

## Vita of John Collura

**PRESENT POSITION:** Professor of Civil Engineering and Associate Director of the University of Massachusetts Transportation Center (UMTC)

**MAILING ADDRESS:** University of Massachusetts  
Department of Civil and Environmental Engineering  
Marston Hall Room 214C  
Amherst, MA 01003

**EDUCATION:** Ph.D. in Civil Engineering (Transportation), 1976  
North Carolina State University, Raleigh, North Carolina  
  
M.S.C.E in Civil Engineering (Transportation), 1971  
Villanova University, Villanova, Pennsylvania  
  
BSCE in Civil Engineering, May 1970  
Merrimack College, North Andover, Massachusetts

### PROFESSIONAL REGISTRATION:

Professional Engineer (P.E.) in Massachusetts

### PROFESSIONAL EXPERIENCE:

**Sept. 1976 -** University of Massachusetts at Amherst

**Dec. 1997 &**

**June 2004**

**To Present**

Position: Professor of Civil Engineering and UMTC Associate Director

Responsibilities: Teach courses in transportation engineering, transportation systems analysis, advanced transportation technologies, public transportation and pavement management. Conduct research in the application of advanced information and computer technologies in transportation and transit planning, management, design, and operations; ongoing projects involve electronic toll/fare collection; traveler information systems, incident management, and database systems for public transit, pavement, bridge, and geographic information purposes.

**Jan. 1998 -** Virginia Tech

**To June 04**

Position: Professor and Director of the Advanced Transportation Systems and Infrastructure Programs

Responsibilities: Teach courses in transportation engineering, transportation systems analysis, advanced transportation technologies, public transportation. Conduct research in the application of advanced information and computer technologies in transportation planning, management, design, and operations; ongoing projects involve electronic toll/fare collection; traveler information systems, and incident management.

**July 1992 -** Volpe National Transportation Systems Center, U.S. Department of Transportation  
**Dec. 1997** Position: Faculty Fellow

Responsibilities: Develop evaluation guidelines for the ITS Advanced Public Transportation Systems (APTS) Program; assess the National Transit Analysis Tool (NTAT) for its use in the metropolitan planning process and ISTEA Management Systems; and conduct case studies of electronic payment systems in public transit in U.S.

**Dec. 1982 -** Stanford University, Civil Engineering Department, Palo Alto, California  
**July 1983** Position: Associate Professor (visiting)

Responsibilities: Present lectures on application of small scale computers in transportation and carry out research on modeling transportation and urban activity systems.

**May 1973 -** North Carolina Department of Transportation, Raleigh, North Carolina  
**August 1976** Position: Transportation Analyst

Responsibilities: Manage, coordinate, and perform research efforts related to the planning of public transportation alternatives for small urban areas; prepare Federal research and demonstration proposals for rural public transportation projects in the State (Federal Highway Act 1973/Sec. 147); provide technical assistance to local, rural, and urban areas for the preparation of Federal research, planning and capital grant applications and proposals (Urban Mass Transportation Act 1974 as amended/Sec. 3,5,9,16(b) 2); initiate and design a state mass transportation research program with the universities in the State.

**Sept. 1971 -** J. F. White Construction and Contracting Company, MBTA Quincy Center Station and  
**Aug. 1972** New England Telephone Company in Framingham.  
Position: Office and Field Engineer

Responsibilities: Layout buildings and other facilities; schedule and coordinate field operations including slab concrete pours, and paving of access roads.

## SELECTED SCHOLARLY PUBLICATIONS:

### Book Chapters and Monographs

Gkritza K., J. Collura, D. Teodorovic and S. Tignor. *An Analysis of the Characteristics of Emergency Vehicle Operations*, Transport Science and Technology, Edited by Kostas Goulias, 2007, Elsevier Ltd., Oxford, U.K.

Collura, J., "Information Technology Innovations in Public Transportation", Transportation Engineer's Handbook, Edited by Myer Kutz, McGraw-Hill, 2004.

Flintsch, G., Dymond, R., Collura, J., "Pavement Management Applications Using Geographic Information Systems", NCHRP Synthesis of Highway Practice 335, Transportation Research Board, Washington D.C., 2004.

Collura, J., "Transportation and Downtown Revitalization in Small and Medium Sized Cities," Massachusetts Cities and Towns: Issues and Prospects, Edited by John Mullin and Carol Thomas, Commonwealth Books Palisades Park, New Jersey, 1985

Collura, J., Transit Ownership and Operation Options for Small Urban and Rural Areas, NCHRP Synthesis of Highway Practice 97, Transportation Research Board, Washington D.C., 1982

### Refereed Journal Articles

Soo, H., Collura, J., Teodorovic, D., and Tignor, S.; Towards the Development of a Decision Support System Framework for Advanced Traffic Signal Control System Investment Planning", Journal on Public Transportation, National Transit Institute, 2005.

Louisell, C., Collura, John, Teodorovic, D., Tignor, Sam; "Simple Work Sheet Method to Evaluate Emergency Vehicle Preemption and Its Impacts on Safety", Transportation Operations and Traffic Signal Systems Transportation Research Record No. 1867, Transportation Research Board, Washington D.C., 2004

Laurie, N. L., Zhang, S., Mundoli, R., Duffy, S. A., Collura, J. and Fisher, D. L. (2004). Evaluation of alternative DO NOT ENTER signs: Failures of attention. *Transportation Research Part F: Psychology and Behaviour*, 7, 2004.

Ghandforoush, P., Collura, J., and Plotnikov, V., "Developing a Decision Support System for Evaluating an Investment in Fare Collection Systems", Journal of Public Transportation, National Urban Transit Institute, 2003

Chang, J., Collura, J., Rakha, H., and Dion, F., "Evaluation of Service Reliability Impacts of Traffic Signal Priority for Bus Transit", Transportation Research Record 1841, National Academy of Sciences, Transportation Research Board, 2003.

Holton, A. Collura, Fisher, D., and Collura J., "Advanced Parking Management Systems: Parking Decision Strategies"; Journal of Transportation Engineering, American Society of Civil Engineers, Washington D.C., 2002.

Collura, J., Chang, J., and Carter, M., "Seattle Intelligent Transportation System Information Backbone", Transportation Research Record 1753, Transportation Research Board, Washington D.C., 2002.

Obenberger, J., and J. Collura, *Transition Strategies to Exit Preemption Control: State-of-the-Practice Assessment*, Transportation Research Record No. 1748, TRB, National Research Council, Washington, D.C., 2001.

Gifford, J., Pelletiere, D., and Collura, J., "Stakeholder Requirements for Traffic Signal Preemption and Priority in Washington D.C., Transportation Research Record No. 1748, TRB, National Research Council, Washington, D.C., 2001.

Chang, J. and Collura J., "Integrating Public Transportation Facilities and Equipment Management Systems into the Capital Planning Process", Transportation Research Record 1618, Transportation Research Board, National Research Council, Washington D.C., 1998.

El-Korchi, T. and Collura J., "A Comparative Study of Ride Quality Measuring Devices", Transportation Research Record 1618, Transportation Research Board, National Research Council, Washington D.C., 1998.

Spring, G., Collura, J., and Black, K., "Evaluation of AVL Technologies for Para-transit in Small and Medium Sized Urban Areas", Journal of Public Transportation, National Urban Transit Institute, Tampa, 1997.

Lyons, W., Collura, J., Libberton, S., and Branch, P., "Applications of FTA National Transit Data Base for the Intermodal Surface Transportation Efficiency Act Management System Requirements", Transportation Research Record 1521, Transportation Research Board, National Research Council, Washington, DC, 1996, pp. 45-48

Collura, J., "Evaluating Ridesharing Programs: The Massachusetts Experience", Journal of Urban Planning, American Society of Civil Engineers, Vol. 120, No. 1, New York, NY, March 1994, pp. 28-47.

Collura, J., "Electronic Toll Collection and Traffic Management in Italy," Civil Engineering Practice, Journal of Boston Society of Civil Engineers Section/ASCE, BSCES, Boston, MA, Spring/Summer 1993, pp. 55-64.

Spring, G.S., Collura, J., Shuldiner, P.W., and Watson, J., Testing, "Verification, and Validation of Expert Systems: A Case Study", Journal of Transportation Engineering, American Society of Civil Engineers, May 1991, pp. 350-360.

Spring, G.S., Collura, J., and Shuldiner, P.W., "Analysis of High Hazard Locations: Is an Expert System Approach Feasible?" Transportation Research Record 1111, Transportation Research Board, Washington, DC, 1987, pp. 7-17.

Shuldiner, P.W., Collura, J., Sharma, S.N., and A.N. Barbas, "Transportation and Downtown Revitalization in Small and Medium Sized Urban Area," Transportation Research Record 1067, Transportation Research Board, Washington, DC, 1986, pp. 28-32.

Collura, J. and McOwen, P.A., "Management Information Systems for Small Fixed-Route/Fixed-Schedule Operators," Transportation Research Record 994, Transportation Research Board, Washington, DC, 1984, pp. 71-75.

Collura, J., Bonsignore, R., and McOwen, P.A., "Computerized Management Information Systems for Transit Services in Small Urban and Rural Areas," Transportation Research Record 936, Transportation Research Board, Washington, DC, 1983, pp. 60-69.

Collura, J., "Computer Assisted Management Information System for Advanced Reservation Bus Service," Transportation Research Record 863, Transportation Research Board, Washington, DC, 1982, pp. 14-20.

Collura, J. and Cope, D.F., "Assessing User Needs in the Design of a Management Information System for Rural Public Transportation Service," Transportation Research Record 854, Transportation Research Board, Washington, DC, 1982, pp. 67-70.

Collura, J., Nkonge, J., Cope, D.F., and Mobolurin, A., "Charging Human Service Agencies for Public Transportation in Rural Areas," Transportation Research Record 830, Transportation Research Board, Washington, DC, 1981, pp. 15-21.

Collura, J., Male, J.W., and Mobolurin, A., "An Examination of the Design and Implementation of Procedures to Allocate Regional Transit Costs Among Towns: Five Case Studies," Transportation Research Record 813, Transportation Research Board, Washington, DC, 1981, pp. 10-15.

Collura, J., Canner, L., Cope, D.F., Gordon, S., and Mobolurin, A., "Guidelines for Allocating Public Transportation Costs Among Towns in Non-Urbanized Areas," Transportation Research Record 807, Transportation Research Board, Washington, DC, 1981, pp. 41-48.

Warren, R. P., Rogers, A., Collura, J., and Beliveau, R., "Proposed Fare Policy for Advanced-Reservation Bus Service," Transportation Research Record 791, Transportation Research Board, Washington, DC, 1981, pp. 5-10.

Collura, J., Warren, R.P., O'Leary, D., and Bohn, D. A., "Evaluation of the Barnstable County Public Transportation Demonstration Project," Transportation Research Record 761, Transportation Research Board, Washington, DC, 1981, pp. 58-66.

Male, J.W., Collura, J., and Shuldiner, P.W., "Allocating Public Transit Costs Among Participants," Transportation Engineering Journal, American Society of Civil Engineers, New York, NY, March 1981, pp. 213-227.

Collura, J. and Warren, R.P., "Regional Paratransit Services: An Evaluation," Transportation Engineering Journal, American Society of Civil Engineers, New York, NY, November 1979, pp. 683-699.

Warren, R.P. and Collura, J., "Data Recording and Evaluation: The Barnstable County Experience," Transportation Research Record 696, Transportation Research Board, Washington, DC, 1978, pp. 58-66.

### **Refereed Conference Proceedings Papers:**

Louisell, C., Collura, J., Teodorovic, D, and Tignor, S. "Evaluating the Benefits of Emergency Vehicle Preemption", Proceedings of the 84<sup>th</sup> Annual Meeting of the Transportation Research Board, Transportation Research Board, Washington D.C., 2005.

Soo, H., Collura, J., and Teodorovic, J., "Transit Signal Priority and Emergency Vehicle Preemption", Proceedings of the 84<sup>th</sup> Annual Meeting of the Transportation Research Board, Transportation Research Board, Washington D.C., 2005.

Grizta, N., Collura, J. and Teodorovic, D. "Evaluating Emergency Vehicle Characteristics", Proceedings of the Transtech Conference, Athens, September 2004.

Deshpande, V. Collura, J. and Tignor, S. "Assessing Transit Signal Priority Strategies Using Simulation Modeling", ITS World Congress, Nagoya, November 2004.

Collura, J. and Plotnikov, V., "Evaluating Ticket and Fare Collection Systems in Public Transit in the U.S.", Proceedings of ITS America Annual Meeting, Miami, 2001.

Collura, J. and Plotnikov, V., "Toward the Development of a Business Case in Electronic Payment Systems in Public Transit", Proceedings of the ITS America Annual Meeting, Boston 2000.

White, C., Reed, T., and Collura, J., "Core Competencies for the Future Transportation Professionals", Sixth International Congress on ITS, Torino, 2000.

Collura, J., Chang, J., Carter, M., "An Analysis of the ITS Information Backbone on ATIS Services in Seattle", Proceedings of the ITS America Annual Meeting, Washington D.C., April 1999.

Collura, J. and Kaufman, D., "Integrating ITS into the Transportation Engineering Curriculum", Proceedings of the Third World Congress on Intelligent Transportation Systems, Orlando, FL, October 1996.

Dinning, M. and Collura, J., Electronic Payment Systems in Urban Public Transit, Proceedings of the Second World congress on the Intelligent Transportation Systems, Yokohama, Japan, 1995.

Dinning, M. and Collura, J., "Electronic Payment Systems in Urban Public Transit", Proceedings of the Second World congress on the Intelligent Transportation Systems, Yokohama, Japan, 1995, pp. 1462-1469.

Collura, J., Goldstein, H., Fisher, D., and Syzmkowiak, A., "Experience with an Advanced Traveler Information Systems Trial Test in the Metropolitan New York City Area", Towards An Intelligent Transport System: Proceedings of the First World Congress on Applications of Transport Telematics and Intelligent Vehicle-Highway Systems, Vol. 5, Boston, MA, 1995, pp. 2394-2401.

Collura, J., Shuldiner, P.W., Acharya, D. R., and McOwen, P.A., "Portable Micros in Transportation Data Collection," Proceedings of the American Society of Civil Engineers National Conference on Microcomputers in Urban Transportation, American Society of Civil Engineers, New York, NY, 1985, pp. 719-728.

Collura, J., Tsamboulas, D.A. and Shuldiner, P.W., "Data Collection to Calibrate a Mode Choice Model for a University Town," Proceedings on the Second International Conference on New Survey Methods, Workshop on Survey Needs Modeling, Australia, 1983, pp. 77-106.

Collura, J., "Public Transit Ownership and Operation Options for Small Urban and Rural Areas in the United States," Proceedings of the World Conference on Transport Research, Vol. 1, Hamburg, West Germany, 1983, pp. 657-689.

Collura, J. and Cope, D.F., "Applications of the Concept of Equity to Cost Allocation: Two Approaches," Proceedings of the Second International Conference on Mobility for the Elderly and Handicapped, Loughborough University of Technology, Loughborough, Great Britain, 1981, pp. 99-110.

Collura, J. and Schuster, J., "Mobility of Inner City Low Income Areas," Proceedings of International Conference on Urban Housing, Detroit, MI, May 1973, 45 pp.

