994.
- May 1994 Visiting Researcher, National Museum of American History, Smithsonian Institution, Washington D. C. , May 1994.
- Summer 1992 Chercheur en Visite, Dépt. d'histoire, Université de Montréal, Summer 1992.
- 1990-1991 Visiting Researcher, Centre de recherches mathématiques, Université de Montréal, 1990-1991.
- May 1989 Visiting Researcher, Mathematics Institute, University of Copenhagen, May 1989.

Research Interests

History of Mathematics, 1750-1950. I am particularly interested in the history of analysis and its applications, broadly construed, in the period from about 1845-1920. I have an ongoing interest in mathematics and the way it is embedded in society through the state. This is allied to interests in the history of mathematics in Canada, and an interest in how mathematics and mathematicians are involved in war. I have longstanding interests in the work and careers of Bernhard Riemann and Charles Hermite. Currently turning somewhat more toward how history can inform philosophy, I am interested in the relationship between education in (higher) mathematics and the way in which mathematics is justified. This is associated with a not-very-professional interest in the history of mathematics education.

Publications & talks

ARTICLES AND BOOK CHAPTERS

- 2016 “Mathematics in Canada: An institutional portrait 1900-1980,” in Luis M. R. Saraiva and Sergio Nobre eds., *The institutionalization of mathematics and the founding of national societies* special issue of *Archives Internationales d'histoire des sciences* vol. 66-1, fascicule 176, 2016, 99-115.
 “Mathematics and First Nations in Western Canada: from Cultural Destruction to a Re-awakening of Mathematical Reflections”, jointly with V. Jungić, in *Mathematical Cultures*, ed. B. Larvor. New York, Springer, 2016, 305-328.
- 2015 “Counterexamples in Weierstraß’s Work”, in *Karl Weierstraß (1815-1897): Aspekte seines Lebens und Werkes – Aspects of his Life and Work*, hrsg. W. König and J. Sprekels, Springer Spektrum, Wiesbaden, 2015, pp. 269-285.
 “Poincaré and Saturn’s Rings”, in *A Delicate Balance. Global Perspectives on Innovation and Tradition in the History of Mathematics*, ed. Horng, Wann-Sheng, Rowe, David E. (Eds.). Basel, Birkhäuser, 103-124.
- 2014 “Integral Equations between Theory and Practice: the cases of Italy and France to 1920.” joint with Rossana Tazzioli. DOI 10.1007/s00407-013-0132-2, *Archive for History of Exact Sciences* 68, 2014, 547-597.
 “A Mobilized Community: Mathematicians in the United States during the First World War”, jointly with D. Fenster and D. Kent. In *The War of Guns and Mathematics*, eds. D. Aubin and C. Goldstein,

- Providence, American Mathematical Society, 2014. 229-271.
- 2013 “Sources in the Development of Mathematics”, Book Review of work by R. Roy, *Notices of the American Mathematical Society* v. 60, no. 10, 2013, 1331-1333.
- “Transmitting Disciplinary Practice in Applied Mathematics? Textbooks 1900-1930.” *Oberwolfach Reports* 12/2013, DOI 10.4171/OWR/2013/12, pp 714-718.
- 2011 “Differential Equations and Algebraic Transcendents: French efforts at the creation of a Galois Theory of Differential Equations 1880-1910”. *Revue d’histoire des mathématiques*, 2011, 373-401.
- 2009 “Mathematics in Canada to 1980: an Historical Assessment”, Canada Museum of Science and Technology. 2009.
- “Connectivity and Smoke-Rings: Green’s Second Identity in its First Fifty Years,”. In *Who Gave You the Epsilon*, Eds.M. Anderson, V. Katz, and R. Wilson.Mathematical Association of America, 2009, 69-78.
- 2008 “Rigour in Analysis”, *Princeton Companion to Mathematics*, ed. T. Gowers., Princeton, Princeton University Press 2008.
- “Charles Hermite”. *Princeton Companion to Mathematics*, ed. T. Gowers. Princeton, Princeton University Press, 2008.
- Archibald, Thomas and Tazzioli, Rossana. “The reception of Fredholm’s Theory of integral equations, 1900-1915”, *Oberwolfach Reports*, 24, 2008. 1324.
- Archibald, Thomas and Tazzioli, Rossana. “The reception of Fredholm’s results on integral equations: preliminary report”. *Real Anal. Exchange* v. 31, 2006.113–136.
- 2005 Archibald, Thomas and Charbonneau, Louis. “Mathematics in Canada before 1945: a preliminary survey”. *Mathematics and the historian’s craft*, ed. G. van Brummelen, 141–182. Springer, New York, 2005.
- 2003 “Differential equations: an historical overview to 1900”, in *A History of Analysis*, ed. H. N. Jahnke. Providence: American Mathematical Society, History of Mathematics Series, 325-353. 2003.
- “Analysis and Physics: the case of Boundary value problems” in *A History of Analysis*, ed. H. N. Jahnke. Providence: American Mathematical Society, History of Mathematics Series, 197-211, 2003.
- 2002 “Multivariate Calculus and its Applications”, *Enciclopedia Italiana della Storia della Scienza*, ed. S. Petruccioli, 2002.
- “Charles Hermite and German Mathematics in France.” Chapter 7 (pp 123-137) in *Mathematics Unbound: The Evolution of an International Mathematical Research Community, 1800-1945*. eds. K. H. Parshall and A. Rice, American Mathematical Society, 2002.
- 2001 “Priority Claims and Mathematical Values: Disputes over Quaternions at the end of the Nineteenth Century” in Caspar Wessel and his Mathematical Legacy, *Matematisk-Fysiske Meddelelser* 46:2 Royal Danish Academy of Sciences and Letters, Copenhagen, 2001. 255-269.
- “Images of Applied Mathematics in the German Mathematical Community: Authors of Physico-Mechanical Papers in Crelle-Borchardt, 1860-1875 ” in *Changing Images of Mathematics in History*, eds. A. Dahan and U. Bottazzini, p 49-67. London: Gordon and Breech. 2001. “Differentialgleichungen: ein historischer Ueberblick,” in *Geschichte der Analysis*, ed. H. N. Jahnke. Heidelberg: Spektrum Akademische Verlag, 1999, 411-448.
- 1999 “Randwertprobleme der mathematischen Physik,” in *Geschichte der Analysis*, ed. H. N. Jahnke. Heidelberg: Spektrum Akademische Verlag, 1999, 245-266.
- 1998 Charles Hermite and German Mathematics in France”, Universitas (Bologna).
- 1996 “Electromagnetic Theory of Light”, in *Encyclopedia of Physics*, ed. John Rigden. New York: Macmillan, 1996. v.2, pp. 863-866.
- “From attraction theory to existence theory: the evolution of potential-theoretic methods in the study of boundary-value problems, 1860-1890”. *Revue d’histoire des mathématiques* 2 (1996), pp. 101-128.
- 1995 “The History of Mathematics in Canada to 1945: a Preliminary Survey” (With L. Charbonneau). in *Mathematics in Canada*, v.1, Ottawa: Canadian Mathematical Society, 1995, pp. 1-43. (French

Translation pp. 44 - 90).

“Heinrich Hertz: la scoperta delle onde elettriche” (With J. Z. Buchwald). In *Cento Anni di radio: le radici dell’invenzione*, ed. A. Guagnini and G. Pancaldi, pp. 121 - 174. Rome, Edizioni SEAT, 1995.

“Mathematics in English Canada to 1900”. *CSHPM Proceedings*, v, 7, (1995), pp. 1-14.

1994 “The Establishment of a Research Tradition in Mathematical Physics at Cambridge,” *CSHPM Proceedings* v 6 (1994) .

1993 “Mathematical Theories of Electricity and Magnetism to 1900”, article in *Companion Encyclopedia of the History and Philosophy of the Mathematical Sciences*, ed. I. Grattan Guinness. London: Routledge, (1993), v. 2, pp. 1208-1219.

1992 “Riemann and the theory of electrical phenomena: Nobili’s rings”. *Centaurus* 34, (1992), pp. 247-271.

“Les fondements de la théorie du potentiel, 1860-1880”, *CSHPM Proceedings* 4 (1992), pp. 79 - 92.

Essay Review of “Convolutions in French Mathematics” by I. Grattan Guinness, Birkhäuser, 1990. *Historia Mathematica*, 19 (1992), pp. 303 - 310.

1989 “Energy and the Mathematization of Electrodynamics in Germany, 1845-1875”, *Archives Internationales d’Histoire des Sciences* 39 (1989), pp. 276-308.

“Physics as a constraint on mathematical research: the case of potential theory and electrodynamics, 1840-1880” in *The History of Modern Mathematics*, New York , Academic Press, 1989, v.2, pp. 28-75.

“Connectivity and Smoke Rings: Green’s Theorem during its first 50 years”, *Mathematics Magazine*, 1989, 219-232.

1988 “Tension and Potential from Ohm to Kirchhoff”, *Centaurus*, 31, 1988, 141-163.

1986 “Carl Neumann versus Rudolf Clausius on the propagation of electrodynamic potentials”, *American Journal of Physics* 54(1986), pp. 786-790.

MONOGRAPH

1989 *Erasmus Bartholin: Experiments on Birefringent Icelandic Crystal*. Translated by Thomas Archibald. Introduction by Jed Z. Buchwald and K. M. Pedersen. Acta Historiae Scientiarum Naturalium et Medicinalium, v.40. Copenhagen, Danish National Library of Science and Medicine, 1991.

PLENARY AND SPECIAL LECTURES

2016 Principal speaker (with Norbert Schappacher), Workshop on Advanced Study of History of Mathematics, Northwest University, Xi’an, China. This was a national doctoral and post-doctoral school consisting of 4 days of talks under the sponsorship of the Chinese Society for the History of Mathematics.

2015 Invited plenary lecturer, Weierstraß 200 Conference, Berlin-Brandenburgische Akademie der Wissenschaften, October 2015.

2010 Invited keynote lecture, International conference of the Association for Philosophy of Mathematical Practice, Brussels, Dec. 2010.

2009 “Franco-German Relations in Mathematics, 1840-1900: the role of Charles Hermite”, Plenary paper. Kyoto, History of Science Society of Japan, Kyoto, Oct 2009.

2008 “Calculus Curriculum from the French Revolution to the Present”, Invited plenary paper, Alberta Mathematics Teachers’ Association, Jasper Alberta Oct 2008.

2007 “Mathematics and the French Revolution: Changing the Culture”. Plenary Talk, Changing the Culture conference, Vancouver, April 2007.

2003 “France, Germany, and the Making of Modern Mathematics,” Invited plenary paper, Canadian Mathematical Society Winter Meeting, December 2003, Vancouver BC.

“Using History of Mathematics in the Classroom: Prospects and Problems?” Invited Plenary lecture, Canadian Mathematics Education Study Group, Annual Meeting, Acadia University, May

2003.

- 2000 “John Charles Fields: Life and Mathematical Work”, Symposium on the Legacy of J. C. Fields, June 2000, Fields Institute, Toronto. (A symposium including lectures by 8 Fields medallists).
- 1999 “The Rise and Fall of Pure Mathematics.” Blundon Lecture, Atlantic Provinces Council on Sciences, (APICS) St. John’s, NF 1999.
- 1995 “History of mathematics in the undergraduate curriculum: an overview of strategies and aims.” Education Plenary Lecture, Canadian Mathematical Society Summer Meeting, Calgary, Alberta.

CONFERENCE PAPERS AND TALKS

- 2016 “Charles Hermite’s publications in non-French journals,” Invited paper at “Circulating Mathematics via Journals: The rise of internationalization 1850-1920”, Mittag-Leffler Institute, Djursholm, Sweden, June 2016.
- “Measure and abstraction: reflections on definition and axiomatization 1900-1950.” Invited paper, Colloquium in honour of David E. Rowe, Johannes Gutenberg Universität, Mainz, Germany, May 2016. I gave the same talk at Pitzer College, Claremont CA in April.
- “Riemann and PDE Modelling: Nobili’s Rings.” Invited paper in Special Session on History of Mathematics, Joint Mathematics Meetings (AMS-MAA) Seattle, WA, January 2016.
- 2015 “Modelling and Experiment: Becquerel, du Bois-Reymond and Riemann on Nobili’s rings”, Mathematische Forschungsinstitut Oberwolfach October 2015.
- “Comment faire une base de données inutile: à la recherche du temps perdu”. Paris, CIRMATH group, Institut Henri Poincaré, June 2015.
- “Weierstrass on Counterexamples,” IRMA, Université de Strasbourg, June 2015.
- 2014 “Mathematical Career Strategies and Transformations in German-language Publishing: Observations from 1780-1830.” Centro di incontro matematiche, Levico Terme, Italy, Dec. 2014.
- “Research Papers in the History of Mathematics: some comments on research, writing and publishing.” Doctoral workshop, Dept. of Mathematics, Northwest University, Xi’an, China, Sept. 2014.
- “U. S. Mathematicians and Mathematicians during WWI”. Third International Conference on History and Education of Modern Mathematics, Hangzhou, Zhejiang, China, 2014.
- “Mathematical Work and Mathematical Publics as reflected in German Periodical Literature, 1785-1830.” Sixth Conference of the European Society for History of Science, Lisbon, Sept. 2014.
- “Algebra in Analysis circa 1900: some questions.” History Symposium, International Congress of Mathematicians, Seoul, Korea, August 2014.
- “Mathematics and First Nations in Western Canada: from Cultural Destruction to a Re-awakening of Mathematical Reflections,” joint with V. Jungic, Mathematical Cultures 3 (meeting), London Mathematical Society, London, UK.
- 2013 “Visualization in the Theory of Algebraic Functions Circa 1900.” Canadian Mathematical Society Winter Meeting, Ottawa, Dec. 2013.
- “Échanges, sociabilités, et mathématiques appliquées 1900-1930: exemples et questions.” CIRM Luminy Workshop on mathematical exchanges, Sept 2013.
- Workshop on History of Mathematics, Open University, Milton Keynes, UK, June 2013.
- “Transmitting Disciplinary Practice in Applied Mathematics? Textbooks 1900-1930.” Mathematische Forschungsinstitut Oberwolfach March 2013.
- “Mathematical Publication in Early Nineteenth-Century Germany: Venues, Careers and Publics. ” Special Session, History of Mathematics, Joint Mathematical Meetings, San Diego, Jan. 2013.
- 2012 “Publishing Mathematics in German 1800-1825”, Canadian Mathematical Society Winter Meeting, Montreal, Dec. 2013.
- Workshop on the Transmission of Mathematical Knowledge, Les Treilles France, Three lectures, Nov. 2012.
- International PhD Seminar and Second International Conference on History of Modern Mathematics, Xi’an, China. Three lectures. May 2012.

- “Opening remarks: Les inconscients d’ècole and tacit knowledge”. *Explicit and Tacit Knowledge in Mathematics*, Mathematisches Forschungsinstitut Oberwolfach, Jan. 2012.
- 2011 “The Galois Theory of Differential Equations in France.” Canadian Mathematical Society Winter Meeting, Toronto, Dec. 2011.
Meeting on Migrations of Mathematicians During WWII, Mathematisches Forschungsinstitut Oberwolfach, Oct, Nov 2011. Session Chair and commentator.
“Fundamental mathematical objects in the late nineteenth century: a new look,” Congress on Logic, Methodology, and Philosophy of Science, Nancy, France, July 2011.
“L’Analyse vers 1900 : valeurs, outils, publics.” Séminaire d’Histoire des Mathématiques de l’Institut Henri Poincaré, March 2011.
- 2010 “The Image of Applied Mathematics in Mathematical and Physical Journals in the 19th Century”, European Association for the History of Science, Barcelona, Nov. 2010.
“Picard, Vessiot, and the Galois Theory of Differential Equations to 1920”, Canadian Mathematical Society, Vancouver BC, Dec. 2010.
“Publics for Applied Mathematics in the 19th century” Workshop at CIRM-Luminy, “Quels publics pour quelles mathématiques?”, January 2010.
“Maxwell, Kovalevskaya, Poincaré and Saturn’s Rings,” Special Session on History of Mathematics, AMS/MAA Joint Meeting San Francisco, Jan 2010. Same paper given at Mathematisches Forschungsinstitut Oberwolfach, Feb 2010.
“Poincaré and Saturn’s Rings.” Conference paper, “Mathematics meets Physics”, Saxon Academy of Sciences, Leipzig, March 2010; Same paper given at Universität Mainz, May 2010; Xi’an, International conference on the history of modern mathematics, Aug. 2010; at IRMA, Université de Strasbourg, Oct 2009, Courants actuels en histoire des mathématiques, and at Institut de Mathématiques, Université de Lille 1, Nov. 2010. “Integral Equations: A “Revolution” in Mathematics in the Early 20th Century?” Special Session on History of Mathematics, AMS/MAA Joint Meeting, Washington DC, Jan. 2009.
- 2009 “Poincaré and Saturn’s Rings”, Session in History of Mathematics, Canadian Mathematical Society Summer Meeting (Joint with Canadian Society for History and Philosophy of Mathematics), St. John’s NF, June 2009.
“Integral Equations between Theory and Application, 1900-1920”, conference paper, Budapest, International Congress on the History of Science and Technology, July 2009.
“Application and Theory in the Development of Integral Equations, 1900-1920.” Symposium on History of Mathematics, Tokyo, Tsuda College, Oct. 2009.
“Geometry and Visual Reasoning: Historical and Pedagogical Issues”, with N. Sinclair. BC Association of Mathematics Teachers/ Northwest Mathematics Association Conference, Whistler, Oct 2009.
“US Mathematics and the First World War,” Seminar talk, Mathematics Institute, Copenhagen University, Oct. 2009.”
- 2007 “Integral Equations and Chinese Mathematicians in the early Twentieth Century”. History of Mathematics Session, Fourth International Conference on Representation Theory, Lhasa, Tibet, China, July 2007.
“The Mittag-Leffler Theorem and its Reception” (joint work with L. E. Turner, presented by Turner.) Special Session on History of Mathematics, AMS-MAA Joint Meetings, New Orleans LA. January 2007.
- 2006 “The Mittag Leffler Theorem: Genesis and Development of a mathematical Fact.” (joint work with L. E. Turner). Session on History of Mathematics, Canadian Mathematical Society Winter Meeting, Toronto. December 2006.
“Integral Equations 1900-1920”. Session on History of Mathematics, Canadian Mathematical Society Summer Meeting, Calgary, Alberta.
- 2006 “International contributions to the theory of Integral Equations.” Canadian Society for the History and Philosophy of Mathematics, Annual Meeting, York University, May 2006. History of Applied

Mathematics. Mathematics Research Institute, Oberwolfach, Germany. December 2005. "Integral Equations in Germany, France and Italy, 1900-1915." Summer Workshop in Real Analysis, Whitman College, WA. June 2005

"U. S. Mathematics in World War I". Special Session on Mathematics and War, Joint Meeting of AMS and DMV, Mainz, Germany, June 2005

"US and Canadian Mathematics in WWI." Canadian Society for History and Philosophy of Mathematics, Annual Meeting, University of Waterloo. May 2005.

CONFERENCE AND SEMINAR PAPERS - OLDER

- 2004 "Jules Tannery and the Mathematical Research Community in France , 1870- 1914." Special Session on History of Mathematics, Annual Meeting, American Mathematical Society, Phoenix, Arizona, USA, January 2004.
- 2003 "Hermite and Jacobi", Special Session on History of Mathematics, American Mathematical Society Regional Meeting, Boston, Mass, October 2003.
"Charles Hermite and German Mathematics in France", International Congress of Mathematicians Satellite Conference, Xian, China, August 2003.
- 2002 "Hermite and the Quintic", Annual Meeting, American Mathematical Society, San Diego, CA, January 2002.
- 2001 "Les fonctions thêta et les équations différentielles dans les travaux de Charles Hermite." Séminaire d'histoire des mathématiques, Institut Henri Poincaré, Paris, décembre 2001.
"Charles Hermite et la promotion de la recherche mathématique allemande", University of Marseille, October 2001.
"Hermite and German Mathematics", Journées histoire des mathématiques, sur le thème 'Mathématiques et l'état'. CIRM- Luminy, Octobre 2001.
"Hermite and Jacobi." Joint International Meeting, American Mathematical Society and Société mathématique de France, Lyon, France, July 2001.
"German Mathematics Comes to France". Address at the launch of the Centre for the History of the Mathematical Sciences, Open University, Milton Keynes, England, July 11, 2001.
"The French reception of German work on Partial Differential Equations, 1870-1895." International Meeting on the History of Differential Equations, University of Lisbon, Portugal, June 28-30, 2001.
"Les thèses en mathématiques à Paris, 1870-1890." Séminaire du doctorat, Université de Paris VI/VII, June 2001.
"Le rôle des thèses dans la diffusion des recherches mathématiques allemands en France, 1870-1890." Séminaire REHSEIS, Paris, June 2001.
"Aspects des liens entre la physique et les mathématiques au XIXème siècle". Quatre conférences données dans le cadre d'un poste de professeur en visite à l'Université de Lille 1, mai-juin 2001.
"Hermite's early work on elliptic functions", invited paper, Special Session on History of Mathematics, Annual meeting, American Mathematical Society, New Orleans, LA, January 2001.
"Charles Hermite et la renaissance des mathématiques pures en France", Invited seminar, Université de Moncton, March 2001. "Hermite and Jacobi". Analysis seminar, Dalhousie University, April 2001.
- 2000 "Evaluation in University Mathematics: Some Implications for Secondary Schools", Mathematics Teachers Association of Nova Scotia, Annual Meeting. Truro, NS, October 2000.
"Charles Hermite comme directeur de thèse". Seminar given to CNRS research group REHSEIS, Paris, May 2000.
"Les thèses en mathématiques à Paris, 1870-1890". Seminar given at Institut national de recherche pédagogique, Paris, June 2000.
"French mathematics 1870-1890: a view through theses", Winter meeting of the Canadian Mathematical Society, Montreal, December 1999, and also at the Annual Meeting of the American Math-

- emational Society, Special Session on History of Mathematics, January 2000.
- “Hermite and Jacobi”, Annual meeting, Canadian Mathematical Society, Vancouver, BC, December 2000.
- 1999 “Hermite and German Mathematics in France,” International conference on the development of the international mathematics community, University of Virginia, July 1999
- “Rational physics’: mechanics and mathematical physics in Crelle’s Journal, 1860-1875”. Joint meeting of the British Society for the History of Mathematics and the Canadian Society for the History of Mathematics, University of Toronto, July 1999.
- “Les mathématiques françaises, 1870-1890: une panorame à travers les thèses”, Université de Paris VI et VII, September 1999.
- “Pure and Applied Mathematics: the values behind the terms in late nineteenth century France and Germany” Colloque CIRM-Luminy in history of mathematics, Luminy France, October 1999.
- “The rise (and fall?) of pure mathematics”, Blundon Lecture, APICS Math Days, Memorial University of Newfoundland, St. John’s, NF, October 1999.
- Invited speaker, Special Session on History of Mathematics, American Mathematical Society Annual Meeting, San Antonio, January 1999
- 1998 . “The History of Mathematics in English Canada.” History of Mathematics meeting, Mathematische Forschungsinstitut Oberwolfach, Germany, October 1998
- “Quaternions and Priority Claims”, Wessel Symposium, Royal Danish Academy of Sciences and Letters, Copenhagen, August 1998.
- “Mathematical Physics in Crelle-Borchardt 1850-1890.” International Symposium on the History of Mathematics, Satellite Conference of the International Congress of Mathematicians, Göttingen August 1998.
- Participant, Seven Pines Symposium on History and Philosophy of Mathematics and the Physical Sciences, University of Minnesota, July 1998.
- “Gauss et le magnétisme terrestre”. Université de Cergy-Pontoise, France. June 1998
- “Rational Physics: German writers on physical questions in Crelle-Borchardt, 1850-1890”. Journée d’étude, Centre de recherche en histoire des sciences et techniques, (CNRS). Paris March 1998
- 1997 “Images of mathematical physics in Crelle’s journal”. CIRM-Luminy, October 1997.
- 1996 “The disciplinary division between mathematics and physics in the nineteenth century: some consequences for mathematics.” Mathematische Forschungsinstitut Oberwolfach, November 1996.
- “The Origins of Research Mathematics in Canada”. Special Session on Mathematical Migrations, Joint meeting of the Benelux Mathematical Society and the American Mathematical Society, Antwerp, Belgium, June 1996.
- “Boundary-value problems and partial differential equations”. Mathematics Department, Universität Mainz and Mathematics Institute, Utrecht University, May 1996.
- 1995 “Differential Equations: an historical overview” and “Analysis and physics in the nineteenth century”, Tagung Geschichte der Analysis, Universität Essen, Essen, Germany, November 1995.
- 1994 “Cambridge Mathematics and the Research Imperative”, 5 Congreso internacional de la historia y filosofía de las matemáticas, National University of Mexico, Mexico City, June 1994.
- “Emile Picard and the Background to the Method of Successive Approximations”, Dept, of Mathematics, Statistics, and Computer Science, Dalhousie University, March 1994.
- “The Cambridge Mathematical Physicists”, Special Session on the History of Mathematics, American Mathematical Society, Cincinnati, OH, January 1994
- 1993 “Laplacian Research Comes to Cambridge: Airy, Green, and the Cambridge Philosophical Society”. International Congress on the History of Science, Zaragoza, Spain, August 1993.
- “From Algorithm to Existence Proof: Emile Picard and the Method of Successive Approximations”. International Congress on the History of Science, Zaragoza, Spain, August 1993.
- 1992 “Keys to the Kingdom or Amazing Toys: Modes of mathematical modelling in mid-nineteenth-century physics”. Joint Summer Meeting of the BSHS, HSS and CSHPS, Toronto, July 1992.
- “Emile Picard, the method of successive approximations, and the development of an international

- style in mathematics”, Special Session on the history of mathematics, American Mathematical Society, Baltimore, MD, January 1992.
- 1991 “Les fondements de la théorie du potentiel”, Université de Québec à Montréal, Dépt. de mathématiques et informatique, Feb. 1991.
- 1989 “The Energy Problem in Action at a distance Electrodynamics”, Mathematics Institute, Copenhagen University, May 1989.
- 1988 “Potential Theory and Electrodynamics”. Karl Marx University, Leipzig, German Democratic Republic, July 2, 1988.
- “Physics as a constraint on mathematical research: the case of potential theory and electrodynamics, 1840 1880” at the Symposium on the History of Modern Mathematics, Vassar College, June, 1988.
- “Potential to Actual: Patterns of research in nineteenth century analysis.” Institute for history of exact sciences, Aarhus University, Aarhus, Denmark, May 1988.
- “Mathematics in the late nineteenth century”. Invited address given at the dedication of the Agnes Sime Baxter Mathematics Library, March 1988. Dept. of Mathematics, Dalhousie University, Halifax, Nova Scotia.
- “Patterns of research in nineteenth century analysis.” Institute for the History and Philosophy of Science and Technology, University of Toronto, Feb. 25, 1988.
- “Hermann von Helmholtz and electrodynamics”, History of Science Society Meeting, Cincinnati, Ohio, 1988.
- 1985 “On some aspects of the history of potential theory, 1840 1870”, and “Bernhard Riemann as an applied mathematician”.
- Congreso Internacional sobre la historia de las matemáticas, National University of Mexico, December 9 13, 1985.
- “Bernhard Riemann as an applied mathematician”. Department of Mathematics, University of New Brunswick, Fredericton, January 1985.
- 1984 “Potential, vortices and knots”. Department of Mathematics, Acadia University, Wolfville, Nova Scotia, April 1984.

BOOK REVIEWS AND OTHER NON-REFEREED CONTRIBUTIONS

Book Reviews (Incomplete)

- 2016 *La patria ci vuole eroi: matematici e vita politica nell'Italia del Risorgimento*, by U. Bottazzini and P. Nastasi, Milan: Zanichelli, 2013. *Historia Mathematica*, available online July 26 2016. To appear 2016 or 2017.
- 2015 *Hilbert's Programs and Beyond*, Oxford: Oxford University Press, 2013 and William Ewald and Wilfried Sieg, eds. Michael Hallett, associate ed. *David Hilbert's Lectures on the Foundations of Arithmetic and Logic 1917-1933*. Heidelberg: Springer, 2013. *Isis*, 106, 2015, 481-483.
- Justifier en mathématiques* by Dominique Flament; Philippe Nabonnand. *Isis* June 2015, Vol. 106, No. 2: 417-419.
- 2011 *The Shaping of Arithmetic after C. F. Gauss's Disquisitiones arithmeticae* by Catherine Goldstein; Norbert Schappacher; Joachim Schwermer. *Isis*, v. 102, 2011, pp. 368-369
- 2009 *The Mathematics of Egypt, Mesopotamia, China, India, and Islam: A Sourcebook* by Victor J. Katz. *Isis*, Vol. 100, 2009, pp. 381-382
- Italian Mathematics Between the Two World Wars* (2006) by Angelo Guerraggio and Pietro Nastasi. *Historia Mathematica*, Volume 36, Issue 3, August 2009, Pages 289-290
- to 1999 *Va Pensiero: immagini della matematica nell'Italia dell'ottocento* by U. Bottazzini, Milano, Il Mulino, 1994. *Historia Mathematica*, v. 26, 1999, pp. 79-81
- A History of Mathematics: an introduction* by V. Katz, Harper Collins (1993). *Historia Mathematica*, 23 (1996) pp. 89-92.

La France mathématique: la Société Mathématique de France 1872-1914 by Hélène Gispert, Belin (1991). *Isis* v. 84 (1993), pp. 807-808.

The Man who Knew Infinity: a life of the Genius Ramanujan by Robert Kanigel, Scribner's, (1991). *Isis* v. 84 (1993), pp. 165-166.

Louis Néel, le magnétisme, et Grenoble by D. Pestre, CNRS, 1990. *Isis*, v. 83 (1992), pp. 514-515.

The Maxwellians by Bruce J. Hunt, Cornell University Press, 1991. *American Scholar*, v. 81 (1993), p. 100.

The Anthropology of Numbers by T. Crump, Cambridge, 1990. *Can. Rev. Soc. and Anth.* 28, (1991), 143 144.

Elements of Early Modern Physics, by John L. Heilbron. *Canadian Journal of History*, 19 (1984), pp. 90 92.

Sophie Germain: an essay in the history of the theory of elasticity, by L. Bucciarelli and N. Dworsky. *Centaurus*, v.26(1982), pp. 226 227.

Contributed Papers

- 1995 "Why do existence theorems exist? Cauchy and singular solutions.", Annual Meeting, Canadian Society for the History and Philosophy of Mathematics, Université du Québec à Montréal, June 1995.
- "Why do existence theorems exist? Cauchy and his contemporaries", Dept. of Mathematics, Dalhousie University, March 1995.
- 1994 "Abstraction in the Visual Arts and the Mathematical Sciences: Socio-Political Meaning and Aesthetic Dimensions" (jointly with J. Marontate). XIII World Congress of Sociology, Bielefeld, July 1994.
- "Mathematics in English Canada in the Nineteenth Century". Annual Meeting, Canadian Society for the History and Philosophy of Mathematics, Calgary, June 1994.
- 1993 "George Green and the Cambridge Mathematical Physicists". Canadian Society for the History and Philosophy of Mathematics, Annual Meeting, Ottawa, Ont. May 1993.
- 1991 "Founding potential theory: geometric and analytic approaches", Canadian Society for the History and Philosophy of Mathematics, Annual Meeting, Queen's University, May 1991.
- 1988 "Green's functions and nineteenth century potential theory", Annual Joint Meeting of the American Mathematical Society and the Mathematical Association of America, Atlanta, Georgia, January 1988.
- 1983 "H.A. Lorentz and action at a distance electrodynamics", History of Science Society Annual Meeting, Norwalk, Conn. October 1983.
- "Carl Neumann versus Rudolf Clausius on the propagation of potentials", Joint Atlantic Seminar in the History of the Physical Sciences, Georgetown University, Washington, DC, April 1983.
- 1982 "Green's Theorem and its Generalizations", Annual Meeting of the Canadian Society for the History and Philosophy of Mathematics, Ottawa, Ontario, Canada, June 1982.
- "Julius Plücker and Magnecrystallics", Joint Atlantic Seminar in the History of the Physical Sciences, University of Toronto, Toronto, Ontario, Canada, April 1982.

Grants, honors & awards

GRANTS - RECENT

- 2013-2018 SSHRC Insight Grant, "Technique, Justification, and the Transmission of Mathematical Knowledge 1870-1940." Principal (and sole) Investigator. C\$140,000.
- 2008-2009 Contract, awarded 2008 Period: 2008 - 2009 *Mathematics in Canada: an Historical Assessment*

Canada Museum of Science and Technology Total: C\$ 20,000.
Contract/Grant: MITACS Accelerate Internships (2) Period: 2008 - 2009
MITACS Total: C\$ 15,000. Interns were two of my MSc students.

OLDER GRANTS - SELECTED

Dibner Fellowship, Dibner Institute, MIT. 2004-2005. US \$50,000
SSHRC (Social Sciences and Humanities Research Council, Canada) Research Grant, 2003-2008 (extended) C\$ 28,000
Fields Institute, grant in aid of research, 2000.
SSHRC Research Grant, 1999-2002. C\$38,000
SSHRC Research Grant, 1992-1995
SSHRC Research Grant, 1990-1992
SSHRC Research Grant, 1988-90
Canadian Scandinavian Foundation Fellowship, 1988.
SSSHRC Research Grants, 1985-86, 1986-87

HONOURS

1990 Carl B. Allendoerfer Award (for expository writing in the mathematical sciences), Mathematical Association of America, 1990.

Teaching and Supervision

GRADUATE SUPERVISION

2015 Lorenat, Jemma, Ph. D. *Die Freude an der Gestalt : Methods, Figures, and Practices in Early Nineteenth Century Geometry*. SFU and Université Pierre et Marie Curie (Paris), joint supervision with Catherine Goldstein. (Currently Asst. Prof. at Pitzer College, Claremont CA USA).

2013 Liu, Yaya, Visiting predoctoral student from Northwest University, Xi'an China. Topic: "Equal Temperament in Chinese and European Mathematical theories of music circa 1600." Supervisor Qu Anjing.

2012 Turner, Laura, Ph. D. *Cultivating Mathematics in an International Space: Mittag-leffler in the Development of Mathematics in Sweden and Beyond, 1880-1920*. Aarhus University, Denmark. (Currently Asst. Prof. at Monmouth University, NY USA)

2011 Kieffer, Steven, M.Sc. *Algorithms and Theory in Algebraic Number Theory: Hensel's Lemma*. SFU. (Served on Committee: Senior supervisors were N. Bruin and M. Monagan). Currently PhD student U. Melbourne.

2010 Lysne, Menolly, M.Sc. *Laplace's Early Work and his Debts to D'Alembert*. SFU. Completed teaching qualification and now a working secondary teacher.

2010 Davison, Brenda, M.Sc. *The Early Mathematical Work of G. H. Hardy* SFU. Currently Lecturer, Mathematics, SFU.

2008 Barnes, Marcus, M.Sc. *John Charles Fields: A sketch of his Life and Mathematical Work* SFU. Currently in Information Services, SFU Library.

2007 Turner, Laura. M.Sc. *The Mittag-Leffler Theorem: The Origins, Evolution and Reception of a Mathematical Result, 1876-1884*. SFU

1996 Young, Shawn, M.Sc. *The Mathematical Gazette and School Mathematics in Edwardian Britain*. Dalhousie University (Jointly supervised with R. Nowakowski)

UNDERGRADUATE SUPERVISION

- 2001-2002 Sunshine Dubois. Group representation theory and its applications to probability and statistics, jointly with P. Cabilio. Honours B. Sc. Project.
- 1999-2000 Heather Martin, Green's Functions and the Schwarz-Christoffel Transformation, Honours B. Sc. Project, Acadia University, 1999-2000.
- 1998-1999 Matthew McCalla, "The Gibbs Phenomenon", Honours B. Sc. project, Acadia University, 1998-99.
- 1996-1997 Troy Ashby, "Summing Infinite Series", Honours B. Sc. project, Acadia University, 1997. (Ashby completed M. Sc. in Mathematics at Dalhousie, now teaching in Bermuda).
- 1993-1994 Andre Sonnichsen, "Symmetry Groups of Differential Equations", Honours B. Sc. project, Acadia University, 1994. (Sonnichsen completed M. Math., Waterloo, currently a consultant).

TEACHING OVERVIEW

Since coming to SFU I have taught principally the history of mathematics at the undergraduate and graduate levels, and undergraduate analysis courses of various kinds. In the forthcoming year I will teach Calculus and combined undergrad/grad courses in complex analysis and topology.

I have taught a wide variety of courses since 1984, including: Introductory Calculus, Matrix and Linear Algebra, Foundations (Intro discrete course for mathematics majors), Advanced Calculus and Vector Calculus, Real Analysis 1 and 2, Complex Analysis, Optimization (basic convex optimization: Kuhn Tucker theory etc.), Algebraic Structures (Boolean Algebras, Finite State Automata and Turing Machines, Semigroups and Groups, Introduction to Grammars), and History of Mathematics. I have also taught survey courses in history of science, and a course in the Nature and Origins of Scientific Thought to science honours students.

The main element of my teaching credo is that I attempt to help all willing students to move forward in ways that help them reach their goals, while instilling the idea that their goals should include learning mathematics well. Most students are functioning well below the level at which they could be learning. I find the general attitude of the secondary schools, who routinely call truly mediocre performance excellent, absolutely appalling.

GRANTS RELATED TO PEDAGOGY

- Teaching Innovation Fund Award, Acadia University, 2001 (Jointly with P. Stephenson)
- Teaching Innovation Fund Award, Acadia University, 1994 (Jointly with T. Müldner and P. Williams)

INVITED LECTURES ON EDUCATION AND PEDAGOGY - OLDER

"History of mathematics in the undergraduate curriculum: an overview of strategies and aims." Education Plenary Lecture, Canadian Mathematical Society Summer Meeting, Calgary, Alberta, 1994.

CBC Radio - National Broadcast for Mathematics Awareness Week.

"Historical and Mathematical Aims in the Use of Original Sources". Mathematical Association of America Session on Teaching with Original Sources, San Francisco, January 1995.

"Acadia's experience with Calculus Reform", Dept. of Mathematics, St. Francis Xavier University, October 1994.

"Calculus Reform: Fantasy and Reality", APICS Math Days Annual Conference, Acadia University, October 1994. (Jointly with R. Nowakowski)

Workshops for secondary teachers on the calculus curriculum and the high schools, Mathematics Teachers' Association Annual Meeting, Halifax, N. S. 1994 and 1993.

Co-organizer, "Calculus Reform at Acadia" Conference, April 1994.

CONTINUING EDUCATION RELATED TO TEACHING - OLDER

Participant, "Enhancing and Evaluating College Teaching and Learning", Virginia Tidewater Consortium for Higher Education, Mt. St. Vincent University, Halifax, March 31 1995.

Invited participant, U. S. National Science Foundation and Dept. of Education Invitational Conference, "Building the System: Making Science Education Work", Washington D. C. Feb. 1994.

Participant in Calculus Reform Short Course, Annual Meeting of the American Mathematical Society, San Antonio, January 1993.

Participant in Short Course on Use of Projects in Calculus Teaching, Northeastern Section of the Mathematical Association of America, Western New England College, Springfield, Massachusetts, April 1992.

Service to the profession

EDITORSHIPS

- 2013- Editor-in-Chief, *Historia Mathematica*, with N. Guicciardini (2013-2014) and Reinhard Siegmund-Schultze (2015-).
- 2014 - Contributing Editor, *Springer Briefs in the History of Science* (Book series).
- 2012-2014 Editor, *Proceedings*, Annual Meeting, Canadian Society for History and Philosophy of Mathematics.
- 2008-2012 Editorial Board Member, *Revue d'histoire des mathématiques*, Société mathématique de France, Paris.
- 1999-2003 Book Review Editor, *Historia Mathematica*.

CONFERENCE ORGANIZATION

- 2018 Co-organizer, "Mathematical Reconstruction in the Years Following the Great War", CIRM-Luminy, France, Approved for November 2018.
- 2016 Co-organizer, "Circulating Mathematics via Journals: The rise of internationalization 1850-1920", Mittag-Leffler Institute, Djursholm, Sweden, June 2016.
- 2015 Co-organizer, History and Philosophy of Mathematics, Canadian Mathematical Society Winter Meeting, Montréal.
- 2013 Co-organizer, History and Philosophy of Mathematics, Canadian Mathematical Society Winter Meeting, Ottawa.
- 2012 Co-organizer, History of Mathematics meeting (with J. Peiffer and N. Schappacher), Mathematisches Forschungsinstitut Oberwolfach Jan. 7-13 2012.
- Co-organizer, History and Philosophy of Mathematics, Canadian Mathematical Society Winter Meeting, Montreal.
- 2011 Session Co-organizer, History of Mathematics, Canadian Mathematical Society Winter Meeting, Toronto.
- 2010 Session Co-organizer, History of Mathematics, Canadian Mathematical Society Winter Meeting, Vancouver.
- 2009 Symposium co-organizer (with C. Gilain): Interactions between mathematics and the natural sciences: scientific realities and social representations (1750-1950) Budapest, International Congress on the History of Science and Technology (leading international meeting in this field – every 4 years). July 2009.

- Program chair, 11th Annual Meeting of the Chairs of Canadian Mathematics Departments, University of Saskatchewan, Saskatoon.
- Meeting Organizer, Joint meeting, Canadian Society for History and Philosophy of Mathematics and Canadian Mathematical Society, St. John's NF. June 2009.
- 2008 Session Co-organizer, History of Mathematics, Canadian Mathematical Society Winter Meeting, London Ont.
- 2007 Session Co-organizer, History of Mathematics, Canadian Mathematical Society Winter Meeting, Toronto.
- 2006 Session Co-organizer, History of Mathematics, Canadian Mathematical Society Summer Meeting, Calgary.
- 2005 Session Co-organizer, History of Mathematics, Canadian Mathematical Society Winter Meeting, Montréal
- 2004 Co-Organizer (with I. Grattan-Guinness and C. Fraser), Workshop on the History of Differential Equations, Mathematisches Forschungsinstitut, Oberwolfach, Germany, October 2004.
- 2004 Organizer, Special Session on "Maritime Mathematics", Canadian Society for the History and Philosophy of Mathematics annual meeting with Learned Societies Meeting, Halifax NS May 2003.
- 2002 Co-Organizer (with D. Zitarelli, Temple U), Special Session, History of Mathematics. American Mathematical Society Annual Meeting, San Diego California, January 2002.
- Co-organizer (with Christian Gilain, U. de Paris VI-VII and J. Tattersall, Providence College), Special Session on History of Mathematics, First Franco-American Conference, Société mathématique de France and American Mathematical Society, Lyon, France, July 2002.
- Co-organizer (with C. Gilain, U. De Paris VI-VII), International Conference on the History of Differential Equations, University of Lisbon, Portugal, June 2002.
- 2001 Co-organizer (with Catherine Goldstein, Université de Paris-Sud, Orsay) Regards sur les travaux et le rôle de Charles Hermite (à l'occasion du centenaire de sa mort), Séminaire d'histoire des mathématiques, Institut Henri Poincaré, Paris, December 2001.
- Co-organizer (with Bruno Belhoste, Institut national de recherche pédagogique, Paris), Mathematics and the State, CIRM-Luminy, October 2001.
- Co-organizer (with Christian Gilain), Session on history of mathematics, First Franco-American Congress of Mathematics, AMS/SMF. Lyon, July 2001.
- Co-organizer (with Christian Gilain, Université de Paris), "History of differential equations" University of Lisbon, Portugal, June 2001.
- 1988-2000 Co-organizer, Special Sessions on History of Mathematics, American Mathematical Society Annual Meeting, 1993, 1994, 1995, 1996(with Victor Katz).
- Co-organizer, Session on Mathematical Models and Experiment, Joint meeting, British Society for the History of Science and History of Science Society, Toronto, 1992. (with Craig Fraser).
- Co-organizer, Session on History of Mathematical Physics, History of Science Society Meeting, Cincinnati, 1988.(With Craig Fraser).

OTHER SERVICE

at Simon Fraser University

BC Ministry Quality Assurance Process Audit of SFU, Faculty Representative on team to prepare the Self-Study, Fall 2016.

Dept of Mathematics, ALRP, member Summer 2016-Spring 2018.

Presentations, "Hand calculation and square root," Burnaby and Surrey Math Camps, June 2016.

Presentations, Student Success Sessions, several times in 2015-2016.

Presentation, "Who needs algebra?" Math Outside the Box", jointly with D. Muraki, Nov. 2015.

Undergraduate Studies Committee, Mathematics. 2013 -14

Graduate Co-Chair, Dept of Mathematics, 2012-2013.

Internal Reviewer, Dept of Statistics External Review, 2013.
Senate Undergraduate Awards Advisor Committee 2008-2010, 2013-2014.

Non-SFU

Invited Presenter/Mentor, Project NEXTMAC, Canadian Mathematical Society, Summer Meeting, Quebec City, June 2002.
Board of Directors, Canadian Mathematical Society, 1999-2003.
Chair, Mehrten Hasse Prize Committee, Mathematical Association of America, 1990 - 1994.
Atlantic Provinces Council on the Sciences, Math and Stats Committee member from Acadia University, 1999-present.
Member of national executive, Canadian Society for the History and Philosophy of Mathematics. 1985 1987, 1988 2000. President 1993-1996.
Member of Executive Council, Canadian Federation for the Humanities, 1993-1995.
Member at various times of various scholarly groups, including: American Mathematical Society, Canadian Mathematical Society, Mathematical Association of American, Canadian Society for the History and Philosophy of Mathematics, Canadian Society for the History and Philosophy of Science, Canadian Science and Technology Historical Association, British Society for the History of Mathematics, International Council on Museums.

Administration and Leadership - Older

Head of Department of Mathematics and Statistics, Acadia University, 1998-2002, 2003-2004.
Member of Senate of Acadia University, 1995-1998, 2001-2002.
Senate Nominating Committee, Acadia University, 2001-2002.
Senate Committee on Research and Graduate Studies, Acadia University, 1999-2002
Acting head, Dept. of Mathematics & Statistics, Acadia University, Jan - June 1997.
Senate Academic Program Review Committee Acadia University (1994-1997). President, 1996-1997.
Senate Curriculum Review Committee, Acadia University, (1991-93).
Search Committee, University Librarian, Acadia University (1993-94).
University Curriculum Committee Acadia University (Secretary, 1988-89, Chair, 1989-90).
Dept. of Mathematics & Statistics Curriculum Committee, Acadia University, (1987-1997, 1998-2002).
Executive, Acadia University Faculty Association (Secretary, 1991-1992) .
Departmental liaison from Acadia University, Mathematical Association of America and American Mathematical Society.

REFEREEING

Ongoing

Refereeing of articles and grant proposals, SSHRC, *Historia Mathematica*, *Revue d'histoire des mathématiques*, *Mathesis*, *American Mathematical Monthly*, *American Journal of Physics*, *Perspectives on Science*.