

CARLOS F. DAGANZO
Resume/Bibliography

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SUMMARY

Carlos F. Daganzo is a Chancellor's Professor of the Graduate School in civil and environmental engineering at the University of California, Berkeley. He is also a co-founder, chairman of the board, and principal scientist of *Via Analytics*, a California benefit corporation devoted to improving mobility through technology. He has served as Convenor of the oldest international symposium on transportation and traffic theory (the ISTTT) and as an Associate Editor of *Transportation Research* (Part B, methodological) and *Transportation Science*. Daganzo's former students hold faculty positions at top ranked schools of engineering, business and management all over the world. He has authored "*Fundamentals of Transportation and Traffic Operations*" (Pergamon-Elsevier, 1997) – an internationally used and translated graduate level textbook. Noted for his contributions to econometrics, logistics, freight operations, network theory, traffic flow, and transit operations, Daganzo has also sole-authored four research books: "*Multinomial Probit: The Theory and its Application to Demand Forecasting*" (Academic Press, 1979), "*Logistics Systems Analysis*" (1st, 2nd and 3rd and 4th eds, Springer, 1991, 1996, 1999, 2005), "*A Theory of Supply Chains*" (Springer, 2003) and "*Public Transportation Systems: Basic Principles of System Design, Operations Planning and Traffic Control*" (published online, 2010). The latter contains the blueprint for Barcelona's new high-performance bus system, which Daganzo co-designed. The Universitat Politecnica de Catalunya, Barcelona, Spain, bestowed on him an honorary doctorate, partly in recognition for this work. The ISTTT Symposium of 2011 was dedicated to him in recognition of his cumulative contributions to transportation science.

EDUCATION

Ph.D. - Civil Engineering (Transportation) University of Michigan, Apr 1975
Master of Science - Civil Engineering (Transportation) University of Michigan, Dec 1973
Ingeniero de Caminos (Civil Engineer) University of Madrid, 1972

EMPLOYMENT/EXPERIENCE

Professor of the Graduate School - University of California, Berkeley, Jul 2012 - present
Professor - Civil Engineering (Transportation), University of California, Berkeley, Jul 1985 – Jun 2012
Assoc. Professor - Civil Engineering (Transportation), University of California, Berkeley, Jul 1980 - Jun 1985
Asst. Professor - Civil Engineering (Transportation), University of California, Berkeley, Jan 1977 - Jun 1980
Asst. Professor - Civil Engineering (Transportation), Massachusetts Institute of Technology, Jul 1975 - Dec 1976

ACADEMIC ACTIVITIES (selected)

Convenor, *Intl. Symp. on Transportation and Traffic Theory*, Jul 2002 - 2009
Associate Editor, *Transportation Research part B* (methodological), Jan 1979 - present
Member, International Advisory Committee, *Intl. Symp. on Transportation and Traffic Theory*, 1993-present.
Associate Editor, *Transportation Science*, Nov 1976 - Dec 1982
Editorial Board Member, *Transportation Research*, Jun 1977 - Dec 1978
Member, Committee on Supply Analysis, *Transportation Research Board*, Jan 1989 - 1996

PROFESSIONAL ACTIVITIES (*selected*)

Principal Scientist, Via Analytics, 2011- present. Discovered a new method to counteract the so-called “bunching effect” that now can be used to improve bus service reliability; led a group of scientists and engineers in the development of a prototype; took the product to market; now developing other products.

Consultant to the General Motors Research Laboratories, Warren, Michigan, on production, logistics and transportation matters, 1977 – 1997, and 2006-2008. This activity led General Motors to change the way in which it schedules its assembly lines; has guided some of its investment decisions; and has influenced the way in which it distributes its parts and finished products.

Consultant to the General Motors Corporation Economic, Marketing and Product Planning Staffs, Detroit, Michigan, on econometric issues, 1985 – 1993. This activity has resulted in unique software, which is used by General Motors for product development, marketing and forecasting.

Other consulting: ABT Associates, Cambridge, Massachusetts; Advanced Logistics Group, Barcelona, Spain; Booz Allen and Hamilton, Cambridge, Massachusetts; California State Senate, Sacramento, California; Cambridge Systematics, Inc., Cambridge, Massachusetts; Crain Associates, Los Altos, California; Dave Parsons, Inc., Pasadena, California; European Communities Commission, Belgium; I.E.S.E. Business School, Barcelona, Spain; I.N.T.E.C.S.A., Madrid, Spain; IDOM, Barcelona, Spain; Institut Cerda, Barcelona, Spain; Kodak, Corp., Rochester, N.Y.; Lockheed Martin, Lakeland FL; Massachusetts Institute of Technology, Cambridge, Massachusetts; Multisystems, Inc., Cambridge, Massachusetts; Oak Ridge National Laboratory, Oak Ridge, Tennessee; Peat, Marwick and Mitchell, San Francisco, California; S.I.C.E., Madrid, Spain; SYSTAN, Inc., Los Altos, California. Vino21, Madrid, Spain. Universidad de los Andes, Merida, Venezuela; Universidad Central, Caracas, Venezuela; Universitat Polytechnica de Catalunya, Barcelona, Spain; Universidad de Castilla-La Mancha, Ciudad Real, Spain.

AWARDS AND HONORS

Robert Herman Lifetime Award in Transportation Science (INFORMS, TSL), 2013

Honorary Doctorate (Doctor Honoris Causa) Universitat Politècnica de Catalunya, Barcelona, Spain, 2012

Chancellor Professorship of the Graduate School, U. C. Berkeley, 2012.

ISTTT Tribute, 2011

U.C. Berkeley, Faculty Mentor Award, 2008

Distinguished Lectures: TU Delft (2013); U. Tokyo (2008); U. Kyoto/U.Kobe (2008); U. Illinois (2007); U. Texas (Austin) 2003.

Main Applicant and Director, Volvo Research and Educational Foundations International Center of Excellence on Future Urban Transport.

Robert Horonjeff Chair in Civil and Environmental Engineering, Univ. of California, Berkeley, 1999-2012.

Honorable mention (2nd place) in the 1986 TIMS Edelman Award competition for management science achievement (with D.E. Blumenfeld, L.D. Burns and M. Frick from General Motors, and R.W. Hall from University of California, Berkeley, 1986).

Research work honored with three McCuen Awards at the General Motors Research Labs in the span of four years (latest award in 1988). The projects were code-named: MINLODE, TRANSPART, and AUTOSEQUENCE.

National Science Foundation - principal investigator, 1977 - 1988, 1991-1993, 2003-2005, 2009-present

Fullbright Fellow, 1987, 2005

Supervisor of INFORMS award winning Ph.D. theses (Y. Sheffi, 1978; A. Erera 2001; A. Goodchild 2006)

Supervisor of ITE and TRF national award winning paper (D. O'Neil, 1992)

Supervisor of ASCE national award-winning paper (F. Robuste, 1988)

Supervisor of TRF national award winning paper (R. Hall, 1982)

PhD THESES SUPERVISED

- Chavis, C. (2012) "Analyzing the structure of informal transport: The evening commute problem in Nairobi, Kenya"
- Saloner, D. (2012) "An analysis of personal rapid transit"
- Gayah, V. (2012) "The aggregate effect of turns on urban traffic networks"
- Xuan, Y. (2011) "Increasing the Flow Capacity of Signalized Intersections with Pre-signals: Theory and Case Study"
- Eric Gonzales (2011) "Allocation of Space and the Costs of Multimodal Transport in Cities"
- Offer Grembek (2010) "User adaptation to injury protection systems: its effect on fatalities, and possible causes"
- Stella So (2010) "Managing City Evacuations"
- Joshua Pilachowski (2009) "An Approach to Reducing Bus Bunching"
- Nikolas Geroliminis (2007) "Increasing mobility in cities by controlling overcrowding"
- Monica Menendez (2006) "An analysis of HOV lanes: Their impact on traffic"
- Anne Goodchild (2005) "Crane double-cycling in container ports: Algorithms, Evaluation and Planning"
- Yanfeng Ouyang (2005): "System level stability and optimality of decentralized supply chains"
- Yuwei Li (2004): "Integrated capacity management for time-differentiated transportation services"
- Jorge Laval (2004): "Hybrid traffic models: impacts of bounded vehicle accelerations"
- Alejandro Lago (2003): "Modeling the structure of cities and its interrelation with traffic congestion"
- Juan Carlos Munoz (2002): "Driver-shift design for single-hub transit systems under uncertainty"
- Karen Smilowitz (2001): "Design and operation of multimode, multi-service logistics systems"
- Alan Erera (2000): "Design of large-scale logistics systems for uncertain environments"
- Reinaldo Garcia (1999): "A Pareto improving strategy for the morning commute problem"
- David J. Lovell (1997): "Traffic control; on metered networks without route choice"
- Esteban Diez-Roux (1996): "Storage capacity for import containers at seaports"
- Wei H. Lin (1995): "Incident detection with data from loop surveillance systems: The role of wave analysis"
- Bernardo De Castilho (1992): "High-throughput intermodal container terminals: Technical and economic analysis of a new direct-transfer system"
- Mounira Taleb-Ibrahimi (1989): "Modeling and analysis of container storage in ports"
- Francesc Robuste (1988): "Analysis of baggage handling operations at airports"
- Carlos Muller (1987): "A framework for quality of service evaluation at airport terminals"
- Chawn-Yaw Jeng (1987): "Routing strategies for an idealized airline network"
- Federico Sabria (1986): "Analysis of potential improvements in port operations"
- Anthony F.W. Han (1984): "One-to-many distribution of non-storable items: Approximate analytic models."
- Randolph W. Hall (1982): "Traveler route choice under six information scenarios"
- Said M. Easa (1981): "Analysis of traffic operations in harbor terminals"
- Jürg M. Sparmann (1980): "Calibration of the trinomial probit model."
- Mahbobeh M. Soheily (1980): "Concavity results for the trinomial probit model."
- Yosef Sheffi (1978): "Transportation networks equilibration with discrete choice models."
- Fernando Bouthelie (1978): "An efficient methodology to estimate and predict with multinomial probit models: Applications to transportation problems."

BIBLIOGRAPHY

Publications (more than 50%, including all the books) are sole-authored unless co-authors are shown.
H-index = 50 (sole-authored = 37).

BOOKS AND MONOGRAPHS

- 1 “Apuntes y Formulario de Taludes,” (Madrid: E.T.S. Ingenieros de Caminos, 1972).
- 2 “Two Lane Road Traffic: A Stochastic Model,” Ph.D. Thesis, Department of Civil Engineering, The University of Michigan, Ann Arbor, MI (1975).
- 3 *Multinomial Probit: The Theory and Its Application to Demand Forecasting*, Academic Press, New York, N.Y. (1979).
- 4 *Logistics Systems Analysis*, [Springer-Verlag](#), Heidelberg, Germany (1991); 2nd edition (1996); 3rd edition (1999); 4th edition (2005).
- 5 *Transportation and Traffic Theory*, Proc. 12th Int. Symp. on Transportation and Traffic Theory, Berkeley, CA (C.F. Daganzo, editor), American Elsevier, New York, N.Y. (1993).
- 6 *Fundamentals of Transportation and Traffic Operations*, Pergamon-Elsevier, New York, N.Y. (1997).
- 7 *A Theory of Supply Chains*, [Springer-Verlag](#), Heidelberg, Germany (2003).
- 8 *Public Transportation Systems: Basic Principles of System Design, Operations Planning and Real-Time Control*. [Institute of Transportation Studies Publication UCB-ITS-CN-2010-1](#) (2010).

PAPERS

- 1 “Probabilistic Structure of Two-Lane Road Traffic,” [Transportation Research](#), 9(6), 339-346 (1975).
- 2 “Traffic Delay at Unsignalized Intersections: Clarification of Some Issues,” [Transportation Science](#), 11, 180-189 (1977).
- 3 “Some Statistical Issues in Connection with Traffic Assignment,” [Transportation Research](#), 11(6), 385-389 (1977).
- 4 “On the Traffic Assignment Problem with Flow Dependent Costs,” [Transportation Research](#), 11(6), 433-437 (1977).
- 5 “On the Traffic Assignment Problem with Flow Dependent Costs II,” [Transportation Research](#), 11(6), 439-441 (1977).
- 6 “An Approximate Analytic Model of Many-to-One Demand Responsive Transportation,” Proc. 7th Int. Symp. on the Theory of Traffic Flow and Transportation, pp. 743-772, Kyoto, Japan (1977). (with C. T. Hendrickson and N. H. M. Wilson)
- 7 “Multinomial Probit and Qualitative Choice: A Computationally Efficient Algorithm,” [Transportation Science](#), 11, 338-358 (1977). (with F. Bouthelie and Y. Sheffi)
- 8 “On Stochastic Models of Traffic Assignment,” [Transportation Science](#), 11, 253-274 (1977). (with Y. Sheffi)
- 9 “Another Paradox of Traffic Flow,” [Transportation Research](#), 12(1), 43-46 (1978). (with Y. Sheffi)
- 10 “An Approximate Analytic Model of Many-to-Many Demand Responsive Transportation,” [Transportation Research](#), 12(5), 325-333 (1978).
- 11 “Hypernetworks and Supply/Demand Equilibrium Obtained with Disaggregate Demand Models,” *Transportation Research Record* 673, 113-120 (1979). (with Y. Sheffi)
- 12 “Aggregation with Multinomial Probit and Estimation of Disaggregate Demand Models with Aggregate Data: A New Methodological Approach,” [Transportation Research Part B: Methodological](#), 13(2), 133-146 (1979). (with F. Bouthelie)
- 13 “The Statistical Interpretation of Predictions with Disaggregate Demand Models,” [Transportation Science](#), 13, 1-12 (1979).
- 14 “An Equilibrium Algorithm for the Spatial Aggregation Problem of Traffic Assignment,” [Transportation Research Part B: Methodological](#), 14(3), 221-228 (1980).
- 15 “Network Representation, Continuum Approximations and a Solution to the Spatial Aggregation Problem of Traffic Assignment,” [Transportation Research Part B: Methodological](#), 14(3), 229-239 (1980).

- 16 “Optimal Sampling Strategies for Statistical Models with Discrete Dependent Variables,” [*Transportation Science*](#), 14, 324-345 (1980).
- 17 “Computation of Equilibrium Over Transportation Networks: The Case of Disaggregate Demand Models,” [*Transportation Science*](#), 14, 155-173 (1980). (with Y. Sheffi)
- 18 “Estimation of Gap Acceptance Parameters within and Across the Population from Direct Roadside Observations,” [*Transportation Research Part B: Methodological*](#), 15(1), 1-15 (1981).
- 19 “Calibration and Prediction with Discrete Choice Models: Some Recent Advances and Unresolved Questions,” Chapter 2 in *New Horizons in Travel Behavior Research*, P. Stopher, A. Meyburg, and W. Brog (editors), Lexington Books, Lexington, MA, pp. 35-54 (1981).
- 20 “Baggage Claim Area Congestion at Airports: An Empirical Model of Mechanized Claim Device Performance,” [*Transportation Science*](#), 16, 246-260 (1982). (with A. Ghobrial and T. Kazimi)
- 21 “On the Uniqueness and Globality of Optimal Data Gathering Strategies,” [*Transportation Science*](#), 16, 241-245 (1982).
- 22 “An Investigation of the Accuracy of the Clark Approximation for the Multinomial Probit Model,” [*Transportation Science*](#), 16, 382-401 (1982). (with J. L. Horowitz and J. M. Sparmann)
- 23 “Multinomial Probit Models with Time Series Data: Unifying State Dependence and Serial Correlation Models,” [*Environment and Planning A*](#), 14, 1377-1388 (1982). (with Y. Sheffi)
- 24 “Unconstrained Extremal Formulation of Some Transportation Equilibrium Problems,” [*Transportation Science*](#), 16, 332-360 (1982).
- 25 “Equilibrium Model for Car-Pools on an Urban Network,” *Transportation Research Record*, 835, 74-79 (1982).
- 26 “Goodness-of-Fit Measures and the Predictive Power of Discrete Choice Models,” *Transportation Research Record*, 874, 13-19 (1982).
- 27 “On the Estimation of the Multinomial Probit Model,” [*Transportation Research Part A: General*](#), 16(5-6), 447-456 (1982). (with Y. Sheffi and R. Hall)
- 28 “Parking Studies, Gap Acceptance and the Intervening Opportunities Model: A Unified Quick Calibration/Estimation Method,” Proc. 8th Int. Symp. Transp. and Traffic Theory, pp. 162-174 Toronto, Canada (1983).
- 29 “Railroad Classification Yard Throughput: The Case of Multistage Triangular Sorting,” [*Transportation Research Part A: General*](#), 17(2), 95-106 (1983). (with R. G. Dowling and R. W. Hall)
- 30 “Derivation of Delays Based on Input-Output Analysis,” [*Transportation Research Part A: General*](#), 17(5), 341-342 (1983).
- 31 “Linear Probit Models: Statistical Properties and Improved Estimation Methods,” [*Transportation Research Part B: Methodological*](#), 17(1), 67-86 (1983). (with J. M. Sparmann and M. Soheily)
- 32 “Tandem Toll Booths for the Golden Gate Bridge,” *Transportation Research Record* 905, 7-14 (1983). (with R. W. Hall)
- 33 “Stochastic Network Equilibrium with Multiple Vehicle Types and Asymmetric Indefinite Link Cost Jacobians,” [*Transportation Science*](#), 17, 282-300 (1983).
- 34 “The Length of Tours in Zones of Different Shapes,” [*Transportation Research Part B: Methodological*](#), 18(2), 135-145 (1984).
- 35 “The Distance Traveled to Visit N Points with a Maximum of C Stops per Point: A Manual Tour-Building Strategy and Case Study,” [*Transportation Science*](#), 18, 331-350 (1984).
- 36 “Check-Point Dial-a-Ride Systems,” [*Transportation Research Part B: Methodological*](#), 18(4-5), 315-327 (1984).
- 37 “Supplying a Single Location from Heterogeneous Sources,” [*Transportation Research Part B: Methodological*](#), 19(5), 409-419 (1985).
- 38 “The Uniqueness of a Time Dependent Distribution of Arrivals at a Single Bottleneck,” [*Transportation Science*](#), 19, 29-37 (1985).
- 39 “Distribution Strategies that Minimize Transportation and Inventory Costs,” [*Operations Research*](#), 33, 469-490 (1985). (with L. D. Burns, R. W. Hall and D. E. Blumenfeld)
- 40 “Physical Distribution from a Warehouse: Vehicle Coverage and Inventory Levels,” [*Transportation Research Part B: Methodological*](#), 19(5), 397-407 (1985). (with G. F. Newell)
- 41 “Mathematical Modeling of Transportation Systems,” in *Measuring the Unmeasurable*, P. Nijkamp, M. Leitner and E. Wrigley, editors, pp. 663-678, NATO ASI Series D #22, Martinus Nijhoff, Dordrecht, the Netherlands (1985).

- 42 “Analyzing Trade-offs Between Transportation, Inventory and Production Costs on Freight Networks,” [Transportation Research Part B: Methodological](#), 19(5), 361-380 (1985). (with D. E. Blumenfeld, L. D. Burns and J. D. Diltz)
- 43 “Extrapolating Automobile Usage Data to Long Time Periods” [Transportation Science](#), 20, 48-51 (1986). (with A. D. Horowitz)
- 44 “Design of Multiple Vehicle Distribution Tours I: A Ring Radial Network,” [Transportation Research Part B: Methodological](#), 20(5), 345-363 (1986). (with G. F. Newell)
- 45 “Design of Multiple Vehicle Delivery Tours II: Other Metrics,” [Transportation Research Part B: Methodological](#), 20(5), 365-376 (1986). (with G. F. Newell)
- 46 “Vehicle-Miles for a Freight Carrier with Two Capacity Constraints,” [Transportation Research Record](#), 1038, 34-40 (1986). (with R. W. Hall)
- 47 “Configuration of Physical Distribution Networks,” [Networks](#), 16(2), 113-132 (1986). (with G. F. Newell)
- 48 “Distributing Non-storable Items without Transshipments,” [Transportation Research Record](#) 1061, 32-41 (1986). (with A. F. W. Han)
- 49 “Static Blocking Strategies for Railyards: Sorting Implications and Track Requirements,” [Transportation Science](#), 20(3), 189-199 (1986).
- 50 “A Graphical Method for Optimizing a Continuous Review Inventory System,” [Production and Inventory Management](#), 27(4), 30-45 (1986). (with A. D. Horowitz)
- 51 “Assembly Line Job Sequencing Principles,” [International Journal of Production Research](#), 25 (1), 71-99 (1987). (with L. D. Burns)
- 52 “Dynamic Blocking for Railyards: Part I. Homogeneous traffic,” [Transportation Research Part B: Methodological](#), 21(1), 1-27 (1987).
- 53 “Dynamic Blocking for Railyards: Part II. Heterogeneous Traffic,” [Transportation Research Part B: Methodological](#), 21(1), 29-40 (1987).
- 54 “Reducing Logistics Costs at General Motors,” [Interfaces](#), 17(1), 26-47 (1987). (with D. E. Blumenfeld, L. D. Burns, M. C. Frick and R. W. Hall)
- 55 “Modeling Distribution Problems with Time Windows: Part I,” [Transportation Science](#), 21(3), 171-179 (1987).
- 56 “Modeling Distribution Problems with Time Windows. Part II: Two Customer Types,” [Transportation Science](#), 21(3), 180-187 (1987).
- 57 “Increasing Model Precision Can Reduce Accuracy,” [Transportation Science](#), 21(2), 100-105 (1987).
- 58 “The Break-Bulk Role of Terminals in Many-to-Many Logistics Networks,” [Operations Research](#), 35, 543-555 (1987).
- 59 “Shipment Composition Enhancement at a Consolidation Center,” [Transportation Research Part B: Methodological](#), 22(2), 103-124 (1988).
- 60 “A Comparison of In-Vehicle and Out-of-Vehicle Freight Consolidation Strategies,” [Transportation Research Part B: Methodological](#), 22(3), 173-180 (1988).
- 61 “Optimization Procedures for Traffic Models,” Proc. 19th Annual Conference on Modeling and Simulation, Pittsburgh, PA (1988).
- 62 “Impact of Parallel Processing on Job Sequences in Flexible Assembly Systems,” [International Journal of Production Research](#), 27(1), 73-89 (1989). (with N. Udomkesmalee)
- 63 “Approximate Expressions for Queueing Systems with Schedule Arrivals and an Established Service Order,” [Transportation Science](#), 23(3), 159-165 (1989). (with F. Sabria)
- 64 “The Crane Scheduling Problem,” [Transportation Research Part B: Methodological](#), 23(3), 159-175 (1989).
- 65 “Crane Productivity and Ship Delay in Ports,” [Transportation Research Record](#) 1251, (1989).
- 66 “Diseño Optimo de las Terminales Centralizadas de Aeropuertos Respecto a la Distancia Caminada por los Pasajeros”, in *Sistemas de la Ingenieria Civil: Identificacion, Optimizacion, Control*, (J. Rodellar, ed.), CIMNI, Barcelona, Spain, (1989).
- 67 “A Branch and Bound Method for the Crane Scheduling Problem,” [Transportation Research Part B: Methodological](#), 24(3), 159-172 (1990). (with R. I. Peterkofsky)
- 68 “On the Coordination of Inbound and Outbound Schedules at a Transportation Terminal”, Proc. 11th Int. Symp. Theory of Traffic Flow and Transportation, (M. Koshi, ed.), Yokohama, Japan, 1990.

- 69 “Some properties of Polling Systems” *Queueing Systems*, 6(1), 137-154 (1990).
- 70 “Implementing Vehicle Routing Models”, *Transportation Research Part B: Methodological*, 24(4), 263-286 (1990). (with F. Robustè and R. R. Souleyrette)
- 71 “The productivity of multipurpose seaport terminals”, *Transportation Science*, 24(3), 205-216, (1990).
- 72 “Synchronizing production and transportation schedules” *Transportation Research Part B: Methodological*, 25(1), 23-37, (1991). (with D. E. Blumenfeld and L. D. Burns)
- 73 “Generalized hub-terminal geometric concepts. II: baggage operations and extensions”, *Journal of Transportation Engineering* 117 (2), 159-177, (1991). (with F. Robustè)
- 74 “Analysis of baggage sorting schemes for containerized aircraft”, *Transportation Research A: Policy and Practice*, 26(1), 75-92 (1992). (with F. Robustè)
- 75 “Optimal pricing strategies for temporary storage facilities at ports”, *Transportation Research Record* 1313, 66-74 (1992). (with B. de Castilho)
- 76 “Storage space versus handling work in container terminals”, *Transportation Research Part B: Methodological*, 27(1), 13-32 (1993). (with M. Taleb-Ibrahimi and B. de Castilho)
- 77 “Handling operations and the lot size trade-off”, *Transportation Research Part B: Methodological*, 27(3), 167-183 (1993). (with G. F. Newell)
- 78 “Handling strategies for import containers at marine terminals”, *Transportation Research Part B: Methodological*, 27(2), 151-166 (1993). (with B. de Castilho)
- 79 “Two properties of the nested logit model”, *Transportation Science*, 27(4), 395-400 (1993). (with M. Kusnic)
- 80 “Moving queues in traffic networks” in *Large Urban Systems* (S. Yagar, editor) pp.121-136, FHWA, (1993).
- 81 “A routing model for pickups and deliveries: No capacity restrictions on the secondary items”, *Transportation Science*, 27(4), 315-329 (1993). (with R. W. Hall)
- 82 “Assembly system design principles and trade-offs”, *International Journal of Production Research*, 32, 669-681 (1994). (with D. E. Blumenfeld)
- 83 “The cell transmission model: A dynamic representation of highway traffic consistent with the hydrodynamic theory” *Transportation Research Part B: Methodological*, 28(4), 269-287 (1994).
- 84 “The cell transmission model. Part II: Network traffic” *Transportation Research Part B: Methodological*, 29(2), 79-93 (1995).
- 85 “A Pareto optimum congestion reduction scheme” *Transportation Research Part B: Methodological*, 29(2), 139-154 (1995).
- 86 “Effect of modeling assumptions on the evolution of queues in a single corridor”, *Transportation Research Record* 1453, 66-74 (1995). (with W.-H. Lin)
- 87 “Properties of link travel time functions under dynamic loads” *Transportation Research Part B: Methodological*, 29(2), 95-98 (1995).
- 88 “The variance of the number of customers in an infinite server queueing system with an arbitrarily correlated arrival process”. *Queueing Systems*, 19(3), 289-299 (1995). (with E. Diez-Roux)
- 89 “A finite difference approximation of the kinematic wave model of traffic flow” *Transportation Research Part B: Methodological*, 29(4), 261-276 (1995).
- 90 “Requiem for high-order fluid approximations of traffic flow” *Transportation Research Part B: Methodological*, 29(4), 277-286 (1995).
- 91 “Two paradoxes of traffic flow on networks with physical queues”, Proc. II Symp Ing Transp, (A. Monzon, editor) Vol 1, pp. 55-62, Madrid (1996). ([Abstract](#))
- 92 “[The technical and economic viability of automated highway systems](#)” *Transportation Research Record* 1588, pp. 130-136, (1997). (with J. M. del Castillo and D. J. Lovell)
- 93 “[The nature of freeway gridlock and how to prevent it](#)” in *Transportation and Traffic Theory*, Proc. 13th Int. Symp. Trans. Traffic Theory (J.B. Lesort, ed) pp. 629-646, Pergamon-Elsevier, Tarrytown, N.Y. (1996).
- 94 “[Using the input-output diagram to determine the spatial and temporal extent of a queue upstream of a bottleneck](#)” *Transportation Research Record* 1572, pp. 140-147 (1997). (with T. W. Lawson and D. J. Lovell)

- 95 “A simple detection scheme for delay-inducing freeway incidents” [*Transportation Research A: Policy and Practice*](#), 31, 144-155 (1997). (with W.-H. Lin)
- 96 “A continuum theory of traffic dynamics for freeways with special lanes”. [*Transportation Research Part B: Methodological*](#), 31(2), 83-102 (1997).
- 97 “A simple physical principle for the simulation of freeways with special lanes and priority vehicles”. [*Transportation Research Part B: Methodological*](#), 31(2), 103-125 (1997). (with W.-H. Lin, J. M. Del Castillo)
- 98 “Queue spillovers in transportation networks with a route choice,” [*Transportation Science*](#), 32, 3-11 (1998).
- 99 “[A simple, generalized method for analysis of a traffic queue upstream of a bottleneck](#)” [*Transportation Research Record*](#) 1646, pp 132-140, (1998). (with A. L. Erera and T. W. Lawson)
- 100 “Possible explanations of phase transitions in highway traffic” [*Transportation Research A: Policy and Practice*](#), 33, 365-379, 1999. (with M. J. Cassidy and R. L. Bertini)
- 101 “[Remarks on traffic flow modeling and its applications](#)” in Traffic and Mobility, Proc. Traffic and Mobility, Simulation, Economics and Environment Conference (Brilon, Huber, Schreckenberg and Wallentowitz, eds.), pp. 105-115, Aachen, Germany, Springer-Verlag, New York, N.Y., 1999.
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- 103 “[The lagged cell-transmission model](#)” in *Transportation and Traffic Theory*, Proc. 14th ISTTT Symposium (A. Ceder, editor), pp. 81-104, Elsevier, New York. (1999).
- 104 “[Some observations of highway traffic in long queues](#)” [*Transportation Research Record*](#) 1678, 225-233 (1999). (with K. R. Smilowitz, M. J. Cassidy and R. L. Bertini)
- 105 “Una optimización simple en la gestión de carreteras con peaje en la sombra”, Proc. IX Congreso Chileno de Ingeniería del Transporte, pp. 135-145, Santiago, Chile, Oct. 1999.
- 106 “Impact of Manufacturing Response Time on Retailer Inventory” [*International Journal of Operations and Production Management*](#), 19(8), 797-811 (1999). (with D. E. Blumenfeld, M. C. Frick, D. J. A. Gonsalvez)
- 107 “Access control on networks with unique O-D paths” [*Transportation Research Part B: Methodological*](#), 34(3) 185-202 (2000). (with D. J. Lovell)
- 108 “A Pareto Improving Strategy for the Time-Dependent Morning Commute Problem” [*Transportation Science*](#), 34, 303-311 (2000). (with R. C. Garcia)
- 109 “[Experimental verification of time-dependent accumulation predictions in congested traffic](#)” [*Transportation Research Record*](#) 1710, 85-95 (2000). (with K. R. Smilowitz)
- 110 “A simple traffic analysis procedure” [*Networks and Spatial Economics*](#), 1, 77-101 (2001).
- 111 “[Taking turns: Rx for Congestion](#)” *Access*, pp 14-19. Fall (2000). Reprinted as “Taking turns paying tolls: Rx for congestion” *Better Roads*, 71 (4), 47-50, April (2001).
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