

DOMINIQUE LORD, Ph.D., P.Eng.

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RESEARCH EXPERIENCE

ASSISTANT PROFESSOR

2004-Present

Department of Civil Engineering
Texas A&M University

Teach undergraduate and graduate courses in transportation engineering.
Supervise master's and Ph.D. students.
Participate in university and departmental committees.

ASSOCIATE RESEARCH SCIENTIST

2001-Present

Center for Transportation Safety
Texas Transportation Institute

Leading studies on roundabout safety and the development of predictive models for multilane rural highways
Participate on current research projects in transportation safety: California Call Box, Median Barrier Guidelines, Rollover Causation and Mitigation Study, Pedestrian Warrants at Unsignalized Intersections, and In-service Performance Evaluation of Roadside Safety Features.
Prepare research proposals for FHWA, TxDOT, BTS, NSF, CDC, Caltrans and NCHRP.
Supervise research assistants.

POST-DOCTORAL RESEARCHER

2000-2001

Ryerson University

Fundamental research on accident analysis methodology.
Validation of accident prediction models developed as part of FHWA-RD-98-133.
Developed accident prediction models at signalized/unsignalized intersections (US and Toronto data).
Involved in accident modeling for an FHWA research project to validate/recalibrate intersection crash prediction models.
Associate researcher for a study comparing driver and pedestrian behaviour in Quebec and Ontario (in collaboration with the CRT at the University of Montreal).

RESEARCH ASSISTANT

1995-2000

University of Toronto/Ryerson University

1992-1994

Participated in a study on drivers' training program for the MPI in Manitoba, Canada.
Created models to predict traffic flow breakdowns on freeways under congested conditions.
Developed and applied an algorithm to estimate missing traffic counts at intersections (U.S. project).
Supervised a traffic safety study for left-turning accidents at signalized intersections in Toronto, Canada.
Developed accident prediction models to estimate the number of accidents at interchanges.
Developed accident prediction models to assess and optimize safety on computerized transportation networks.
Performed research on traffic conflicts and human factors issues between left-turning vehicles and pedestrians at signalized intersections.
Participated in the improvement of two equations used in the capacity analysis of signalized intersections.

RESEARCH ASSISTANT **1994-1995**

University of Montreal - École Polytechnique (Center for Research on Transportation)

Prepared a literature review on the identification of hazardous highway sections.
Conducted analyses to identify hazardous highway sections in the Montréal region.
Performed sensitivity analyses for upgrading vertical and horizontal alignment designs for rural highways.

SCIENTIFIC REVIEWER - PROPOSALS AND PAPERS **1994-Present**

TRB Special Task Force for the Highway Safety Manual (Scientific Review Committee)
Member of TRB A5011 (Statistical Methodology)
Friend of TRB Committees A3B05 (Safety Data, Analysis and Evaluation) and (A3B04) Pedestrians
National Research Foundation
Fonds québécois de la recherche sur la nature et les technologies (FQRNT)
Journal of Transportation Engineering (ASCE)
Canadian Journal of Civil Engineering (CSCE)
Accident Analysis & Prevention
Journal of Transportation and Statistics

TEACHING EXPERIENCE

VISITING ASSISTANT PROFESSOR **2003**

Department of Civil Engineering, Texas A&M University, College Station

Teaching Highway Design (CVEN 456)

VISITING ASSISTANT PROFESSOR **2002**

Department of Nuclear Engineering, Texas A&M University, College Station

Taught Product Safety Engineering (SENG 313)

EXAMINER **2001-2002**

Association of Professional Engineers of Ontario

National examiner for the Professional Engineering Exam in Transportation Engineering.

LECTURER **2001**

Department of Civil Engineering, Ryerson University

Taught 3rd year Transportation Engineering (CVL316)
Received very good evaluation from students.

TEACHING ASSISTANT **1995-1999**

University of Toronto **1992-1993**

Marked assignments and midterms for courses in Linear Algebra, Transport Engineering I, Transport Engineering II, and Traffic Engineering. Delivered lectures in Traffic Engineering.

SEMINARS **1994-Present**

Guest speaker on Citytv's Talkback Live in Toronto, Ont.
Performed a seminar at C.O. Charles College (Police Academy) on traffic engineering and safety.
Conducted presentations on traffic safety issues for numerous research groups in the Province of Quebec.

CONSULTING EXPERIENCE

ROAD SAFETY AND TRAFFIC ENGINEERING CONSULTANT

1995-Present

INTERNATIONAL

Prepared the initial bidding documents for the followup on the traffic safety study in Burkina, Faso.
Prepared the bidding documents for a traffic safety study in Burundi, Central Africa.
Supervised (Mission Chief) a \$0.5M (CAN) traffic safety project in Burkina Faso, Western Africa between February and July 2000. This project was financed by the Canadian International Development Agency.
Conducted a traffic safety study of Highway A-1 in Vietnam in 1995 as part of a road rehabilitation project. This project was financed by the World Bank. The work was performed in Montreal, Canada.

CANADIAN

Prepared a document on the effects of physical characteristics at signalized intersections on pedestrian safety and behavior (CRT Montreal)
Performed a study on the safety of RTOR for the MTQ.
One of three national external reviewers for a safety audit review of the l'Acadie roundabout reconstruction project (\$60M).
Developed accident prediction models as part of a transportation safety study in Durham and Halton regions.
Performed an analysis of vehicle accidents at signalized intersections as part of a traffic impact study in Montreal, Canada.

Participated in a traffic impact study in Ottawa, Canada where I applied accident prediction models to a transportation network.
Developed accident prediction models for a roundabout safety study project.
Supervised the data collection process for a traffic safety project on intersection safety.
Performed capacity analyses at signalized intersections in Laval, Canada.
Modeled traffic flows on a highway corridor as part of a traffic impact study on the South Shore of Montreal, Canada.

ASSOCIATION QUÉBÉCOISE DU TRANSPORT ET DES ROUTES

1991-1995

Active member of the Traffic Engineering and Road Safety Committees

ASSISTANT TO THE TRAFFIC ENGINEER

City of Côte St. Luc, Quebec

Summer 1992

Summer 1991

Prepared and performed several traffic engineering studies.
Participated in the improvement of problematic intersections and highway corridors.

EDUCATION

DOCTOR OF PHILOSOPHY (Transportation Engineering)

2000

Thesis title: The Prediction of Accidents on Digital Networks: Characteristics and Issues Related to the Application of Accident Prediction Models
(Thesis Supervisors: Prof. Ezra Hauer/Prof. Bhagwant N. Persaud)
University of Toronto

MASTER OF APPLIED SCIENCE (Transportation Engineering)

1994

Thesis title: Pedestrian Conflicts and Left-Turning Traffic at Signalized Intersections
(Thesis Supervisor: Prof. Ezra Hauer)
University of Toronto

BACHELOR OF ENGINEERING (Civil) /MINOR IN MANAGEMENT 1992

Project title: Feasibility Study of a Reserved H.O.V. Lane for the Approach of the Victoria Bridge during the Morning Peak Period
 (Project Supervisor: Prof. R.G. Rice)
 McGill University

AWARDS AND PRIZES

Nominated by OIQ for Young Engineer Achievement Award (CCPE)	2004
D. Grant Mickle Award (TRB) (second award)	2004
Committee ANB20 Best Paper Award (TRB)	2004
New Investigator Award for Non-intentional Injuries (CDC)	2003
Young Researcher Award (TRB Committee A3B05)	2003
D. Grant Mickle Award (TRB)	2002
Committee A3A08 Best Paper Award (TRB)	2002
CARSP Student Paper Competition	2000
Research Assistantship (University of Toronto/Ryerson University)	1992-2000
2 nd Prize Student Presentation (Dist. 7, ITE)	1996
Open Fellowship (University of Toronto)	1995-1999
Scholarship for Graduate Studies in Transportation (CTRF)	1993-1994
2 nd Prize Student Research Paper Competition (CTRF)	1992
Allen Cook Prize in Transportation (McGill University)	1992
David Adrian Selby Award (CSCE)	1992

EXTRACURRICULAR ACTIVITIES

Financial Officer for the Social Committee of the Lexington Corporation	1999-2000
Financial Officer and Vice-President for the ITE Student Chapter	1995-1998
First Floor Representative at the Rowell Jackman Hall Residence	1995-1996
Montréal Young Board of Trade	1994-1995
President of the St. George Graduate Residence Committee	1993-1994
Member of the St. George Graduate Residence Committee	1992-1993
Student-editor for the bimonthly journal <i>Canadian Civil Engineer</i>	1990-1992
Commissioner for the <i>Fédération québécoise des sports cyclistes</i>	1991-1992

COMPUTING KNOWLEDGE

Transportation EMME/2, LOGIT, HCS, QRS II, SIDRA

Others: Windows 98, UNIX, WordPerfect 9, Quattro Pro 9, Paradox 9, QuickBASIC, C/C++, GLIM, Genstat, SAS, AutoCAD, MathCAD

PROFESSIONAL ASSOCIATIONS

Professional Engineers of Ontario (Member)
 Ordre des ingénieurs du Québec (Member)
 Association québécoise du transport et des routes (Member)
 The Canadian Association of Road Safety Professionals (Member)
 Institute of Transportation Engineers (Associate Member)
 Transportation Research Board (Member)
 American Statistical Association (Member)

PUBLICATIONS

PEER-REVIEWED JOURNAL ARTICLES

Miaou, S.-P., R.P. Bligh, and D. Lord (2004) Developing Median Barrier Installation Guidelines: A Benefit/Cost Analysis using Texas Data. Paper accepted for presentation and possible publication at the 84th Annual Meeting of the TRB, Washington, D.C.

Lord, D., D. Middleton, and J. Whitacre (2004) Does Separating Trucks from Other Traffic Improve Safety? Paper accepted for publication and presentation at the 84th Annual Meeting of the TRB, Washington, D.C.

Lord, D., and J.A. Bonneson (2004) Calibration of Predictive Models for Estimating the Safety of Ramp Design Configurations. Paper accepted for presentation and possible publication at the 84th Annual Meeting of the TRB, Washington, D.C.

Lord, D., S.P. Washington, and J.N. Ivan (2004) Poisson, Poisson-Gamma and Zero Inflated Regression Models of Motor Vehicle Crashes: Balancing Statistical Fit and Theory. *Accident Analysis & Prevention*. In press. (Also presented at the 83rd Annual Meeting of the TRB)

Lord, D., A. Manar, and A. Vizioli (2004) Modeling Crash-Flow-Density and Crash-Flow-V/C Ratio for Rural and Urban Freeway Segments. *Accident Analysis & Prevention*. In press. (Presented at the 83rd Annual Meeting of the TRB)

Lord, D., and B.N. Persaud (2004) Estimating the Safety Performance of Urban Transportation Networks. *Accident Analysis & Prevention*. Vol. 36, No. 2, pp. 609-620.

Lord, D., H.A. Abdou, A. N'Zué, G. Dionne, and C. Laberge-Nadeau (2003a) Investigating Sites Located on Two-Lane Rural Roads in Burkina Faso for Safety Improvements. Submitted for publication (to be determined).

Lord, D., H.A. Abdou, A. N'Zué, G. Dionne, and C. Laberge-Nadeau (2003b) Traffic Safety Diagnostic and Application of Countermeasures for Rural Roads in Burkina Faso. *Transportation Research Record 1846*, pp. 39-43.

Miaou, S.-P., and D. Lord (2003) Modeling Traffic-Flow Relationships at Signalized Intersections: Dispersion Parameter, Functional Form and Bayes vs Empirical Bayes. *Transportation Research Record 1840*, pp. 31-40.

Persaud, B.N., H. McGee, C. Lyon, and D. Lord (2003) Development of Procedure for Estimating the Safety Effects for a Completed the Traffic Signal Installation. *Transportation Research Record 1840*, pp. 96-103.

Lord, D. (2002) Issues Related to the Application of Accident Prediction Models for the Computation of Accident Risk on Transportation Networks. *Transportation Research Record 1784*, pp. 17-26.

Persaud, B.N., D. Lord, and J. Palminaso (2002) Issues of Calibration and Transferability in Developing Accident Prediction Models for Urban Intersections. *Transportation Research Record 1784*, pp. 57-64.

Persaud B.N., R. Retting, P.Garder and D. Lord (2001) Observational before-after study of U.S. roundabout conversions using the empirical Bayes method, *Transportation Research Record 1751*, pp. 1-8.

Persaud, B.N., R.A. Retting, P.E. Gårder, and D. Lord (2001) Crash Reductions Following Installation of Roudabouts in the United States, *American Journal of Public Health*, Vol 91, No. 4, pp. 628-631.

Lord, D., and B.N. Persaud (2000) Accident Prediction Models With and Without Trend: Application of the Generalized Estimating Equations (GEE) Procedure, *Transportation Research Record 1717*, pp. 102-108.

Hurdle, V.F., and D. Lord (1998) Analysis of Two Left-Turn Equations from the Highway Capacity Manual, *Transportation Research Record 1646*, pp. 17-78.

Lord, D. (1996) Analysis of Pedestrian Conflicts with Left-Turning Traffic, *Transportation Research Record 1538*, pp. 61-67.

CONFERENCES WITH PEER-REVIEWED PROCESS

Lord, D. (2003) Synthesis on the Safety of Right Turn on Red in the United States and Canada. Paper presented at 82th Annual Meeting of the TRB. National Research Council, Washington, D.C.

Bergeron, J., J.-P. Thouez, H. Bélanger-Bonneau, R. Bourbeau, D. Lord, and A. Rannou (2002) Étude des conflits entre piétons et automobilistes. Presented at the 9th Annual Meeting of International Traffic Injury Prevention, IX PRI World Congress, Madrid, Spain. (In French)

Thouez J.-P., D. Lord, J. Bergeron, R. Bourbeau, Y. Bussiere, H. Bélanger-Bonneau, A. Rannou, and M.-E. Latremouille (2002) Physical and environmental characteristics of signalized intersections and pedestrian behavior. In Sucharov L.J., and C.A. Brebbia (ed.) Urban Transport IX Urban transport and the environment in the 21st century. Southampton:WIT press, pp.143-148.

Lord, D., M.H. Abdou, C. Laberge-Nadeau, G. Dionne, and A. N'Zué (2001) Élaboration d'un plan d'actions en matière de sécurité routière au Burkina Faso, *published in the Proceedings of the Canadian Multidisciplinary Road Safety Conference XII*, University of Western Ontario, June 10-13. (in French) (also published in Routes et Transports, Vol. 30, No. 3, pp. 9-19)

Lord, D. (2000) Procedure to Estimate Missing Year-to-Year Traffic Counts at Intersections. *Presented at the 2000 CSCE Annual Meeting*, June 7-10, London, Canada.

Lord, D., A. Georgi, B. Abduhlay, K.C. Choo, and P. Koutsoulias (1999) Safety Issues in Dynamic Route Guidance, *presented at the 6th World Congress on ITS*, Paper 1355, November 8 to 12, Toronto, Canada.

Lord D., A. Smiley, and A. Haroun (1998) Pedestrian Accidents with Left-Turning Traffic at Signalized Intersections: Characteristics, Human Factors and Unconsidered Issues, *presented at the 77th Annual TRB Meeting*, TRB, National Research Council, Washington, D.C.

Lord, D. (1997) Pedestrian Accidents with Left-Turning Traffic: Characteristics, Human Factors and Countermeasures, *published in the Proceedings of the Canadian Multidisciplinary Road Safety Conference X*, June 8-11, Ryerson Polytechnic University, pp. 520-531.

Lord, D. (1995) Pedestrian Conflicts and Left-Turning Traffic at Signalized Intersections, *published in the Proceedings of the Canadian Multidisciplinary Road Safety Conference IX*, May 28-30, Université de Montréal - École Polytechnique, pp. 269-282.

Wong, B., and D. Lord (1994) Feasibility Study of a Reserved H.O.V. Lane for the Approach of the Victoria Bridge During the Morning Peak Period, *published in the Proceedings of the 29th Annual Meeting of the Canadian Transportation Research Forum*, May 15-18, Canadian Transportation Research Forum, pp. 872-892. (award paper)

INVITED ARTICLES

Lord, D., and S.-P. Miaou (2004) Modélisation des accidents aux intersections : Évaluation des formes fonctionnelles pour établir la relation statistique entre les accidents et les débits de circulation. *Routes et Transports*, Vol. 33, No. 2, pp 2-12. (In French)

Lord, D. (2002) Synthèse et discussions des expériences du virage à droite au feu rouge dans les provinces canadiennes et les états américains. *Routes et Transports*, Vol. 31, No. 2, pp. 10-20. (in French)

Lord, D., E. Hauer, and J. Bamfo (1999) Deux nouvelles méthodes pour examiner la relation entre les accidents et les variables explicatives, *Routes et Transports*, Vol. 28, No. 3, Association québécoise du transport et des routes, pp. 11-20 (also *poster presented at the Special Conference of the AQTR/CITE*, May 3-5, Association québécoise du transport et des routes.) (jn French)

CONFERENCE WITH REFEREED ABSTRACT

Lord, D., A. Manar, and A. Vizioli (2003) Modélisation des accidents en fonction des caractéristiques microscopiques du débit de circulation. Presented at the 38th Annual Meeting of the AQTR, Sherbrooke, Quebec. (In French) (also published as invited article in *Routes et Transports*, Vol. 32, No. 3, pp. 5-16.)

Lord, D., B.N. Persaud, R.A. Retting, and P.E. Gårder (2001) *Évaluation de l'impact sur la sécurité des carrefours giratoires en utilisant la méthode empirique bayésienne*, 36th Annual Conference, Association québécoise du transport et des routes, April 1-3. (in French)

Lord, D. (1999) Procédure pour estimer les débits de circulation des années manquantes en vue d'une meilleure évaluation du niveau de sécurité aux intersections, *poster presented at the Special Conference of the AQTR/CITE*, May 3-5, Association québécoise du transport et des routes. (jn French)

Lord, D., and B.N. Persaud (1999) L'utilisation des analyses longitudinales pour estimer le niveau de sécurité : une amélioration sur la précision des modèles de régression, *poster presented at the Special Conference of the AQTR/CITE*, May 3-5, Association québécoise du transport et des routes. (jn French)

Lord, D., and V.F. Hurdle (1998) Analyse de deux équations du "Highway Capacity Manual" : le cas des carrefours à feux avec virage à gauche permis, *published in the Proceedings of the 33rd Annual Meeting of the AQTR (Tome 2)*, April 20-21, Association québécoise du transport et des routes, pp. 298-314. (in French)

Lord, D., and A. Smiley (1997) Accidents impliquant les piétons et les véhicules tournant à gauche aux carrefours à feux : leurs caractéristiques et les facteurs humains, *published in the Proceedings of the 32nd Annual Meeting of the AQTR (Tome 1)*, April 6-10, Association québécoise du transport et des routes, pp. 201-202. (in French)

Lord, D., K.G. Baass, and B. Brown (1995) Une analyse de sensibilité de certains facteurs utilisés pour le dépistage de sites dangereux, *published in the Proceedings of the 30th Annual Meeting of the AQTR (Tome 1)*, April 5-7, Association québécoise du transport et des routes, pp. 105. (in French)

Lord, D. (1995) L'utilisation des conflits routiers dans le cadre des analyses de sécurité piétonnière, *published in the Proceedings of the 30th Annual Meeting of the AQTR (Tome 1)*, April 5-7, Association québécoise du transport et des routes, pp. 373-375. (in French)