

# Curriculum Vitae

Gregory M. Paoli

## EDUCATION

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- 1996** Post-Graduate Training, Department of Management Sciences, University of Waterloo  
Courses: Decision Analysis under Uncertainty, Social Science Research Methods, Management of Technology, and Technical Entrepreneurship
- 1991-1993** Master of Applied Science, Systems Design Engineering, University of Waterloo.  
*Course Topics:* Statistical Pattern Recognition, Stochastic Processes, Stochastic Optimisation and Probabilistic Design, Artificial Neural Networks, Machine Intelligence.  
*Research:* Decision-Support Tools for Computer-Assisted Diagnosis of Neuromuscular Disorders.  
*Awards:* Ontario Graduate Scholarship, University of Waterloo Graduate Scholarship, Faculty of Engineering Scholarship and Research Assistantship.
- 1986-1991** Bachelor of Applied Science (First Class Honours), Electrical and Computer Engineering, Faculty of Engineering, University of Waterloo. Grace M. Watterson Foundation Scholarship.

## EMPLOYMENT

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- 1997-** President, Decisionalysis Risk Consultants, Inc. A consultancy specialising in assessment, communication and management of health risk.
- 1993-1997** Research Manager, Institute for Risk Research, University of Waterloo  
Diverse research activities related to health risk management and public policy.

## PROFESSIONAL SOCIETY ACTIVITY

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- SRA** Member of SRA Council (Board of Directors), Society for Risk Analysis, (2005-2006).  
Chair and Vice-Chair, Society for Risk Analysis Food and Water Risk Specialty Group (2001-2003).  
Member, Internationalization Task Force and Conferences and Workshops Committee
- SRA** Chair, Organizing Committee for *Public Forum on OMB's Proposed Bulletin on Risk Assessment: Implications for Inside and Outside Government*, held May 23-24, 2006 in Washington, DC.
- Co-Chair, *Symposium on Antimicrobial Resistance and Risk Assessment: Past, Present and Future*, held September 28-29, 2004 in Washington, DC.

## EXPERT PANEL SERVICE

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- 2005-Pres** Member, Expert Advisory Panel on Antimicrobial Resistance Risk Assessment.
- 2006-Pres** Member, *Joint WHO/FAO Expert Workshop on Practical Applications of Risk Assessment in Risk Management*, Rome.
- 2005-Pres** Expert Advisory Panel on Climate Change Adaptation, National Roundtable on the Environment and the Economy, Ottawa.
- 2004** Member, *Joint WHO/FAO Expert Consultations on the Provision of Scientific Advice to the Codex Alimentarius Commission*, Geneva.

- 2003-2006** Member, *Joint WHO/FAO Expert Consultations on Risk Management of Pathogens in Powdered Infant Formula*, Geneva and Rome.
- 2003-2006** Member, *Joint WHO/FAO Expert Consultations on Guidelines for Risk Characterisation in Microbiological Risk Assessment*. Elsinore and Geneva.
- 2003-2005** Member, *Expert Panel on a Framework for Risk Ranking of Microbial and Chemical Hazards*. A Collaborative Project of the United States Food and Drug Administration and the Institute of Food Technologists.
- 2001-2002** Member, *National Academy of Sciences – Institute of Medicine Committee to Review the USDA-FSIS Risk Assessment of E. Coli O157:H7 in Ground Beef*.
- 2001-2003** Member, *Expert Consultations on Microbial Risk Assessment for Campylobacter spp. in Broilers*, Joint FAO/WHO Activities on Microbial Risk Assessment, 2001-2002.
- 2001** Member, *Joint FAO/WHO Expert Consultation on Risk Assessment of Salmonella spp. in Broilers and Eggs and Listeria monocytogenes in Ready-to-Eat Foods*. Geneva, February, 2001 and Rome, April, 2001.
- 1998** Member, *Expert Panel on Risk Management Methods in Climate Change*, Intergovernmental Panel on Climate Change (IPCC), Toronto.
- 1997** Member and Editor, *Panel on Energy Research and Development (PERD) Working Group on Consideration of Climate Change in the Design of Engineered Projects in Permafrost (1994-1997)*.

### SELECTED SHORTCOURSES AND WORKSHOPS DELIVERED

- 2004** Lectures on: Introduction to Probability, Monte Carlo Simulation, Fitting Data to Distributions  
Continuing Education Course: *Probabilistic Risk Assessment*  
Harvard School of Public Health, Boston, MA
- 2003** Seminar Facilitator, *Risk Management and Assessment for the Codex Committee for Food Hygiene*,  
35<sup>th</sup> Meeting of the Codex Committee on Food Hygiene, Orlando, Florida
- 2000** *Risk Analysis and Its Use in Food Safety*, Seminar Co-ordinator and Lecturer,  
WHO/FAO/PAHO Seminar, Buenos Aires, Argentina
- 1999** *Quantitative Microbial Risk Assessment in Foods*  
Society for Risk Analysis Annual Meeting, Atlanta, Georgia.
- 1999** *An Insider's Look at Microbial Risk Assessment*,  
International Food Protection Association, Arlington, Virginia and Dearborn, Michigan.
- 1998** *Developing Simulation Models using @Risk in Food Safety Risk Assessment*,  
Canadian Food Inspection Agency, Food Safety Risk Analysis Unit, Ottawa, Ontario.
- 1996** *Risk Management and Risk Communication: A Case Study of Mad Cow Disease*,  
Agriculture Canada, Animal Health Division, Ottawa, Ontario.
- 1994** *Probabilistic Modelling in Microbial Food Safety*,  
Health of Animals Laboratory, Agriculture Canada, Guelph, Ontario.

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**PUBLICATIONS**


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- 2004** Fazil, A.M., Paoli, G.M., Davidson, V., Lammerding, A.M., Hrudey, S., Isaac-Renton, J., and M.W. Griffiths, *Needs, Gaps and Opportunities Analysis for Microbial Risk Assessment in Canada*. A Report Prepared for CIHR, NSERC and the Canadian Water Network.
- 2003** Tamplin, M., Paoli, G.M., Marmer, B.S., and Phillips, J., “Models of the Behavior of *Escherichia coli* O157:H7 in Raw Sterile Ground Beef Stored at 5° to 46°C.” Submitted to *International Journal of Food Microbiology*.
- 2003** Tamplin, M., Bárányi, J., and Paoli, G.M., “Software Programs to Increase the Utility of Predictive Microbiology Information.” Chapter 6, in McKellar, R. and Lu, X.[Eds.] *Modelling Microbial Responses in Foods*, CRC Press.
- 2002** Stern, N.J. and 12 others and Paoli, G.M., “Campylobacter spp. in Icelandic poultry operations and human disease” *Epidemiology and Infection*, 129: 1-10.
- 2001** Leiss, W. and Paoli, G.M., “Cellular Telephones,” chapter 3 in William Leiss et al., *In the Chamber of Risks: Understanding Risk Controversies* (McGill-Queen’s University Press, in press).
- 2001** Fazil, A., Ross, T.A., Paoli, G.M., et al., “A probabilistic analysis of the risk of *C. perfringens* growth during foodservice operations.” *Int. Jour. Food Micro.* (Accepted, in press).
- 2001** Lammerding, A.M., Fazil, A.M., and Paoli, G.M., Microbial food safety risk assessment. In (Ito, K. and J.Rose, ed.). *Compendium of Methods for the Microbiological Examination of Foods*, 4th ed. American Public Health Association.
- 1999** Paoli, G.M., Assessing the value of risk reduction in Environmental Health. *Environmental Business Canada*. Fall, 1999, p. 21-22.
- 1998** Cassin, M.H., Paoli, G.M. and Lammerding, A.M., “Simulation modeling for microbial risk assessment.” *Journal of Food Protection*, 61(11), 1560-1566.
- 1998** Paoli, G.M. and Risebrough, D.W. [Eds.], *Consideration of Climate Change in Engineering Projects in Permafrost*. Atmospheric Environment Service, Environment Canada.
- 1998** Paoli, G.M., “Risk management of pathogens and pests in food, plants and animals,” in *Risk Management Methods in Climate Change*. Intergovernmental Panel on Climate Change (IPCC) Expert Panel Report on Risk Management.
- 1997** Lammerding, A.M., and Paoli, G.M., “Quantitative risk assessment: An emerging tool for emerging foodborne pathogens” *Emerging Infectious Diseases*, 3(4):483-487.
- 1996** Cassin, M.H., Paoli, G.M., McColl, R.S., and Lammerding, A.M., “A comment on ‘Hazard assessment of *Listeria monocytogenes* in the processing of bovine milk.’” *J. Food Prot.* 59:341-343.
- 1995** Paoli, G.M., “Turning natural hazard risk assessments into decisions,” in *Proceedings of a Tri-lateral Workshop: Toward a Comprehensive Assessment of Risks due to Natural Hazards*. D. Etkin, [Ed.], Environment Canada.
- 1996** Paoli, G.M. [Editor], *Climate Change, Uncertainty and Decision-Making*. Institute for Risk Research, Waterloo, Ontario, Canada.

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**SELECTED INVITED PRESENTATIONS**


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- 2006** *Risk Assessment of Hygiene Systems*, Second International Conference on Microbial Risk Assessment, Sydney, Australia, February, 2006.
- 2006** *Risk Ranking for Microbial and Chemical Hazards: The IFT Ranking Framework and Future Needs*, Second International Conference on Microbial Risk Assessment, Sydney, Australia, February, 2006.
- 2005** *Common Metrics for Food Safety Risk Assessment: Next Steps in Risk Ranking*, Institute of Medicine Food Forum, National Academies of Science, Washington, DC, December, 2005.
- 2005** *Dimensions of Validity in Risk Assessment*, ILSI-Europe Symposium on Microbial Risk Management, Prague, Czech Republic, October, 2005.
- 2005** *Navigating the SPS Risk Assessment Toolbox*, International Colloquium on Sanitary and Phytosanitary Risk Assessment, Washington, DC, August, 2005.
- 2003** *Peeling the Onion of Pathogen Performance Standards*, Symposium on Pathogen Performance Standards: Insights from Risk Assessment and Economics at the Annual Meeting of the Society for Risk Analysis, Baltimore, MD, December, 2003.
- 2003** *A Review of the Integration of Epidemiology and Risk Assessment for Foodborne Pathogens*, Symposium on Integration of Risk Assessment and Epidemiology at the Annual Meeting of the Society for Risk Analysis, Baltimore, MD, December, 2003.
- 2003** *Toward Risk-Based Food Safety Policy: Rationale, Barriers and Solutions*, Plenary Presentation at Agricultural Institute of Canada Foundation Conference: *From the Farm Gate to the Dinner Plate*. Edmonton, AB, November 2-4, 2003.
- 2003** *Risk Communication Issues for Chlorinated Disinfection By-Products*, to the Federal-Provincial-Territorial Chlorinated Disinfection By-Products Task Group, Ottawa, ON, August, 2003.
- 2002** *Risk Modeling in Food Safety and Animal Health*, Conference of the Academy of Veterinary Consultants, Denver, CO, December, 2002.
- 2002** Plenary Lecture, *Risk Assessment of Microbiological Risk Assessment: Lessons Learned and Future Directions*, First International Conference on Microbiological Risk Assessment, College Park, MD, July, 2002.
- 2002** *Moving toward Risk-Based Policy*, Alberta Agriculture, Edmonton, AB, September, 2002.
- 2001** *Prospects for Expert System Support in Predictive Microbiology*, Workshop on Decision-Support Tools for Microbial Risk Assessment, Society for Risk Analysis Annual Meeting, Seattle, WA.
- 2001** Guest Lecturer, *Public Management of Radio-Frequency Field Risks*. Queen's University School of Public Policy, Kingston, Ontario, May 2001.
- 2000-2001** Guest Lecturer, *Public Sector Risk Management*. Public Sector Executive Programme, Queen's School of Business, Queen's University, Kingston, Ontario. September 2000 and January 2001.
- 1999** Invited Speaker, *The Need for Fair Public Risk Dialogue in Controversies over RF Fields*. Conference on Mobile Telephones and Health: An Update on the Latest Research, Göteborg, Sweden, Sept., 1999.
- 1996** Invited Speaker, *HACCP and Risk Assessment: Issues of Process, Performance and Harmonisation*. Ontario Food Protection Association Annual Meeting, Toronto, Ontario, November, 1996.

- 1994 Invited Speaker, *Toward a Structured Methodology for Carcinogenic Hazard Identification*. US Environmental Protection Agency, Office of Health Risk Assessment, Washington, DC.
- 1994 Invited Speaker, *Combination of Evidence for Carcinogenic Hazard Identification*. Royal Society of Canada Panel on Electromagnetic Field Health Risk, Toronto, Ontario.

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## SELECTED CONFERENCE PRESENTATIONS

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- 2003 Brand, K.P., Paoli, G.M. and Ruthman, R.T., “Reweighting Techniques for Examining Input Dependence Structure.” Annual Meeting of the Society for Risk Analysis, Baltimore, MD, December, 2003.
- 2003 Furgal, C., Paoli, G.M., and Ruthman, R.T., “An integrated decision-support tool for the management of diverse risks and benefits associated with country foods in the Canadian North.” Annual Meeting of the Society for Risk Analysis, Baltimore, MD, December, 2003.
- 2003 Michaels, B.S., Keller, C., Blevins, M., Paoli, G.M., et al., “Application of QMRA to Study Mitigation Strategy Effectiveness at Reducing Pathogen Transmission in Foodservice” International Association for Food Protection, New Orleans, LA, August, 2003.
- 2003 Michaels, B.S., Paoli, G.M., Clayton, D., and Griffiths, C., “Development of a Risk Assessment Framework and Decision Support Tools for Healthcare Hand Hygiene System Design.” Annual Meeting of the Association of Professionals in Infection Control and Epidemiology, San Antonio, TX, June 2003.
- 2003 Osborne, G.M., and Paoli, G.M., “Disaster-Based Response to Pandemics” at *Conference on Recovery following Conflict and Natural Disaster*, GC-19 Parallel Event, UN Habitat Programme, Nairobi, Kenya, May, 2003.
- 2002 Paoli, G.M. and Brand, K., “Application of Re-weighting Techniques to Expedite Sensitivity Analysis in Monte Carlo Simulation Models,” Society for Risk Analysis Annual Meeting, New Orleans, LA.
- 2002 Paoli, G.M., “Valuation of Information in Risk Management,” Conference on *Future Trends: Risk*, Annual Policy Research Conference, Ottawa, ON, October, 2002.
- 2002 Paoli, G.M. et al., “Systems Modelling of Campylobacter Exposure in Iceland,” International Association for Food Protection, San Diego, CA.
- 2001 Paoli, G.M., “Modelling Challenges in Microbial Risk Assessment” Society for Risk Analysis Annual Meeting, Seattle, WA.
- 2001 Paoli, G.M. and Osborne, G.M., “The Potential for Risk Amplification via International Trade Barriers” Society for Risk Analysis Annual Meeting, Seattle, WA.
- 2000 Paoli, G.M. et al., “Opportunities for risk assessment and risk management in a closed-system foodborne epidemic in Iceland,” Society for Risk Analysis Annual Meeting, Atlanta, Georgia.
- 2000 Paoli, G.M. et al., “Risk Assessment of *Salmonella* Enteritidis in Canadian Shell Eggs,” Annual Meeting of the International Association for Food Protection, Atlanta, Georgia.
- 1999 Paoli, G.M., “The Need for Fair Public Risk Dialogues in Controversies over RF Fields,” *Proceedings of Mobitel Conference, Goteburg, Sweden*. City and Financial, London.

- 1996** Cassin, M.H., Paoli, G.M., McColl, R.S., “Population response and immunity to *Toxoplasma gondii*,” Society for Risk Analysis Annual Meeting, New Orleans, Louisiana.
- 1996** Cassin, M.H., A.M. Lammerding, G.M. Paoli, and R.S. McColl., “Probabilistic modelling and predictive microbiology: the link between HACCP and risk assessment,” 2nd Int. Conf. Predictive Microbiol., Hobart, Tasmania, Australia.