

## CURRICULUM VITAE

Name: David Leigh Martell

Prepared: August 16, 2016

## ACADEMIC HISTORY

### Degrees Conferred

Ph.D. 1975 Industrial Engineering, University of Toronto  
Thesis Title: Contributions to decision-making in forest fire management  
Supervisor: A.A. Cunningham

M.A.Sc. 1972 Industrial Engineering, University of Toronto  
Thesis Title: An application of statistical decision theory to forest fire control planning  
Supervisor: A.A. Cunningham

B.A.Sc. 1971 Industrial Engineering, University of Toronto

### Academic Appointments

Lecturer, Assistant Professor, Associate Professor, Professor, 1974 to 2016.  
Professor Emeritus, 2016 - present  
Faculty of Forestry, University of Toronto.

Research leave: 1981-82, 1988-89, 1996, 2003-04, 2009-10

Appointed to the School of Graduate Studies, June 27, 1978

Coordinator of Graduate Studies, 1993 to 1995

Cross-appointed to the University of Toronto Institute of Environmental Studies, 1994 to 2005

Cross-appointed to the University of Toronto Centre for Environment, 2005 to present

Research Associate (status only), Institute for Land Information Management,  
Erindale College, University of Toronto, 1989 to 1994

Teaching Assistant  
Department of Industrial Engineering, University of Toronto, 1970-73

## AWARDS and HONOURS

The Canadian Operational Research Society named its award for the best student paper in Operational research and Forestry the David Martell Student Paper Prize in Forestry in recognition of my contributions to operational research in forestry, 2014

My co-authors and I were awarded the Energy Natural Resources and Environment (ENRE) Special Interest Group of the Institute for Operations Research and Management Science (INFORMS) 2013 Best Publication Award for the best refereed journal article in the Natural Resources category for our paper: Acuna, M.A., C. D. Palma, W. Cui, D. L. Martell, and A. Weintraub. 2010. Integrated spatial fire and forest management planning. *Can. J. For. Res.* 40(12): 2370-2383. doi:10.1139/X10-151

Canadian Operational Research Society Award of Merit, June 16, 2009

Faculty of Forestry Graduate Students Association "Excellence in Teaching Award", April 24, 2008

Canadian Operational Research Society, Service Award, June 2004

NSERC 25 Year Continuous Grant Recipient Certificate, March 9, 2004

Invited by the Canadian Operational Research Society, to present one of two Canadian National Contribution papers at the International Federation of Operational Research Societies (IFORS) Triennial Conference in Vancouver, British Columbia, July 8-12, 1996

Canadian Operational Research Society Practice Competition (1993) Finalist (with J.I. MacLellan) for the paper entitled "Basing airtankers for forest fire control in Ontario"

Canadian Operational Research Society Gold Medal Plaque (1979) (with J.H. Bookbinder) for the paper entitled "Time-dependent queuing approach to helicopter allocation for forest fire initial attack"

Annual Student Paper Competition (1973), Toronto Section, Canadian Operational Research Society for the paper entitled "An application of decision theory in forest fire management"

National Research Council Postgraduate Scholarship (1972-74)

University of Toronto Open Fellowship (1971-72)

## **PROFESSIONAL EXPERIENCE**

**2004:** Consultant to the Ontario Ministry of Natural Resources  
Spatial forest management planning

**2000:** Consultant to the Ontario Ministry of Natural Resources  
Forest fire suppression equipment inventory management

**1999:** Consultant to the Canadian Department of National Defence  
Forest fire management at Canadian Forces bases

**1998:** Consultant to the Saskatchewan Environment and Resource Management.  
Sustainable forest management.

**1993:** Consultant to the Forest Protection Branch of the British Columbia Ministry of Forests.  
Evaluation of initial attack airtanker operations.

**1990:** Consultant to the Aviation & Fire Management Centre of the Ontario Ministry of Natural Resources. Assess fire detection system effectiveness.

**1987:** Consultant to the Aviation & Fire Management Centre of the Ontario Ministry of Natural Resources. Assist the A&FMC in evaluating alternative detection system strategies and planning procedures.

**1981 – 82:** Consultant to the Aviation & Fire Management Centre of the Ontario Ministry of Natural Resources. Assist the A&FMC in developing and using a system for evaluating alternative initial attack strategies.

**1978:** Consultant to Thompson, Tooze & McLean, Barristers and Solicitors.  
Assessment of a court transcript.

**1975 (summer):** Thunder Bay District, Ontario Ministry of Natural Resources  
Fire Fighter (6 weeks)

**1970-72 (summers):** Forest Fire Control Branch, Ontario Ministry of Natural Resources  
Summer student (last classification, Engineer I)

## SCHOLARLY AND PROFESSIONAL WORK

### Papers Published and Accepted for Publication in Refereed Journals

- Stocks, B.J. and Martell, D.L. 2016. Forest Fire Management Expenditures in Canada: 1970-2013. **Accepted** for publication in *The Forestry Chronicle*. To appear in Vol. 92, No. 3.
- Ruppert, J., Fortin, M.-J., Gunn, E. A. and Martell, D.L. 2016. Conserving woodland caribou habitat while maintaining timber yield: A graph theory approach. *Canadian Journal of Forest Research*. 46: 914–923, dx.doi.org/10.1139/cjfr-2015-0431.
- Troncoso, J.J., A. Weintraub and D.L. Martell (2016). Development and use of a threat index to manage timber production on flammable forest landscapes subject to spatial harvest constraints. *INFOR: Information Systems and Operational Research*, DOI: 10.1080/03155986.2016.1197543. Published online July 27, 2016. 20 pp.
- Morin, A.A., Albert-Green, A., Woolford, D.G., and Martell, D.L. (2015). The use of survival analysis methods to model the control time of forest fires in Ontario, Canada. *Int. J. Wild. Fire* 24, 964-973.
- Rönnqvist, M., D'Amours, S., Weintraub, A., Jofre, A., Gunn, E., Haight, R.G., Martell, D., Murray, A.T., and Romero, C. 2015. Operations Research challenges in forestry: 33 open problems. *Annals of Operations Research* 232, 11-40
- Kuhlmann, C.A., Martell, D.L., Wets, R.J.B., and Woodruff, D.L. 2015. Generating Stochastic Ellipsoidal Forest and Wild land Fire Scar Scenarios for Strategic Forest Management Planning under Uncertainty. *For. Sci.* 61, 494-508.
- Grunstra, M.G. and D.L. Martell. 2014. A history of railway fires in Ontario's forests. *The Forestry Chronicle*. 90(3): 314-320. (May/June)
- Woolford, D.G., Dean, C.B, Martell, D.L Cao, J. and Wotton, B.M. 2014. Lightning-caused Forest Fire Risk in Northwestern Ontario, Canada is Increasing and Associated with Anomalies in Fire-Weather. *Environmetrics*, 25(6): 406-416. doi: 10.1002/env.2278
- Diaz-Balteiro, L., D.L. Martell, C. Romero and A. Weintraub. 2014. The Optimal Rotation of a Flammable Forest Stand when both Carbon Sequestration and Timber are valued: A Multi-Criteria Approach. *Natural Hazards*. 72 (2): 375-387, doi: 10.1007/s11069-013-1013-3
- Minas, J. P., Hearne, J. W., & Martell, D. L. 2014. A spatial optimisation model for multi-period landscape level fuel management to mitigate wildfire impacts. *European Journal of Operational Research*, 232(2), 412-422. doi: 10.1016/j.ejor.2013.07.026
- Albert-Green, A., Braun, W.J., Martell, D.L. and Woolford, D.G. 2014. Visualization tools for assessing the Markov property: sojourn times in the forest fire weather index in Ontario. *Environmetrics*. 25(6): 417-430, doi: 10.1002/env.2237

- Minas J,\* Hearne J, Martell D.L. 2013. An integrated optimization model for fuel management and fire suppression preparedness. *Annals of Operations Research*. Published online, January 11, 2013. doi: 10.1007/s10479-012-1298-8
- Savage, D., Wotton, B. M., Martell, D. L., & Woolford, D. G. 2013. The Impact of Uncertainty Concerning Historical Burned Area Estimates on Forest Management Planning. *Forest Science*, 59(5), 578-588. doi: 10.5849/forsci.11-081
- Taylor, S. W., Woolford, D. G., Dean, C. B., & Martell, D. L. 2013. Wildfire Prediction to Inform Fire Management: Statistical Science Challenges. *Statistical Science*, 28(4), 586-615. doi: 10.1214/13-sts451
- Albert-Green, A., C.B. Dean, D.L. Martell and D.G. Woolford. 2013. A methodology for investigating trends in changes in the timing of the fire season with applications to lightning-caused forest fires in Alberta and Ontario, Canada. *Can. J. For. Res.* 43(1): 39-45. DOI: 10.1139/cjfr-2011-0432.
- Woolford, D. G., Cao, J., Dean, C. B., & Martell, D. L. 2011. Erratum: Characterizing temporal changes in forest fire ignitions: looking for climate change signals in a region of the Canadian boreal forest (vol 21, pg 789, 2010). *Environmetrics*, 22(3), 485-485. doi: 10.1002/env.1113
- Woolford, D.G., Bellhouse, D.R., Braun, W.J., Dean, C.B., Martell, D.L., and Sun, J. 2011. A Spatio-temporal model for people-caused forest fire occurrence in the Romeo Malette forest. *Journal of Environmental Statistics*, 2(1): 1-26.  
<http://www.jenvstat.org/v02/i01/paper>, **OPEN ACCESS**
- Martell, D.L. 2011. The Development and Implementation of Forest Fire Management Decision Support Systems in Ontario, Canada: Personal Reflections on Past Practices and Emerging Challenges. *Mathematical and Computational Forestry & Natural-Resource Sciences*. 3(1): 18-26. **OPEN ACCESS**  
<http://mcfns.com/index.php/Journal/article/view/MCFNS.3-18/MCFNS-3%281%2918>
- Savage, D.W., D.L. Martell and B.M. Wotton. 2011. Forest management strategies for dealing with fire-related uncertainty when managing two forest seral stages. *Can. J. For. Res.* 41(2): 309-320.
- Woolford, D.G., J.G. Cao, C.B. Dean and D.L. Martell. 2010. Characterizing temporal changes in forest fire ignitions: looking for climate change signals in a region of the Canadian boreal forest. *Environmetrics*. 21(7-8). Special Issue: Sp. Iss. SI 789-800.
- Acuna, M.A., C. D. Palma, W. Cui, D. L. Martell, and A. Weintraub. 2010. Integrated spatial fire and forest management planning. *Can. J. For. Res.* 40(12): 2370-2383. doi:10.1139/X10-151.
- Podur J.J., D.L. Martell and D. Stanford. 2010. A compound Poisson model for the annual area burned by forest fires in the province of Ontario. *Environmetrics*. 21( 5): 457-469.

- Savage DW, D.L. Martell and B.M. Wotton. 2010. Evaluation of two risk mitigation strategies for dealing with fire-related uncertainty in timber supply modelling. *Can J. For. Res.* 40(6): 1136-1154.
- Vilar L, D.G. Woolford, D.L. Martell and M. P. Martín. 2010. A model for predicting human-caused wildfire occurrence in the region of Madrid, Spain. *Int. J. Wildland Fire.* 19(3): 325-337.
- Islam, K.S., D.L. Martell and M.J. Posner. 2010. A Time-Dependent Spatial Queueing Model for the Daily Deployment of Airtankers for Forest Fire Control. *INFOR: Information Systems and Operational Research.* 47(4): 319-333. Online date: Friday, September 17, 2010.
- Woolford, D.G., W.J. Braun, C.B. Dean and D.L. Martell. 2009. Site-specific seasonal baselines for fire risk in Ontario. *Geomatica.* 63(4) 355-363.
- Podur, J.J., D. L. Martell. 2009. The influence of weather and fuel type on the fuel composition of the area burned by forest fires in Ontario, 1996-2006. *Ecological Applications.* 19(5): 1246-1252.
- Martell, D.L. and H. Sun. 2008. The impact of forest fire suppression, vegetation and weather on burned area in Ontario. *Can. J. Forest Res.* 38(6): 1547-1563.
- Martell, D.L. 2007. Fifty Years of OR in Forestry - Preface to the Special Forestry Issue of *INFOR.* *INFOR* 45(1):5-7. (**Preface - not refereed**)
- Palma, C.D., W. Cui, D. L. Martell, D. Robak and A. Weintraub. 2007. Assessing the impact of stand-level harvests and fuel treatments on the flammability of forest landscapes. *International Journal of Wildland Fire.* 16(5): 584-592.
- Podur, J.J. and D. L. Martell. 2007. A simulation model of the growth and suppression of large fires in Ontario. *International Journal of Wildland Fire.* 16(3): 285-294.
- Beverly, J.L. and D.L. Martell. 2005. Characterizing extreme dry-spell and forest fire weather events in the Boreal Shield ecozone of Ontario, Canada. *Agricultural and Forest Meteorology.* 133 (1-4): 5-16.
- Wotton, B.M. and D.L. Martell, 2005. A lightning fire occurrence model for Ontario. *Canadian Journal of Forest Research.* 35(6): 1389-1401.
- Wotton, B.M., B.J. Stocks and D.L. Martell. 2005. An index for tracking sheltered forest floor moisture within the Canadian Forest Fire Weather Index System. *International Journal of Wildland Fire.* 14(2): 169-182.
- Amiro, B.D., K.A. Logan, B.M. Wotton, M.D. Flannigan, J.B. Todd, B.J. Stocks and D.L. Martell. 2004. Fire weather index system components of large fires in the Canadian boreal forest. *International Journal of Wildland Fire.* 13(4): 391- 400.
- Beverly, J.L. and D.L. Martell. 2004. Modeling prescribed surface-fire regimes for *Pinus strobus* conservation. *Conservation Biology.* 18(6) 1541-1552.

- Hirsch, K.G., J.A. Podur, R.D. Jansen, R.D. McAlpine and D.L. Martell. 2004. Productivity of Ontario initial attack fire crews. *Can. J. Forest Res.* **34**: 705-715.
- Wotton, B. M., D.L. Martell and K.A. Logan. 2003. Climate Change and People-Caused Forest Fire Occurrence in Ontario. *Climatic Change* **60**: 275-295.
- Beverly, J.L. and D. L. Martell. 2003. Modeling "Pinus strobus" mortality following prescribed fire in Quetico Provincial Park, northwestern Ontario. *Can. J. Forest Res.* **33**(4): 740-751.
- Podur, J. and D.L. Martell. 2003. Spatial patterns of lightning-caused forest fires in Ontario, 1976-1998. *Ecological Modelling.* **164**: 1-20.
- Martell, D.L. 2002. Comment on "Wildfire Regime in the Boreal Forest and the Idea of Suppression and Fuel Buildup". *Conservation. Biology.* **16** (5): 1177-1177.
- Podur, J., D.L. Martell, and K. Knight. 2002. Statistical quality control analysis of forest fire activity in Canada. *Can. J. Forest Res.* **32**(2): 195-205.
- Skinner, W.R., M.D. Flannigan, B.J. Stocks, D.L. Martell, B.M. Wotton, J.B. Todd, J.A. Mason, K.A. Logan, and E.M. Bosch. 2002. A 500 hPa synoptic wildland fire climatology for large Canadian forest fires, 1959-1996. *Theoretical and Applied Climatology.* **71**: 157-169.
- Stocks BJ, Mason JA, Todd JB, Bosch EM, Wotton BM, Amiro BD, Flannigan MD, Hirsch KG, Logan KA, Martell DL, Skinner WR. 2002. Large forest fires in Canada, 1959-1997. *Journal of Geophysical Research-Atmospheres* **108** (D1)
- B.D. Amiro, J.B. Todd, B.M. Wotton, K.A. Logan, M.D. Flannigan, B.J. Stocks, J.A. Mason, D.L. Martell, and K.G. Hirsch. 2001. Direct carbon emissions from Canadian forest fires 1959-1999. *Can. J. For. Res.* **31**: 512-525.
- Martell, D.L. 1999. A Markov chain model of day to day changes in the Canadian forest fire weather index. *International Journal of Wildland Fire* **9**(4):265-273.
- Skinner, W.R., B.J. Stocks, D.L. Martell, B. Bonsal and A. Shabbar. 1999. The association between circulation anomalies in the mid-troposphere and area burned by wildland fire in Canada. *Theoretical and Applied Climatology.* **63**:89-105.
- Islam, K.M.S and D.L. Martell. 1998. Performance of initial attack airtanker systems with interacting bases and variable initial attack ranges. *Can. J. Forest Res.* **28**(10):1448-1455.
- Hirsch, K.G., P.N. Corey and D.L. Martell. 1998. Using expert judgement to model initial attack fire crew effectiveness. *Forest Science.* **44**(4):539-549.
- Martell, D.L., E.A. Gunn and A. Weintraub. 1998. Forest management challenges for operational researchers. *European Journal of Operational Research (Invited Review)* **104**:1-17.
- Boychuk, D., A. H. Perera, M.T. Ter-Mikaelian, D. L. Martell and C. Li. 1997. Modelling the effect of spatial scale and correlated fire disturbances on forest age distribution. *Ecological Modelling.* **95**:145-164.
- Hirsch, K. G. and D. L. Martell. 1996. A review of initial attack fire crew productivity and effectiveness. *International Journal of Wildland Fire*, **6**(4): 199-215.

- MacLellan, J.I. and D.L. Martell. 1996. Basing airtankers for forest fire control in Ontario. *Operations Research*. 44(5): 677-686.
- Martell, D.L. 1996. Old-growth, disturbance, and ecosystem management: Commentary. *Can. J. Bot* 74: 509-510. (Reviewed by the Editor).
- Boyчук, D.B. and D.L. Martell. 1996. A multistage stochastic programming model for sustainable forest-level timber supply under risk of fire. *Forest Science*, Vol. 42, No.1, February 1996.
- Martell, D.L. 1994. The impact of fire on timber supply in Ontario. *The Forestry Chronicle*. 70(2): 164-173.
- Davis, R.G. and D.L. Martell. 1993. A decision support system that links short term silvicultural operating plans with long term forest-level strategic plans. *Can. J. Forest Res.* 23:1078-1095.
- Martell, D.L., E. Bevilacqua and B.J. Stocks. 1989. Modelling seasonal variation in daily people-caused forest fire occurrence. *Can. J. Forest Res.* 19(12):1555-1563.
- Boyчук, D., and D.L. Martell. 1988. A Markov chain model for evaluating seasonal forest fire fighter requirements. *Forest Science*. 34(3):647-661.
- Martell, D.L., and J.M. Fullerton. 1988. Decision analysis for jack pine management. *Can. J. Forest Res.* 18(4):444-452.
- Martell, D.L., S. Otukol and B.J. Stocks. 1987. A logistic model for predicting daily people-caused forest fire occurrence in Ontario. *Can. J. Forest Res.* 17(5):394-401.
- Martell, D.L., R.J. Drysdale, G.E. Doan and D. Boyчук. 1984. An evaluation of forest fire initial attack resources. *Interfaces* 14(5):20-32.
- Martell, D.L. 1982. A review of operational research studies in forest fire management. *Can. J. Forest Res.* 12(2):119-140.
- Martell, D.L. 1980. The optimal rotation of a flammable forest stand. *Can. J. Forest Res.* 10(1):30-34.
- Bookbinder, J.H. and D.L. Martell. 1979. Time-dependent queuing approach to helicopter allocation for forest fire initial attack. *INFOR* 17(1):58-70.
- Martell, D.L. 1978. A subjective measure of forest fire management effectiveness. *Forest. Chron.* 54(3):159-162.
- Martell, D.L. 1978. The use of historical fire weather data for prescribed burn planning. *Forest. Chron.* 54(2):96-98.
- Cunningham, A.A. and D.L. Martell. 1976. The use of subjective probability assessments concerning forest fire occurrence. *Can. J. Forest Res.* 6(3):348-356.
- Doan, G.E. and D.L. Martell. 1973. The computer based fire weather information system in Ontario. *Forest. Chron.* 50(4):149-150.

Cunningham, A.A. and D.L. Martell 1973. A stochastic model for the occurrence of man-caused forest fires. *Can. J. Forest Res.* 3(2):282-287.

### **Refereed Conference Proceedings**

Myers, J. A. and D.L. Martell. 2007. Modeling Adjacency in Forest Harvest Scheduling *in* Proceedings of the CP 2007 Doctoral Programme of the Thirteenth International Conference on Principles and Practice of Constraint Programming, CP 2007, Providence RI, September 23–27, 2007. B. Hnich and K. Stergiou (Eds.). pp. 109-114.

Skinner, W.R., B.J. Stocks, D.L. Martell, B. Bonsal and A. Shabbar. 2000. The relationship between area burned by wildland fire in Canada and circulation anomalies in the mid-troposphere. *In* Biomass burning and its inter-relationship with the climate system. J.L. Innes, M. Beniston, and M.M. Verstraete, eds. *Advances in Global Change Research: Volume 3*. Kluwer Academic Publishers, Dordrecht, The Netherlands. pp 101-125.

Stocks, B.J., B.S. Lee, and D.L. Martell. 1996. Some potential carbon budget implications of fire management in the boreal forest. *in* Forest ecosystems, forest management and the global carbon cycle. Edited by M. J. Apps and D. T. Price. NATO ASI Series, Subseries 1 Vol. 40. "Global Environmental Change", Springer-Verlag, Berlin, Germany. pp. 89-96.

Martell, D.L. 1990. Operational research and forest fire management resource deployment. *Operational Research '90*. Selected papers from the Twelfth IFORS International Conference on Operational Research, International Federation of Operational Research Societies, Athens, Greece, June 25-29, 1990. Hugh E. Bradley, Editor. Pergamon Press PLC, Oxford. pp. 229-238.

Martell, D.L. 1984. Fire impact management in the Boreal forest region of Canada. *In* Resources and Dynamics of the Boreal Zone. Proceedings of a conference held at Thunder Bay, Ontario, August 1982. Ross W. Wein, Roderick R. Riewe and Ian R. Methven (Editors). Association of Canadian Universities for Northern Studies, Ottawa, Ontario, Canada. pp. 526-533.

### **Book Reviews in Refereed Journals**

Martell, D.L. 2009. Review of "Awful Splendour: A Fire History of Canada" by Stephen J. Pyne. UBC Press. *University of Toronto Quarterly*. 78(1): 198-200.

Martell, D.L. 2006. Review of "Emulating Natural Forest Landscape Disturbances - Concepts and Applications" Edited by Ajith H. Perera, Lisa J. Buse and Michael G. Weber, 2004. ISBN 0231129165. Columbia University Press, New York. *The Forestry Chronicle*. 82(6): 877-878

### **Other anonymously reviewed peer reviewed publications**

- Savage, D.M. and D.L. Martell. 2010. Dealing with uncertainty in strategic forest management planning. SFM Research Note No.73. Sustainable Forest Management Network.  
[http://www.ales.ualberta.ca/forestry/Sustainable\\_Forest\\_Management/Publications/ResearchNotes.aspx](http://www.ales.ualberta.ca/forestry/Sustainable_Forest_Management/Publications/ResearchNotes.aspx). 6 pp.
- Martell, D.L. 2010. Assessing the impact of a forest fire on timber production. SFM Research Note No.66. Sustainable Forest Management Network.  
[http://www.ales.ualberta.ca/forestry/Sustainable\\_Forest\\_Management/Publications/ResearchNotes.aspx](http://www.ales.ualberta.ca/forestry/Sustainable_Forest_Management/Publications/ResearchNotes.aspx). 6 pp.

### Chapters in Books

- Martell, D.L. and E.A. Gunn (2014). The development and management of forest management decision support systems in Canada. pp 48-70 in Computer-based tools for supporting forest management: The experience and expertise world-wide. Borges, Jose G and Nordström, Eva -Maria and Garcia Gonzalo, Jordi and Hujala, Teppo and Trasobares, Antonio, eds. Department of Forest Resource Management, Swedish University of Agricultural Sciences, Umea, Sweden. ISBN 978-91-576-9236-8 **(Refereed)**
- Dean, C.B., Braun, W.J., Martell, D.L., and Woolford, D.G. 2012. Interdisciplinary training in a collaborative research environment. In Nicholas Chrisman and Monica Wachowicz (Eds.). The Added Value of Scientific Networking: Perspectives from the GEOIDE Network Members 1998-2012. GEOIDE Network, Quebec, Canada. ISBN 978-1-927371-68-8 **(Refereed)**
- Martell, D.L. 2009. Fire. Chapter 14 of Natural Disasters, *Canadian Edition*. Patrick L. Abbott and Claire Samson, pp. 405-433. McGraw-Hill Ryerson Limited, Toronto. Major revision of Chapter 15 of Natural Disasters, Sixth edition by Patrick L. Abbott, pp 413-440.
- Martell, D.L. 2007. Forest Fire Management: current practices and new challenges for operational researchers. Chapter 26 in Handbook of Operations Research in Natural Resources. Edited by Andres Weintraub, Carlos Romero, Trond Bjørndal, and Rafael Epstein with the collaboration of Jaime Miranda. Springer Science+Business Media, New York, NY. Pp 489-509.
- Martell, D.L. 2001. Forest Fire Management. Chapter 15 of Forest fires: Behavior and ecological effects. Johnson, E.A., and Miyanishi, K., eds. 2001. Academic Press, San Diego, CA, 594 pp.
- Grissom, P., M.E. Alexander, B. Cella, F. Cole, J.T. Kurth, N.P. Malotte, D.L. Martell, W. Mawdsley, J. Roessler, R. Quillin, and P.C. Ward. 2000. Effects of climate change on management and policy: mitigation options in the North American boreal forest. Chapter 6 in Fire, Climate Change, and Carbon Cycling in the Boreal Forest. E.S. Kasischke and B.J. Stocks, Editors. Springer-Verlag, New York, pp. 85-101.
- Anderson, K., D.L. Martell, M.D. Flannigan, and D. Wang. 2000. Modeling of fire occurrence in the boreal forest region of Canada. Chapter 19 in Fire, Climate Change, and Carbon

Cycling in the Boreal Forest. E.S. Kasischke and B.J. Stocks, Editors. Springer-Verlag, New York, pp. 357-367.

French, N.H.F., E.S. Kasischke, B.J. Stocks, J.P. Mudd, D.L. Martell, and B.S. Lee. 2000. Carbon release from fires in the North American boreal forest. Chapter 21 in *Fire, Climate Change, and Carbon Cycling in the Boreal Forest*. E.S. Kasischke and B.J. Stocks, Editors. Springer-Verlag, New York, pp. 377-388.

The regional impacts of climate change: an assessment of vulnerability. Edited by R.T. Watson, M.C. Zinyowera, and R.H. Moss. A Special Report of IPCC Working Group II. *Published for the Intergovernmental Panel on Climate Change*. Cambridge University Press. 1998. *Contributor* to Chapter 8. North America. pp. 253-330.

Saporta, R., J.R. Malcolm and D.L. Martell. 1998. The impact of climate change on Canadian forests. Chapter Six of the Canada Country Study: *Climate Impacts and Adaptation in Volume VII: National Sectoral Volume*. G. Koshida and W. Avis, Eds. Environment Canada. pp. 319-382.

#### **Other Papers, Conference Proceedings and Technical Reports (not refereed)**

Martell, D.L. 2014. Wildland fire management and tourism: a need to strengthen an important symbiotic relationship. *BC Forest Professional* 21(3): 18-19.

Grunstra, M.G. and D.L. Martell (2013). Along a Rickety Road: One Hundred Years of Railway Fire in Ontario's Forests. *Forestory* 4(1): 5-10.

Martell, D.L. 2011. Wandering around the plants: Why I spent two summers on an Ontario forest fire incident management team. *Canadian Operational Research Society Bulletin*. 45(4): 16-23.

Mariam Sánchez-Guisández, Wenbin Cui, and David L. Martell. 2007. A decision support system for evaluating fuel management strategies for wildland urban interface areas. *Proceedings, Wildfire 2007*. Sevilla, Spain. May 13-17, 2007.

Martell, D.L. 2006. Addressing Uncertain Fire Impacts in Spatial Forest Management Planning – a Literature Review. Report Prepared for the Forest Management Planning Section of the Ontario Ministry of Natural Resources. December 4, 2006. 50 pp.

Beverly, J.L. and D.L. Martell. 2003. Characterizing extreme dry-spell and forest fire events in the province of Ontario, Canada. *Proceedings of the Fifth Symposium on Fire and Forest Meteorology*, November 16-20, 2003, Orlando, Florida. American Meteorological Society, Boston. J9.5.

Amiro, B.D., K. A. Logan, B. M. Wotton, M. D. Flannigan, J. B. Todd, B. J. Stocks, and D. L. Martell. 2003. The weather of large fires in the Canadian boreal forest. *Proceedings of the Fifth Symposium on Fire and Forest Meteorology*, November 16-20, 2003, Orlando, Florida. American Meteorological Society, Boston. P1.5.

- Podur, J, D.L. Martell and F. Csillag. 2003. Spatial point pattern analysis of lightning-caused forest fires in the boreal forest region of Ontario. *In* Systems Analysis in Forest Resources – Proceedings of the Eighth Symposium, September 27- 30, 2000. Snowmass Village, Colorado, U.S.A. Edited by G.J. Arthaud and T.M. Barrett. Kluwer Academic Publishers, Boston, pp. 61-68.
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- Martell, D.L., R.J. Drysdale, G.E. Doan and D. Boychuk. 1984. An analysis of the Ontario Ministry of Natural Resources' forest fire initial attack aircraft requirements. A&FMC Pub. No. 140. Aviation & Fire Management Centre, Ontario Ministry of Natural Resources. Sault Ste. Marie, Ontario.
- Martell, D.L. 1981. Implementing computer technology in forest fire management. In Computer Modelling: Its Application in Fire Management. J.E. Lotan (Editor). Proceedings, Intermountain Fire Council Symposium. Salt Lake City, Utah. Oct. 21, 1981. pp. 74- 85.
- Martell, D.L. 1978. The potential application of minicomputer technology in forest fire management. Faculty of Forestry and Landscape Architecture. University of Toronto. 63 pp.
- Martell, D.L. 1976. The use of historical data to predict forest fire occurrence. Inf. Rep. IR-3. Forest Fire Control Branch Ontario Ministry of Natural Resources. 19 pp.
- Cunningham, A.A. and D.L. Martell. 1976. The construction and empirical evaluation of a classification scheme for expressing subjective likelihood assessments. Working Paper 76-19. Department of Industrial Engineering. University of Toronto. 23 pp

## Papers Presented

- Kuhlmann, C.A., Rios, I., Weintraub, A., Wets, R. J.-B., Woodruff, D.L., and Martell, D.L. 2015. Using discrete stochastic fire scar scenarios to evaluate landscape management strategies. Paper presented at the 6<sup>th</sup> International Fire Ecology & Management Congress. San Antonio, Texas. November 19, 2015. **(Invited)**
- Martell, D.L., Santiago, R., Wotton, B.M., Boychuk, D., Evens, J., McFayden, C., Stacey, A. and Woolford, D. 2015. [The development and use of forest fire detection system performance measures](#). Paper presented at the INFORMS Annual Meeting, Philadelphia, Pennsylvania, November 3, 2015. **(Invited)**
- Ruppert, J., Martell, D.L., Gunn, E.A, and Fortin, M.-J. 2015. Can both Woodland Caribou and Timber Production Coexist on Boreal Forest Landscapes? Paper presented at the CORS/INFORMS International Conference. Montreal, June 14 – 17, 2015. **(Invited)**
- Boychuk, D., Woolford, D., Martell, D.L., McFayden, C. and Stacey, A. 2015. Decision Support Systems for Daily Aerial Detection of and Response To Wildland Fires in Ontario. Paper presented at the CORS/INFORMS International Conference. Montreal, June 14 – 17, 2015. **(Invited)**
- Martell, D.L. 2015. Strategic Planning Challenges in the Forest Sector. NSERC Value chain optimization research network summer school. Montreal, May 14, 2015. **(Invited)**
- Martell, D.L., C. Buttazzoni, B. K. Pagnoncelli and A. Piazza (2014). Forest and wildland fire management resource sharing. INFORMS 2014. San Francisco, California, November 10, 2014. **(Invited)**
- McFayden, C., D.L. Martell, D. Woolford, M. Wotton, A. Stacey and D. Boychuk (2014). Conceptual Decision Support System for Aerial Detection: Aerial Detection Demand Index. Wildland Fire Canada 2014, Halifax, Nova Scotia.
- Ruppert, J.L. W., C. Daniel, M.-J. Fortin, E. Gunn and D.L. Martell (2014). Can timber production and woodland caribou coexist on flammable boreal landscapes? Value Chain Optimization Research Workshop. Dalhousie University. Halifax, Nova Scotia, Canada (Poster).
- Weintraub, A., D.L. Martell and J.J. Troncoso (2014). A heuristic for satisfying adjacency constraints when scheduling timber harvests on flammable forest landscapes. Barcelona, Spain, July 15, 2014. **(Invited)**
- Martell, D.L. and N.A. Clark (2014). Using GPS data to model forest fire initial attack airtanker operations. IFORS 2014 – 20<sup>th</sup> Conference of the International Federation of Operational Research Societies, Barcelona, Spain, July 15, 2014. **(Invited)**
- Martell, D.L., C. McFayden, R. Santiago, D. Woolford and M. Mike Wotton (2014). The Use of GPS Data to Estimate Forest Fire Detection Probabilities. Paper presented at the Canadian Operational Research Society Annual Meeting, Ottawa. May 26 – 28, 2014. **(Invited)**
- Constantino, M.F., M.C. Fonseca and D.L. Martell (2014). Optimizing the containment of large wildfires. Paper presented at the Large Wildland Fires: Social, Political and Ecological Effects conference, Missoula, Montana, May 19-23, 2014.

- Martell, D.L. (2014). Forest fire management: a risk management perspective. Friday Forum: Institute for Catastrophic Loss Reduction, Toronto, Ontario, April 11, 2014. **(Invited)**
- Ruppert, J.L. W., C. Daniel, M.-J. Fortin, E. Gunn and D.L. Martell (2014). Can timber production and woodland caribou coexist on flammable boreal landscapes? University of Alberta, Department of Renewable Resources. Edmonton, Alberta, Canada. **(Invited)**
- Martell, D.L. 2014. Request for model development assistance. Paper presented at the Ontario Ministry of Natural Resources Analyst Workshop 2014, Sault Ste. Marie, Ontario, February 11-12, 2014.
- Martell, D.L. 2013. Forest and Wildland Fire Management Analytics: Some Statistical Challenges. Paper presented at the BIRS Workshop on Managing Fire on Populated Landscapes. Banff International Research Station. Banff, Alberta, October 20 - 25, 2013. **(Invited)**.
- Martell, D.L., C. McFayden, R. Santiago, D. Woolford and B.M. Wotton. 2013. The Development and use of Forest Fire Detection Probabilities for Detection Patrol Route Planning. Paper presented at INFORMS Annual Meeting, Minneapolis, Minnesota, October 6, 2013. **(Invited)**
- Solari, L.S., Martell, D.L., Watson, J.P., Weintraub, A, Wets, R. and Woodruff, D. 2013. A progressive hedging approach to managing harvesting operations on flammable forest landscapes. Paper presented at INFORMS Annual Meeting, Minneapolis, Minnesota, October 6, 2013. **(Invited)**
- Minas, J., J. Hearne and D.L. Martell. 2013. Incorporating habitat requirements in multi-period fuel management planning. Paper presented at the 15th Symposium on Systems Analysis in Forest Resources. Quebec, August 21, 2013.
- Martell, D.L. 2013. Value chains in the boreal forest region of Canada: a risk management perspective. Paper presented at the 15th Symposium on Systems Analysis in Forest Resources. Quebec, Canada. August 20, 2013. **Invited plenary talk**
- Martell, D.L., A. Albert-Green, J. Braun, J. Colgan, R. Eno, M. Grunstra, A. Paudel and L. Zang. 2012. The evolution of forest fire management in northeastern Ontario. Paper presented at the 5th International Fire Ecology and Management Congress, Dec. 3-7, 2012, Portland, Oregon.
- Minas, J., J. Hearne and D.L. Martell. 2012. A spatial optimization model for multi-period landscape level fuel management. Paper presented at the 5th International Fire Ecology and Management Congress, Dec. 3-7, 2012, Portland, Oregon.
- Martell, D.L., C. McFayden and D. Woolford. 2012. Development and field-testing of a forest fire detection decision support system. Paper presented at INFORMS Annual Meeting, Phoenix, Arizona, October 15, 2012. **(Invited)**
- Weintraub, A., D. L. Martell and J. Troncoso. 2012. Addressing adjacency concerns while managing flammable forest landscapes. Paper presented at INFORMS Annual Meeting, Phoenix, Arizona, October 15, 2012. **(Invited)**

- Martell, D.L., B. J. Stocks and L. Zang. 2012. Forest fire management expenditures in Canada Post-1970: Trends and Analysis. Paper presented at Wildland Fire Canada 2012, Kananaskis, Alberta, October 1-4, 2012. **(Invited)**
- Clark, N.A. and D.L. Martell. 2012. Modelling forest fire initial attack airtanker operations. Paper presented at the Annual Meeting of the Canadian Operational Research Society. June 11-13, 2012. Niagara Falls, Ontario. **(Invited)**
- Gunn, E. and D.L. Martell. 2012. Strategic decision support for the forest value chain. Paper presented at the Annual Meeting of the Canadian Operational Research Society. June 11-13, 2012. Niagara Falls, Ontario. **(Invited)**
- Minas, J., J. Hearne and D.L. Martell. 2012. Spatial optimization of multi-year landscape-level fuel treatment planning. Paper presented at the Annual Meeting of the Canadian Operational Research Society. June 11-13, 2012. Niagara Falls, Ontario. **(Invited)**
- Woolford, D.G., A. Albert-Green, J. Cao, C. Dean and D.L. Martell. 2012. Temporal changes and climate effects on the seasonality of forest fire risk. Paper presented at the Annual Meeting of the Canadian Operational Research Society. June 11-13, 2012. Niagara Falls, Ontario. **(Invited)**
- Clark, N. and D.L. Martell. 2012. Modeling forest fire initial attack airtanker operations. Poster presented at the 2012 INFORMS Conference on Business Analytics and Operations Research. Huntington Beach, California. April 15-17, 2012.
- Woolford, D., A. Albert-Green, J. Cao, C.B. Dean and D.L. Martell. 2012. Detecting temporal changes in the seasonality of forest fire risk in Canada. Paper presented at the American Association for the Advancement of Science Annual Meeting, Vancouver, British Columbia, February 16-20, 2012. **(Invited)**
- Martell, D.L. 2011. Managing Flammable Forest Landscapes: An Operational Research Perspective. Symposium on Systems Analysis in Forestry. Maitencillo, Chile. March 10, 2011. **(Invited plenary address)**
- John Braun, J., A. Albert-Green, J. Colgan, D.L. Martell and L. Zang. 2011. Statistical Analysis of Ontario's Historical Forest Fire Records. GEOIDE Webinar. University of Western Ontario. April 6, 2011.
- Martell, D.L. 2011. Putting and leaving more fire on our forest landscapes. 2011 World Conference on Natural Resource Modeling. Ottawa, Ontario, Canada, June 14-17, 2011. **(Invited keynote address).**
- Albert-Green, A., C. Dean, D. Woolford and D. L. Martell. 2011. Temporal Trends in Forest Fire Season Length. Paper presented at Statistics 2011 Canada: 5th Canadian Conference in Applied Statistics/ 20th conference of the Forum for Interdisciplinary Mathematics - Interdisciplinary Mathematical Statistical Techniques, July 1-4, 2011, Concordia University, Montreal, Quebec, Canada.
- Woolford, D.G., W. J. Braun, A. Albert-Green and D. L. Martell. 2011. Modelling the Ontario Fire Weather Index. Paper presented at Statistics 2011 Canada: 5th Canadian Conference

- in Applied Statistics/ 20th conference of the Forum for Interdisciplinary Mathematics - Interdisciplinary Mathematical Statistical Techniques, July 1-4, 2011, Concordia University, Montreal, Quebec, Canada.
- Martell, D.L., C. McFayden and D. Woolford. 2011. Incorporating subjective assessments of detection system performance in fire detection planning. Paper presented at the INFORMS Annual Meeting. Charlotte, N, November 14, 2011. **(Invited)**
- Martell, D.L., R. McAlpine and C. McFayden. 2010. Evaluating Forest and Wildland Fire Detection Systems. INFORMS Annual Meeting. Austin, Texas. November 8, 2010. **(Invited)**
- Martell, D.L. 2010. Incorporating fire ignition and spread models in fire and forest management decision support systems. BIRS / MITACS workshop on front propagation in heterogeneous media: mathematical, numerical and statistical issues in modelling a forest fire front. Banff, Alberta. October 19, 2010.
- Savage, D.W., B. White, K. Peck and D. L. Martell. 2010. Integrating Forest Management and the Energy Sector to Reduce the Disturbance Footprint in Alberta. MITACS / CORS Conference. Edmonton, Alberta. May 27, 2010. **(Invited)**
- Myers, J, D.L. Martell and J.C. Beck. 2010. Modeling Maximum Opening Size Constraints in Forest Harvest Scheduling. MITACS / CORS Conference. Edmonton, Alberta. May 27, 2010. **(Invited)**
- Martell, D.L. 2010. Queueing models of forest fire management systems. MITACS / CORS Conference. Edmonton, Alberta. May 28, 2010. **(Invited)**
- Martell, D.L. 2010. Operational Research Applications in Forest and Wildland Fire Management. Universidad de Chile. Santiago. March 24, 2010. **(Invited)**
- Martell, D.L., S. D'Amours and E. Gunn. 2010. NSERC VCO Network: Optimizing the Modern Forest Bioeconomy Network. Ontario Ministry of Natural Resources Analyst's Workshop. Sault Ste. Marie, Ontario. March 9, 2010. **(Invited)**
- Martell, D.L. 2010. Forest and Wildland Fire Management Decision Support Systems. Alberta Sustainable Resources Development Fire Management Workshop. Edmonton, Alberta. February 9, 2010. **(Invited)**
- Smith, T., A. Asikainen, P. Ralevic, D.L. Martell and D. Röser. 2009. Biomass in Canada - a renewed opportunity for Operations Research. Fields Industrial Optimization Seminar, Fields Institute, Toronto, December 1, 2009. **(Invited)**
- Martell, D.L., L. Zang, H. Sun, A. Albert-Green and J. Braun. 2009. Assessing the impact of fire suppression on area burned – what's the problem? Association for Fire Ecology International Congress. Savannah, Georgia. Nov 30 – Dec 4, 2009.
- Martell, D.L. 2009. Timber Production on Flammable Boreal Forest Landscapes: An Operational Research Perspective. EIS 2009 EURO Workshop. Solsona, Spain. August, 2009. **(Invited)**

- Martell, D.L. 2009. Operational Research Applications in Forest Fire Management. EIS 2009 EURO Workshop. Solsona, Spain. August, 2009. (Invited)
- Albert-Green, Alisha, W. John Braun, David L. Martell, and Douglas G. Woolford. 2009. Modelling the Ontario Fire Weather Index. TIES 2009 – the 20th Annual Conference of The International Environmetrics Society, University of Bologna, Italy, July 5-9, 2009.
- Savage, D.W. and D.L. Martell. 2009. Managing for Non-timber Forest Values under Uncertainty. Paper presented at 2009 CORS/INFORMS Joint International Meeting, Toronto, June 14-17, 2009. **(Invited). \*\*\* check \*\*\*\***
- Martell, D.L. and D.W. Savage. 2009. Dealing with uncertain disruptions to forest value changes. FOR@C Summer School. Montreal. June 3, 2009. **(Invited)**
- Martell, D.L. 2009. The Boreal Forest Region of Canada: An Operational Research Perspective. Aracruz Cellulose Seminar, Aracruz, Brazil, April 28, 2009. **(Invited)**.
- Martell, D.L. 2009. Spatial Forest Management Planning Under Uncertainty Due to Natural Disturbance: SFMN Project Overview - Spatial Forest Management Planning Uncertainty Due to Natural Disturbance. Showcase presentation. Sustainable Forest Management Network Fifth National Conference. Gatineau, Quebec. April 22, 2009
- Martell, D.L. 2009. The Boreal Forest Region of Canada: An Operational Research Perspective. Paper presented in CIRRELT / MITACS Seminar. Interuniversity Research Centre on Enterprise Networks, Logistics and Transportation (CIRRELT), Montreal, March 20, 2009. **(Invited)**.
- Martell, D.L. 2008. Spatial Forest Management Planning Under Uncertainty Due to Natural Disturbance - Project Overview. Spatial Forest Management Planning Under Uncertainty Due to Natural Disturbance. Ontario Ministry of Natural Resources and Sustainable Forest Management Network Project Workshop. Sault Ste. Marie, Ontario. December 8, 2008. **(Invited)**.
- Martell, D.L. 2008. Spatial Forest Management Planning Under Uncertainty Due to Natural Disturbance - Project Overview. Spatial Forest Management Planning Under Uncertainty Due to Natural Disturbance. Sustainable Forest Management Network Workshop. Edmonton, Alberta. November 27, 2008.
- Martell, D.L. 2008. Integrated fire and forest management. Spatial Forest Management Planning Under Uncertainty Due to Natural Disturbance. Sustainable Forest Management Network Workshop. Edmonton, Alberta. November 27, 2008.
- D.L. Martell, D.L., J. Podur, B.J. Stocks, and B.M. Wotton. 2008. Looking for signs of climate change in the historical forest fire record Banff International Research Station Workshop on Climate Change Impacts on Ecology and the Environment. Banff, Alberta. May 4-9, 2008. **(Invited)**
- Acuna, M., W. Cui, D. L. Martell, C. Palma and A. Weintraub. 2007. Integrating fire and forest management planning. INFORMS Seattle, November 6, 2007. **(Invited)**

- Martell, D.L. 2007. Integrated fuel and timber management on flammable forest landscapes. Hanover Forest Science Seminar Series. Department of Forestry, Michigan State University. October 16, 2007. **(Invited)**
- Podur, J. and D.L. Martell. A compound Poisson model for area burned in Ontario. Canadian Operational Research Society Annual Meeting, London, Ontario. May 15, 2007. **(Invited)**
- Savage, D.W. and D.L. Martell. 2007. An evaluation of re-planning policies for dealing with fire-related uncertainty in forest management. Canadian Operational Research Society Annual Meeting, London, Ontario. May 15, 2007. **(Invited)**
- Martell, D.L. 2007. Modelling the Spatial Variability of Burned Area Across the Boreal Forest Region of Ontario. National Program for Complex Data Structures Workshop, Banff International Research Station. Banff, Alberta. April 10, 2007. **(Invited)**
- Martell, D.L. 2007. Assessing the impact of fire suppression on burned area in the boreal forest region of Canada. Invited session on “Controversies in Forest Fire Suppression and Management”, American Association for the Advancement of Science Annual Meeting. San Francisco. February 18, 2007. **(Invited)**
- Martell, D.L. 2007. Forest fire management in Canada - we have to stop behaving like this. Canadian Interagency Forest Fire Centre National Conversation online seminar. January 24, 2007. **(Invited)**
- Martell, D.L., A. Weintraub, C. Palma and W. Cui. 2006. A spatial fuel management decision support system. 3<sup>rd</sup> International Fire Ecology & Management Congress. San Diego, California. November 13-17, 2006.
- Martell, D.L. , W. Cui, C. Palma and A. Weintraub. 2006. Deciding where to establish fuel breaks on flammable forest landscapes. IFORMS Annual Meeting. Pittsburgh, Pennsylvania. November 5–8, 2006. **(Invited)**
- Acuna, M., D. Martell, A. Weintraub, C. Palma and W. Cui. 2006. Integrating timber harvesting and fuel management decision-making. 12<sup>th</sup> Systems Analysis in Forestry Symposium. Burlington, Vermont. September 5-8, 2006.
- Adamowicz, V., D. L. Martell, G.W. Armstrong and P. Boxall. 2006. Improving fire management using values at risk. Sustainable Forest Management Network Conference. Edmonton, Alberta. June 20-22, 2006.
- Martell, D.L., M. Acuña, W. Cui, C. Palma, D. Robak and A. Weintraub. 2006. FireSmart planning for timber production. Sustainable Forest Management Network Conference. Edmonton, Alberta. June 20-22, 2006.
- Savage, D.W. and D.L. Martell. 2006. Using a dynamic replanning interval strategy to deal with uncertainty in spatial forest management planning. Edmonton, Alberta. June 20-22, 2006.
- Martell, D.L. 2006. Statistical analysis of forest fire activity. Statistical Society of Ottawa SSO 2006 Symposium - New Frontiers in Statistics. Ottawa, Ontario. April 20, 2006 **(Invited)**

- Martell, D.L. 2005. Dealing with uncertainty in forest management planning. OMNR Forest management planning analyst's meeting. Sault Ste. Marie, Ontario. December 14, 2005. **(Invited)**
- Martell, D.L. 2005. FireSmart Planning for Timber Production. Department of Rural Economy, University of Alberta. Edmonton, Alberta. December 5, 2005. **(Invited)**
- Martell, D.L. 2005. Adaptive Management of Flammable Forests. Paper presented at INFORMS Meeting, San Francisco, November 13-16, 2005. **(Invited)**
- Acuña, M., Palma, C., Weintraub, A., Martell, D.L., and W. Cui. 2005. Integrated Timber Harvest and Fire Management Planning. Paper presented at INFORMS Meeting, San Francisco, November 13-16, 2005. **(Invited)**
- Martell, D.L. 2005. Incorporating Uncertain Fire Impacts in Timber Supply Analyses. Paper presented at Risky Business: Supplying Forest Values in the Face of Uncertainty. Saskatoon, Saskatchewan, October 17=18, 2005. **(Invited)**
- Martell, D.L. 2005. FireSmart Forest Management in Timber Production and Wildland Urban Interface Areas. Special lecture for visiting delegation from the Forestry Bureau of Hebei Province, China. Faculty of Forestry, University of Toronto. October 12, 2005.
- Podur, J.J. and D.L. Martell. 2005. A simulation model for large forest fire management. Paper presented, 17th Triennial Conference of the International Federation of Operational Research Societies. Honolulu, Hawaii, July 11-15, 2005. **(Invited)**
- Martell, D.L. 2005. Forest Management Planning Under Uncertainty. FOR@C Summer School. Université Laval, Quebec, June 16 – 17, 2005. **(Invited)**
- Martell, D.L. 2005. Operational Research and Forest Fire Management in Canada. Department of Mathematics, Linköpings Universitet. Linköping, Sweden. June 9, 2005. **(Invited)**
- Podur, J.J and D. L. Martell. 2005. Growth and Suppression of Large Forest Fires in Ontario. Poster presented at the Fields Institute Workshop on Forest Fires and Point Processes. Toronto, May 24-28, 2005. **(Invited)**
- Martell, D.L. 2005. Forest Fire Management - A Systems Modelling Perspective. Workshop on Forest Fires and Point Processes. The Fields Institute. Toronto, Ontario. May 24, 2005 **(Invited)**
- Martell, D.L. 2005. Scenario Planning for Flammable Forests. CORS / SCRO National Conference. Halifax, Nova Scotia. May 16 – 18, 2005. **(Invited)**
- Martell, D.L. 2004. Spatial forest management planning under uncertainty due to natural disturbance. Alberta SFMN Partners Working Group Meeting. Edmonton, Alberta. December 16, 2004. **(Invited)**
- Martell, D.L. 2004. The impact of planning model structure on the management of flammable forests. INFORMS, Denver. Oct. 25. **(Invited)**.
- Palma, C., Cui, W., Martell, D.L., Robak, D. and Weintraub, A. 2004. Determining prevention values for forest fires. INFORMS, Denver. Oct. 25. **(Invited)**.

- Martell, D.L. 2004. Spatial forest management planning for landscapes influenced by natural disturbance processes. Paper presented, IPFRA Workshop. Toronto, Ontario. October 13, 2004. **(Invited)**.
- Martell, D.L. 2004. Dealing with uncertainty in sustainable forest management. Paper presented, CIF / SAF Conference. Edmonton, Alberta. October 4, 2004. **(Invited)**
- Martell, D.L. M. M. Sanchez-Guisandez and W. Cui. 2004. What's the probability that wildfire will threaten my home? Joint Statistical Meetings. Toronto, Ontario. August 9, 2004. **(Invited)**.
- Podur, J., and D.L. Martell. 2004. A simulation model of the growth and suppression of large forest fires in Ontario. CORS/INFORMS International Conference, Banff, Alberta. May 16-18, 2004. **(Invited)**
- Martell, D.L. 2004. Forest management planning side effects. Legacy Forest Symposium: Legacy Forest Symposium: Challenges for Adopting New Knowledge and Models in Forest Management, Thunder Bay, Ontario. May 12-13, 2004. **(Invited)**
- Martell, D.L., W. Cui, G. Morita, J.J. Podur, D. Savage and B.M. Wotton. 2004. Fire, Climate Change and Intensive Forest Management. Living Legacy Trust Forest Science: Enhanced Productivity - Knowledge Transfer Workshop. Thunder Bay, Ontario, April 28, 2004. **(Invited)**
- Martell, D.L. 2004. Operational Research and Forest Fire Management. 3T5 - 5T3 Engineering Alumnae Luncheon. Toronto, January 14, 2004. **(Invited)**
- Wenbin Cui, David L. Martell. 2003. Predicting spatially explicit burn probabilities across forest landscapes under extreme weather conditions. November 18-20, 2003, Toronto, Ontario Canada
- Espinoza, Ana C., Wenbin Cui and David L. Martell. 2003. Assessing the ecological implications of FireSmart Fire Management. Paper presented at the 2nd International Wildland Fire Ecology and Fire Management Congress. Orlando, Florida November 18, 2003.
- Acuña, Mauricio, Cristian Palma, Andrés Weintraub and D.L. Martell. 2003. Integrated timber harvest and fire management planning. Systems Analysis in Forestry Conference. Portland, Oregon. October 6th– 9<sup>th</sup>, 2003. **(Invited)**
- Grulich, F.E. and D.L. Martell. 2003. Estimating service times for forest fire initial attack airtanker queueing system models. Systems Analysis in Forestry Conference. Portland, Oregon. October 6th– 9<sup>th</sup>, 2003. **(Invited)**
- Beverly, J. L., and D. L. Martell. 2003. Simulation and goal programming models for prescribed surface-fire scheduling in protected white pine stands. Paper presented at the 45th annual Conference of the Canadian Operational Research Society. June 2-4th, 2003, Vancouver. **(Invited)**
- Martell, D.L. 2003. Wildland Fire Management - Challenges and Opportunities for Operational Research and Information Technology. INFORMS Practice Conference. Phoenix, Arizona. May 2 – 5, 2003. **(Invited)**

- Martell, D.L. 2003. Forest Fire Research at the University of Toronto. CIFFC Science & Technology Working Group Meeting. Quebec. September 18-19, 2003. **(Invited)**
- Martell, D.L., B.M. Wotton & K.A. Logan. 2003. People-caused fire occurrence modelling in Ontario. Statistical Society of Canada Conference. Halifax, Nova Scotia. June 10, 2003. **(Invited)**
- Beverly, J.L. and D.L. Martell. 2003. Simulation and goal programming models for prescribed surface-fire scheduling in protected white pine stands. Paper presented at the 45th annual Conference of the Canadian Operational Research Society, June 2-4<sup>th</sup>, 2003, Vancouver
- Beverly, J.L. and D.L. Martell. 2003. Simulation and goal programming models for prescribed surface-fire scheduling in protected white pine stands. Paper presented at the 45th annual Conference of the Canadian Operational Research Society, June 2-4<sup>th</sup>, 2003, Vancouver
- Martell, D.L. and R.S. McAlpine. 2003. Forest Fire Detection Economics. Fire Detection Workshop. Hinton, Alberta. March 25, 2003
- B.J. Stocks, M.D. Flannigan, B.M. Wotton, J.B. Todd, B.D. Amiro, K.A. Logan, E.M. Bosch, W.R. Skinner, D.L. Martell, and K.G. Hirsch. 2003. Projecting Climate Change-induced Impacts on Future Canadian Forest Fire Regimes. CCAIRN Forest Sector Conference. Prince George, British Columbia. Feb 18, 2003.
- Palma, C., Acuña, M. Weintraub, A, Martell, D., and Cui, W. 2002. Integration of forest and fire management decisions by spatial-strategic models. Paper presented at XI Congreso Latino-iberoamericano De Investigación De Operaciones, Concepcion, Chile.
- Beverly, J.L. and D.L. Martell. 2002. Emulating Natural Disturbance on Flammable Forest Landscapes. Paper presented at Canadian Institute of Forestry Annual Meeting & Conference. North Bay, Ontario. October 2, 2002
- Martell, D.L. and Hua, S. 2002. The Impact of Fuel, Weather and Fire Suppression Effort on the Area Burned by Forest Fires in the Province of Ontario. 4<sup>th</sup> International Workshop on Disturbance Dynamics in Boreal Forests. Prince George, British Columbia. August 14, 2002.
- Martell, D.L. 2002. Living with uncertainty when managing flammable forest landscapes. IFORS 2002, Edinburgh, Scotland. July 8-12.
- Martell, D.L. 2002. Les Impactes Économiques des Feux sur L'Approvisionnement de Bois. L'Amenagement Forestier et le Feu, Chicoutimi, Quebec, 9,10 et 11 avril, 2002. (Invited)
- Martell, D.L., Wenbin Cui, Kelvin Hirsch and R. McAlpine. 2002. FireSmart Management of Flammable Forest Landscapes. Systems Analysis in Forestry Symposium. Punta de Tralca, Chile. March 2002. (Invited)
- Martell, D.L. 2001. Economic Strategies and Techniques for Fire and Ecosystem Management. Fire in Ecosystem Management. Environmental Training Centre, Hinton, Alberta December 12, 2001. (Invited)

- Martell, D.L. 2001. Some Statistical Aspects of Forest Fire Management. Department of Statistical & Actuarial Sciences, University of Western Ontario. December 6, 2001. (Invited)
- Martell, D.L., B. M. Wotton and Wenbin Cui. 2001 An Investigation of the Effect of Fire Suppression on Burned Area in Boreal Forest Landscapes. INFORMS, Miami. Nov 5. (Invited)
- Martell, D.L. 2001. Forest Fire Management: Some Statistical Challenges. Department of Statistics, University of Toronto. October 25, 2001. (Invited)
- Martell, D.L. 2001. Incorporating post burn salvage decision-making into forest management planning systems. Paper presented at CORS 2001, Quebec, Quebec. May 8, 2001. (Invited).
- Martell, D.L. 2001. Using OR to Help Manage Flammable Forests. Paper presented at the Departamento de Ingenieria Industrial, Universidad de Chile, Santiago, Chile, April 18, 2001. (Invited)
- Martell, D.L. 2001. The Impact of Fire on Timber Supply. OMNR Fire Management Symposium Sault Ste. Marie, Ontario. February 27, 2001. To appear in the conference proceedings. R. Janser, Editor. (Invited)
- Martell, D.L. 2001. Forest fire management: why bother? Graduate Seminar, Faculty of Forestry, University of Toronto, February 13, 2001
- Beverly, J.L. and D.L. Martell. 2000. Historical fire cycles in Northwestern Ontario: implications for fire and forest management. Paper presented at the Symposium on Systems Analysis in Forest Resources, Snowmass Village, Colorado September 27-30, 2000. To appear in the conference proceedings. G. Arthaud, Editor.
- Podur, J. D. L. Martell and F. Csillag. 2000. A Preliminary Investigation of the Spatial Pattern of Forest Fires in Ontario. Paper presented at the Symposium on Systems Analysis in Forest Resources, Snowmass Village, Colorado September 27-30, 2000. To appear in the conference proceedings. G. Arthaud, Editor.
- Martell, D.L. 2000. Forest management challenged by fire. Paper presented at CORS 2000. Edmonton, Alberta, May 29, 2000 (Invited Plenary Address and Tutorial).
- Martell, D.L. 2000. The impact of management unit size on forest management planning under uncertainty. Paper presented at INFORMS Spring 2000, Salt Lake City, Utah, May 9, 2000. (Invited).
- Martell, D.L. 1999. Fire impact management planning. Landscape Modelling Workshop. Pacific Forestry Centre, Canadian Forest Service, Victoria, British Columbia. November 16, 1999. (Invited keynote address)
- Martell, D.L. and K. S. Islam. 1999. Spatial and temporal analysis of forest fire initial attack systems. INFORMS Philadelphia, November 9, 1999. (Invited)

- Martell, D.L., J. Beverly, T. Griffin and K.S. Islam. 1999. Forest fire management systems. Poster/Software demonstration. CASCON'99. Toronto, Ontario. November 8 - 11, 1999. (Invited)
- Martell, D.L. 1999. Assessing the Sustainability of Managed Flammable Forests. International Federation of Operational Research Societies 15<sup>th</sup> Triennial Conference Beijing, China. August 19, 1999 (Invited).
- Martell, D.L. 1999. Operational research and forest fire management policy analysis. Canadian Operational Research Society Annual Conference. Windsor, Ontario. June 8, 1999. (Invited)
- Martell, D.L. 1999. Operational research and forest fire management policy analysis. INFORMS Conference, Cincinnati, Ohio, May 4, 1999. (Invited)
- Martell, D.L. 1998. Sustainable Forest Management: Some Challenges For Operational Researchers. Southwestern Ontario Operations Research Day (SWORD '98), London, Ontario, October 3, 1998. (Invited)
- Rogers, J.S., D. L. Martell, D. Boychuk and R. Saporta. (1998). Simple models of flammable forests. INFORMS Conference, Montreal, Quebec, April 29, 1998. (Invited)
- Martell, D.L. and K. G. Hirsch. (1998) Assessing the impact of fire on timber supply. Alberta Land and Forest Service, Edmonton, Alberta, March 17, 1998. (Invited)
- Martell, D.L. (1998) The impact of fire on sustainable forest management in Alberta. Forest Protection Meeting. Alberta Land and Forest Service, Peace River, Alberta, March 16, 1998. (Invited)
- Martell, D.L. 1997. Fire and forest management systems. Paper presented at the Industrial Mathematics Seminar Series, The Fields Institute, Toronto. November 13, 1997. (Invited)
- Hirsch, K.G., P.N. Corey and D.L. Martell. 1997. Using expert judgement to model initial attack fire crew effectiveness in the boreal forest. The 2<sup>nd</sup> International Wildland Fire Conference, Wildland Fire Management and Sustainable Development, Vancouver, British Columbia, May 25-30. (Poster presentation)
- Islam, K.S. and David L. Martell. 1997. A Daily Airtanker Deployment Model for Forest Fire Control. Paper presented at the INFORMS annual meeting. San Diego, May 6, 1997. (Invited)
- Martell, D.L. 1997. The impact of fire on a managed forest. Paper presented at the INFORMS annual meeting. San Diego, May 6, 1997. (Invited)
- Martell, D.L. 1997. What is sustainable forest management? Invited panel member, Discussion Forum on Sustainable Management of the Boreal Forest. Institute for Environmental Studies & Faculty of Forestry, University of Toronto. April 7, 1997.
- Martell, D.L. 1997. Spatial variation in the area burned by forest fires in Ontario. Ecology Seminar Series. Departments of Botany and Zoology, University of Toronto. March 17, 1997. (Invited)

- Martell, D.L. 1997. Forest fires in Canada. Later Life Learning Lecture Series, "Nature's fury: examining natural disasters". Innis College, University of Toronto. March 13, 1997. (Invited)
- Martell, D.L. 1996. Fire management, timber production and natural processes in the boreal forest region of Canada. Paper presented at the Interior West Fire Council Conference. Saskatoon, Saskatchewan. October 21-24, 1996. (Invited)
- Martell, D.L. 1996. A hierarchical approach to forest fire management in Ontario. Paper presented to Operations Management Seminar Series, Faculty of Management, University of Toronto. September 20, 1996. (Invited)
- Martell, D.L. 1996. Integrated management of airtankers for forest fire control. Paper presented at the IFORS Conference, Vancouver, British Columbia, July 8-12. (Invited National Contribution)
- Islam, K.M.S., and D.L. Martell. 1996. Modelling a daily airtanker deployment problem. Paper presented at the INFORMS annual meeting, Washington, D.C., May 4-8. (Invited)
- Islam, K.M.S., and D.L. Martell. 1996. Finding time-dependant locations for daily deployment of airtankers. Paper presented at Optimization Days, Montreal, May 11-13. (Invited)
- Martell, D. L. 1996. Are people contributing to increased fire activity in Canada? Paper presented at Workshop on Increasing Forest Fire Activity in Canada, Edmonton, April 1-4. **(Invited)**
- Martell, D.L. 1995. Airtanker decision support systems for forest fire management in Ontario. Paper presented at Ontario Ministry of Natural Resources airtanker management workshop. Sudbury, Ontario, October 24, 1995. **(Invited)**
- Anderson, K., D.L. Martell and M. Flannigan. 1995. Forest fire occurrence and global warming in the North American boreal forest. Paper presented at the Biomass Burning, Climate Change and the Carbon Cycle in the North American Boreal Forest Workshop. Fairbanks, Alaska, September 11, 1995. (Invited)
- Martell, D.L. and M. Mandelbaum. 1995. Flexible forest management planning. Paper presented at the INFORMS Spring 1995 conference. Los Angeles, California, April 23-26. **(Invited)**
- Islam, K.M.S., and D.L. Martell. 1995. A daily airtanker deployment model. Paper presented at the Canadian Operational Research Society Annual Conference, Calgary, Alberta, May 16-18.
- Martell, D. L. and D. Boychuk. 1995. Integrated fire and forest management planning. Paper presented at "Northern Exposure", Northern Forestry Program Information Workshop on Practical Results and Technology Development. Timmins, Ontario. March 21, 1995. (Invited)
- Boychuk, D., A.H. Perera, M.T. Ter-Mikaelian, D.L. Martell and C. Li. 1995. Modelling fire disturbance patterns and the dynamics of landscape age distribution. Paper presented at the Impacts of Fire on the Landscape Workshop, Aviation, Flood and Fire Management

- Branch, Ontario Ministry of Natural Resources, Sault Ste. Marie, Ontario. January 30-31, 1995. (Invited)
- Martell, D.L., D. Boychuk, J.I. MacLellan, B.M. Sakowicz and R. Saporta. 1994. Decision analysis of the level of forest fire protection in Ontario. Paper presented at the Sixth Symposium on Systems Analysis and Management Decisions in Forestry, Pacific Grove, California. September 6-9, 1994.
- Boychuk, D., C. Li, D.L. Martell, A.H. Perera and M.T. Ter-Mikaelian. 1994. Effect of scale and fire disturbance patterns on forest age class distributions. Paper presented at Ontario Forest Research Institute. August 29, 1994. (Invited)
- Martell, D.L. 1994. Evaluating foam: a systems level perspective. Paper presented at the International Wildland Fire Foam Symposium, Thunder Bay, Ontario. May 3, 1994. (Invited)
- Islam, K. and D.L. Martell. 1994. Airtanker home basing under a budget constraint. Paper presented at CORS'94 - Optimization Days. Montreal, Quebec. May 29 - June 1, 1994. (Invited)
- Martell, D.L. 1994. Strategic planning for forest fire management. Paper presented at the Canadian Committee on Forest Fire Management, Economics of Fire Management Workshop, Winnipeg, Manitoba. November 28-30, 1994. (Invited)
- Boychuk, D. and D.L. Martell. 1994. A stochastic programming model of forest management under risk of fire. Paper presented at TIMS/ORSA Joint National Meeting, Boston, Mass. April 27, 1994. (Invited)
- Martell, D.L. 1994. Location and transportation problems in forest fire management. Centre de Recherche sur les Transports. Montreal. March 28. (Invited)
- Boychuk, D. and D.L. Martell. 1994. An evaluation of airtankers for British Columbia using ATM (Airtanker Model). Paper Presented to Forest Protection Branch, British Columbia Ministry of Forests. March 15, 1994. Victoria, British Columbia. (Invited)
- MacLellan, J.I. and D.L. Martell. 1994. Decision support for the home basing of airtankers for forest fire control in Ontario. Mini-Paper Night, Toronto Section, Canadian Operational Research Society. March 9, 1994. (Invited)
- Martell, D.L. 1993. OR applications in forest fire management. Faculty of Administrative Studies, York University. July 14. (Invited)
- Martell, D.L. 1994. Forest fire management systems research. Canadian Committee on Forest Fire Management. Charlottetown, Prince Edward Island. January 21. (Invited)
- Martell, D.L. and D. Boychuk. 1993. Levels of fire protection for sustainable forestry in Ontario. Paper presented at Level of Fire Protection Workshop, Sault Ste. Marie. September 21-22. (Invited)
- MacLellan, J.I. and D. L. Martell. 1993. Basing airtankers for forest fire control in Ontario. Paper presented at the Canadian Operational Research Society Practice Competition, CORS

- Annual Conference. Halifax, Nova Scotia, May 25 - 27, 1993. Awarded Third Prize. (Invited)
- Boychuk, D. and D.L. Martell. 1993. Timber management with forest fire risk: the effects of policies and forest structure. Paper presented at the Canadian Operational Research Society 35th Annual Conference. Halifax, Nova Scotia, May 25 - 27, 1993. (Invited)
- MacLellan, J.I. and D. L. Martell. 1993. An examination of forest fire airtanker fleet composition over time. Paper presented at the Canadian Operational Research Society 35th Annual Conference. Halifax, Nova Scotia, May 25 - 27, 1993.
- Martell, D.L. 1993. Evaluating forest fire losses and fire management strategies. Paper presented to the Ontario Ministry of Natural Resources, Fire Management Comptrollership Workshop. Sault Ste. Marie, Ontario, March 24, 1993.
- Martell, D.L. 1993. Forest fire management systems workshop. Invited workshop presented at the International Symposium on Systems Analyses and Management Decisions in Forestry. Valdivia, Chile, March 12, 1993.
- Martell, D.L. and A. Tithecott. 1992. The daily deployment of airtankers to fight forest fires in northwestern Ontario. Paper presented at the ORSA/TIMS Joint National Meeting. San Francisco, California, November 2, 1992.
- Martell, D.L. 1992. Operational research supports forest fire management in Ontario. Paper presented at the CORS'92, the Canadian Operational Research Society 34th Annual Conference, Teacher's Workshop. Toronto, Ontario, June 1, 1992.
- Boychuk, D. and D.L. Martell. 1992. A model to assess the effect of a carbon tax on timber management and fire protection decisions in the boreal forest. Paper presented at CORS'92, the Canadian Operational Research Society's 34th Annual Conference, Toronto, Ontario, June 1, 1992.
- Martell, D.L., A. Tithecott and J Caputo. 1991. Airtanker deployment analysis project. Aviation and Fire Management Centre, Ontario Ministry of Natural Resources. Sault Ste. Marie, Ont. March 25, 1991.
- Martell, D.L. 1990. Forest fire management systems. Later Life Learning Lecture Series, "The Earth Sciences Centre: Delight in Research". Department of Public and Community Relations, University of Toronto, December 3, 1990.
- Martell, D.L. 1990. Forest fire management in Ontario. Toronto Board of Education Professional Development Day. Faculty of Forestry, University of Toronto. Nov. 2, 1990.
- Martell, D.L. 1990. The impact of fire on timber supply. 1990 Annual Meeting, Canadian Committee on Forest Fire Management. Sault Ste. Marie, Ontario. January 23-35. (Invited)
- Martell, D.L. and R. G. Davis. 1989. Assessing the impact of a forest fire on timber supply in Ontario. Forestry Research Marketplace. Toronto, Ontario. November 22. (poster)
- Martell, D.L. 1989. Fire and timber supply analysis. Graduate Seminar, Faculty of Forestry, University of Toronto. Toronto, Ontario. November 21. (Invited)

- Martell, D.L. 1989. Assessing the impact of fire on timber supply in Ontario. Forest Resources Group Applied Science and Technology Seminar, Ontario Ministry of Natural Resources, Sault Ste. Marie, Ontario. November 17. (Invited)
- Martell, D.L. 1989. Fire research at the University of Toronto. 7th Annual Meeting, Great Lakes Forest Fire Compact. Toronto, Ontario. August 15. (Invited)
- Martell, D.L. 1989. An evaluation of models used to assess the impact of forest fires on timber supply. 1989 CORS/TIMS/ORSA Joint National Meeting. Vancouver, BC. May 9. (Invited)
- Martell, D.L. 1988. Searching for forest fires with public assistance. 1988 TIMS/ORSA Joint National Meeting. Washington, DC. April 27, 1988.
- Martell, D.L. 1987. Development of a decision-making aid for forest fire detection system managers. Graduate Seminar, Faculty of Forestry, University of Toronto. November 17.
- Martell, D.L. 1986. Decision analysis for forest management in Ontario. Ontario Ministry of Natural Resources Decision Analysis Workshop. Toronto, Ontario. November 3, 1986.
- Martell, D.L. and J. Fortin. 1986. Daily deployment of air tankers for initial attack on forest fires in the province of Quebec. 28th Annual Meeting, Canadian Operational Research Society. Toronto, Ontario. June 2-4, 1986.
- Boychuk, D. and D.L. Martell. 1985. A model to help determine seasonal forest fire fighter requirements in Ontario. 27th Annual Meeting, Canadian Operational Research Society. Halifax, Nova Scotia. May 21 - 23, 1985.
- Booth, D.L. and D.L. Martell. 1984. Daily regional forest fire initial attack crew requirements. TIMS/ORSA Joint National Meeting. San Francisco, California. May 15.
- Martell, D.L. 1983. Computer technology in forest fire management. Northern Ontario Section, Canadian Institute of Forestry. Timmins, Ontario. June 25.
- Drysdale, R.J., D.L. Martell, G.E. Doan and D. Boychuk. 1983. An analysis of a forest fire initial attack system. Annual Meeting, Canadian Operational Research Society. Winnipeg, Manitoba. May 26.
- Martell, D.L. and J.M. Fullerton. 1983. Prescribed burn planning. Great Lakes Forest Research Centre Research Forum. Sault Ste. Marie, Ontario. March 15.
- Martell, D.L. 1982. Operations research in forest fire management. Department of Management Sciences, University of Waterloo. Waterloo, Ontario. November 29.
- Martell, D.L. 1982. Implementing operational research in forest fire management. TIMS/ORSA Joint National Meeting. Detroit, Michigan. April 19.
- Martell, D.L. 1981. Computers and operational research in forest fire management. Parks Canada Fire Management Workshop. Riding Mountain National Park. Wasagaming, Manitoba. May 20.
- Martell, D.L. 1980. Forest management in an uncertain fire environment. Toronto Section, Canadian Operational Research Society. Toronto, Ontario. October 15.

- Martell, D.L. 1980. Operational research studies in forest fire management. Department of Industrial Engineering, University of Toronto. Toronto, Ontario. March 26.
- Martell, D.L. 1979. The optimal rotation of flammable forest stands. 21st Annual Meeting, Canadian Operational Research Society. Montebello, Quebec.
- Martell, D.L. 1978. An operational research approach to planning the use of prescribed fire in forest management. 20th Annual Meeting, Canadian Operational Research Society. Vancouver, British Columbia.
- Bookbinder, J.H. and D.L. Martell. 1977. Time-dependent queueing approach to fighting forest fires. TIMS/ORSA Joint National Meeting. San Francisco, California.
- Cunningham, A.A. and D.L. Martell. 1975. Deciding when to dispatch forest fire detection patrols. 17th Annual Meeting, Canadian Operational Research Society. Waterloo, Ontario.
- Cunningham, A.A. and D.L. Martell. 1974. Eliciting and evaluating subjective probability assessments: an application in forest fire management. 16th Annual Meeting, Canadian Operational Research Society. Ottawa, Ontario.

### **Theses Supervised or Co-supervised**

- Gibos, K. E. 2010. Effect of Slope and Aspect on Litter Layer Moisture Content of Lodgepole Pine Stands in the Eastern Slopes of the Rocky Mountains of Alberta.
- Quince, F. 2009. Performance measures for forest fire management organizations: Evaluating and enhancing initial attack operations in the province of Alberta's Boreal Natural Region. M.Sc.F. Thesis, Faculty of Forestry, University of Toronto.
- David W. Savage, D.W. 2009. Strategic Forest Management Planning Under Uncertainty Due to Fire. Ph.D. Thesis, Faculty of Forestry, University of Toronto.
- Kidnie, S.M. 2009. Fire Load and Fire Behaviour in the Southern Ontario Tallgrass Prairie. M.Sc.F. Thesis, Faculty of Forestry, University of Toronto.
- Podur, J.J. 2006. Weather, Forest Vegetation, and Fire Suppression Influences on Area Burned by Forest Fires in Ontario. Ph.D. Thesis, Faculty of Forestry, University of Toronto.
- Espinoza, A.C. 2005. Assessing the Effects of FireSmart Forest Management Strategies on the Habitat for Three Wildlife Species Near Whitecourt, Alberta. M.Sc.F. Thesis, Faculty of Forestry, University of Toronto.
- Sanchez-Guisandez, M.A. 2004. FireSmart Management of Flammable Wildland Urban Interface Landscapes. M.Sc.F. Thesis, Faculty of Forestry, University of Toronto.
- Okalebo, J.A. 2004. Optimizing the Production of a Zea Mays-Grevillea Robusta Alley Cropping System with the Wanulcas Model using a Tabu Search Heuristic. M.Sc.F. Thesis, Faculty of Forestry, University of Toronto. (Co-supervisor)

- Wotton, B.M. 2004. Predicting Forest Fire Occurrence in Ontario. Ph.D. Thesis, Faculty of Forestry, University of Toronto.
- Beverly, J.L. 2003. Modeling Fire Regimes for Fire Management in Protected Areas. Ph.D. Thesis, Faculty of Forestry, University of Toronto.
- Ahmed, G.U. 1999. Decision analysis for Bangladesh coastal afforestation. M.Sc.F. Thesis, Faculty of Forestry, University of Toronto.
- Beverly, J.L. 1998. Management and history of fire in Wabakimi provincial park, Northwestern Ontario. M.Sc.F. Thesis, Faculty of Forestry, University of Toronto.
- Islam, K.M.S. 1998. Spatial dynamic queueing models for the daily deployment of airtankers for forest fire control. Ph.D. Thesis, Department of Mechanical and Industrial Engineering, University of Toronto. (co-supervised with M.J.M. Posner)
- Hirsch, Kelvin. 1996. Initial attack fire crew effectiveness in the boreal forest region of Western and Central Canada. M.Sc.F. Thesis, Faculty of Forestry, University of Toronto.
- Saporta, Rica. 1995. Escaped fire situation analysis - a forest level perspective. M.Sc.F. Thesis, Faculty of Forestry, University of Toronto.
- MacLellan, J. 1993. Basing airtankers for forest fire control in Ontario. M.Sc.F. Thesis, Faculty of Forestry, University of Toronto.
- Boychuk, D. 1993. Modelling the effects of forest fire risk and insect protection on timber supply. Ph.D. Thesis, Faculty of Forestry, University of Toronto.
- Davis, R.G. 1991. A decision support system to help forest managers design and implement silvicultural strategies. M.Sc.F. Thesis, Faculty of Forestry, University of Toronto.
- Fortin, J. 1989. Daily deployment of air tankers for initial attack on forest fires in the province of Quebec. M.Sc.F. Thesis, Faculty of Forestry, University of Toronto.
- Lynham, T.J. 1987. An analysis of annual people-caused forest fire occurrence in Ontario. M.Sc.F. Thesis, Faculty of Forestry, University of Toronto.
- Sichinga, J.J. 1987. A model for determining an economically optimal cutting and regeneration schedule for a forest management agreement in Ontario. M.Sc.F. Thesis, Faculty of Forestry, University of Toronto. Co-supervisor.
- Boychuk, D. 1985. A model to help determine seasonal forest fire fighter requirements in Ontario. M.Sc.F. Thesis, Faculty of Forestry, University of Toronto.
- Fullerton, J.M. 1983. A planning methodology for evaluating site preparation, regeneration and tending strategies for jack pine sand flat cutovers. M.Sc.F. Thesis, Faculty of Forestry, University of Toronto.
- Booth, D.L. 1983. A model to help determine daily regional forest fire initial attack crew requirements. M.Sc.F. Thesis, Faculty of Forestry, University of Toronto.