

MICHAEL C. CARAMANIS

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Education:

- 1968-1971 Stanford University, Palo Alto, California. B.S. in Chemical Engineering, completed in three years. Graduated with distinction.
- 1971-1976 Harvard University, Cambridge, Massachusetts, Division of Engineering and Applied Physics. Master of Science in Engineering, June 1972. Ph.D. in Engineering, June 1976 (Major: Decision and Control Theory. Minors: Microeconomics and Development Economics).

Work Experience:

- 7/76-6/77 Greek Ministry of Education. Consultant on World Bank funded 3rd Educational Project, and visiting lecturer National Technical University of Athens.
- 6/77-9/79 National Energy Council, Ministry of Coordination and Planning, Athens, Greece. Deputy Director of the Scientific Secretariat in 1978 (15 members, 6 Ph.D., 6 M.S., 3 administrative). Responsibilities included coordination of research, identification and evaluation of research projects, transformation of research results to Energy Policy proposals, and representation to the International Energy Agency.
- 9/79-12/82 Research Scientist, M.I.T. Energy Laboratory, Deputy Manager, Utility Systems Program. Research manager of EPRI funded project for the development of a flexible, modular, environmentally sensitive state of the art Electric Generation Expansion Analysis System (EGEAS, EPRI 1529). Research on Introduction of Non-Dispatchable Technologies in Generation Expansion Planning, Probabilistic Electricity Production Costing Algorithms and Optimal Electricity Pricing.
- 1/83-9/88

- & 9/90-1/91 Visiting Research Scientist, Massachusetts Institute of Technology, Electrical Engineering and Computer Science Department.
- 9/82-9/92 Associate Professor of Manufacturing Engineering, Boston University, College of Engineering.
- 9/95-Fall 2005 Associate Chairman, Department of Manufacturing Engineering
- 10/01-9/05 Director, Center for Information and Systems Engineering (CISE)
- 2/05-3/09 President, Greek Regulatory Authority for Energy
- 10/04-10/08 Chair, Investment Group, Energy Charter, Brussels
- 9/94-Present Director, Production Control of Manufacturing Systems (PCMS) Laboratory
- 9/92-6/2008 Professor of Manufacturing Engineering, Boston University, College of Engineering.
- 6/08-Present Professor of Mechanical Engineering and Systems Engineering, Boston University, College of Engineering

Research Interests:

- Design of Energy Markets
- Production Planning and Control of Manufacturing Systems Operating Under Uncertainty.
- Dynamic Scheduling of Production Systems
- Enterprise Integration of Production System Planning and Control
- Stochastic Control and Mathematical Programming.
- Power System planning and Probabilistic Production Costing
- Real Time Pricing of Electricity and Market Design
- Marginal Costing of Power Transmission Services.

Teaching:

- Control Systems (undergraduate)
- Dynamic Programming and Stochastic Control (graduate)
- Sustainable Power Systems: Planning, Operation and Markets (mezzanine)
- Manufacturing System Design (graduate)
- Statistics and Quality Engineering (undergraduate)
- Probability and Statistics (graduate)

- Factory of the Future (undergraduate)
- Production System Analysis (graduate)

Research Support:

- Supported by the Electric Power Research Institute for the development of the EGEAS software. 1979-82, \$1.2M.
- Supported by the US Department of Energy and the New York State Research and Development Administration for the study of Marginal Wheeling Costs. 1985-89, \$200K.
- Was awarded two Boston University seed research grants.
- Received a \$400K National Science Foundation award over the period 1987-1989 for research in manufacturing systems design.
- Was the leader of a successful proposal to the National Science Foundation which received a three year award (1989-1992) of \$600K under NSF's *Strategic Manufacturing Initiative*.
- Led a second successful effort for NSF funding under the second round of the *Strategic Manufacturing Initiative*, \$600K (1993-1997).
- PI/PP on NSF *Knowledge and Distributed Intelligence* (KDI) Initiative award, \$1,16M (1998-2002).
- Received two gifts from Pratt & Whitney UTC for a total of \$20K (1997 and 1998)
- Received a Grant from the Alcoa Foundations, \$20K (1998-1999)
- CoPI on NSF IGERT award, Multidisciplinary Approach to the Integration of High Performance Computing in Science Education, \$2.67M (2002-2007)
- CoPI on NSF award, “Planning, Coordination, and Control of Supply Chains”, \$350K (2003-2007)
- PI on NSF EFRI SEED award, “Framework for Advanced Sustainable Building Design. Smart Micro-grid Enabled Buildings Interacting with Utility-Side-of-the-Meter Electricity Markets”, \$2M (2010-2015)
- PI on ARPA-E award, “Topology Control for Infrastructure Resilience to the Integration of Renewable Generation” Initially as sub to CRA, \$188K (March 2012), then Prime moved to Boston University in January \$1.2M with duration extended to June 30, 2014, new budget \$1 million. Additional funding of \$1M was applied for and approved in September 2013. Current total budget \$2.2 with new performance period expanded to June 2015
- PI on sub through NEG to ARPA-E grant on Gas and Electricity Coordination (GECO), April 2016 to April 2018, \$321K.
- PI on NSF AiF grant on Distribution Network Reconfiguration, September 2017-August 2021, \$300K
- PI on SLOAN Foundation grant on the Economics of Distribution Networks, September 2017-August 2019, \$500K.

Awards and Distinctions:

1969-1971	Honor Scholarships, Stanford University
1971	Stauffer Award for ranking first in Senior class, Chemical Engineering Department, Stanford University.
1971	Elected to Tau Beta Pi, Gamma Chapter.
1971-1973	Division of Engineering and Applied Physics Scholarship, Harvard University
2004	College of Engineering Service Award, Boston University

Memberships and Other Professional Activities:

-IIE Transactions on Design and Manufacturing, Editor Jan. 1997-December 2000, member of editorial board since January 2001.

-Robotics and Computer Integrated Manufacturing, member, editorial board since Jan. 1999

-Membership: IEEE and Operations Research Society, senior member IIE

-Member of Conference Committee and Session Organizer, Third ORSA/TIMS Conference on Flexible Manufacturing Systems, Cambridge MA. August 1989.

-Organizing Committee Co-Chair, Workshop on Hierarchical Control for Real-Time Scheduling of Manufacturing Systems, Sponsored by the National Science Foundation, Lincoln NH, October 1992

-Program Co-Chair, TIMS/ORSA Joint National Meeting, Boston, April 1994

-Chair, Invited Cluster on Hierarchical Scheduling and Control, 11 sessions hosting 50 presentations at the TIMS/ORSA April 1994 National meeting.

-Chair, *Inform*s October 95, two sessions on Production System Design, May 96, Tutorial on Enterprise Integration

-Member Organizing Committee, 1996 Japan-U.S.A. Symposium on Flexible Automation, Boston, MA July 7-10, 1996

-Member Program Committee, Computer Integrated Manufacturing and Automation Technology, CIMAT '96, Institute National Polytechnique de Grenoble, France May 29-30, 1996

-Organizing Committee Co-Chair, 9th Applied Probability Conference, Boston MA, June 30-July 2, 1997

-Member Program Committee, 1998 IEEE International Conference on Systems, Man, and Cybernetics, La Jolla, Ca. October 11-14 1998

-Member Program Committee RPI International Conference on Agile, Intelligent, and Computer-Integrated Manufacturing, RPI October 7-9, 1998

-Member Program Committee DARPA-JFACC Symposium on Advances in Enterprise Control, San Diego, CA November 15-16, 1999

-Referee: Management Science, International Journal of Production Research, Journal of DEEDS, Operations Research, International Journal of Energy Systems, International Journal of Flexible Manufacturing Systems, JOTA, IEEE Transactions on PS, AC and SMC, IIE Transactions.

-United Nations Development Project: Commissioned to assist with the adoption of the EGEAS software by the India Central Power Authority, New Delhi, 1986. Also commissioned to assist the pertinent Chilean agencies with the marginal costing of electric power and transmission services, Santiago, 1991.

-*Consultant*: Stone and Webster Engineering Corporation, Boston, MA; Stone and Webster Management Consultants inc., New York, NY; International Communication Systems (ICS), Atlanta, GA; Meta Systems inc., Cambridge, MA; Xenergy, Burlington, Ma; TCA, Cambridge, MA; Puget Power and Light Co., Seattle, Washington; Consolidated Edison Co. of New York, NY; Pacific Gas and Electric Co. San Francisco, CA; Central Maine Power Company, Augusta, ME; National Grid Company, London, England; Public Service of Indiana; Southern Services Co.; Colonial Pipeline Co.; Tennessee Valley Authority, Excelergy, GME Italy.

-*CDC Invited Session Tracks Organizer* on Smart Grid Control Applications: 2011, 2012 and 2013 CDC.

-*IEEE Report Writing Working Group, Invited Participant*: Smart Grid Vision for Control Systems, 2012-2013

- Member of NSF Sponsored Cyber Physical Systems Virtual Organization

Selected Invited Lectures

MIT, Laboratory for Manufacturing Productivity, 1988, 1993, Laboratory for Information and Decision Systems, 1990; University of Pennsylvania, Department of Systems Engineering, 1990; University of Maryland, 1991; Harvard University, Division of Applied Sciences, 1991; NSF Workshop on DEDS, Amherst, 1991; NSF Workshop on Hierarchical Control, Lincoln NH, 1992; Tufts University College of Engineering, 1992; Analog Devices Semiconductor Division, Wilmington MA, 1992; GE Lynn, Aircraft Engines Division, 1992, 1993; DEC, Maynard, 1992, Shrewsbury, 1993; MIT, Operations Research Center, 1993; George Mason University, School of Information Technology and Engineering, May 1996; Northeastern University, Dept of Mechanical Eng and OR, May 1997; Fraunhofer Gesellschaft, Aachen, Germany, invited lecture, February 1999; Eindhoven University of Technology, Faculty of Technology Management, The Netherlands, Invited Lecture, February 1999; Harvard University, Committee on the Environment, China Project Workshop, June 1-3, 1999, invited respondent; Lehigh University, Department of Industrial and Manufacturing Systems Engineering, invited seminar, May 5, 2000; University of Washington, Seattle WA, Workshop on Radio Frequency identification tags (RFIDs), invited speaker, June 20, 2003; MIT, E51-315 course on Operations Research applications to Energy, Invited Lecture on Adoption of Hybrid Electric Vehicles, April 27, 2009; November 5, 2012 invited by the Boston University Student Energy Society to give a seminar to its members on “The Smart Grid and its Potential for Energy and Environmental Sustainability”;

Selected Invited Seminars, Workshops and Presentations

Workshop on Informatics and Energy Savings, Rome, 1982; Royal Institute of Technology, on EGEAS software, Stockholm, 1983; ENDESA, on Electricity production Costing and Pricing, Madrid, 1983; Linkoping Institute of Technology on Electricity Pricing, 1985; Energy Engineering Associates Ltd., on Marginal Transmission Costing, Paris 1990, on Spot Pricing of Electricity, London, 1990; Second Annual Transmission Symposium, Washington D.C. 1990; University of

Minnesota, Institute for Mathematics and Applications, 1993; Geneva Forum on Logistics, An Advanced International Program in Engineering Management, University of Geneva, June 26-30, 1995; Tutorial on Enterprise Integration, INFORMS May 1996; NSF workshop on Supply Chain Management in Electronic Commerce, Gainesville for October 19-21, 1998; International Workshop on “Discrete event systems” (WODES ‘98), Cagliari, Sardinia, August 26-28, 1998; IIE Research Conference, Banf Canada, May 1998; RPI International Conference, October 1998; IEEE Robotics & Automation Conference, Detroit, MI, May 10-15, 1999; IIE Research Conference, Phoenix Arizona, May 1999; INFORMS Philadelphia, November, 7-10, 1999; DARPA-JFACC Symposium on Advances in Enterprise Control, San Diego, CA November 1999; CDC, December 1999; 38th IEEE Conference on Decision and Control, Phoenix Arizona, Dec. 7-10, 1999; 2000 AAA Meeting, February 17, 2000; New England Complex Systems Institute, International Conference on Complex Systems, Invited Keynote Address, May 24, 2000; 3rd Aegean International Conference on the Design and Analysis of Manufacturing Systems, invited speaker, Tinos, Greece, May 19-22, 2001; Applied Probability Conference, N.Y., N.Y., July 2001; INFORMS, Miami, Florida, November 2001; National Conference on Industrial Engineering and Management, Tel-Aviv, Israel, March 12-13, 2002, invited key note speaker; IBM Watson Research Center, Yorktown Hight, NY. Invited seminar, June 13, 2003; Euro Informs July 6-10 2003, invited presentation; The role of DEPA in the Greek Gas Market development and in the Eastern gas transit to Europe, June 2004 CEERA Meetings, Istanbul Turkey, invited presentation; Marginal-Cost-Based Guidelines for Setting Transit Fees in the Eurasian Trade of Natural Gas and Electricity, NARUC 5th NARUC/CEER Energy Regulators’ Roundtable Washington DC, February 12-13, 2005, invited presentation; Prospects of a Regional Gas Regulatory Framework Fostering a Sustainable Market-Based Investment Climate, GIE Annual Conference, Athens, 3 November 2005, invited presentation; Striving for Generation Adequacy in Greece’s Emerging Electricity Market: Transition Period and Long Term Market Design, EMART energy Conference, Nice, November 10, 2005, invited presentation; Investment Needs/Prospects in Southeastern Europe and a Capacity Adequacy Mechanism Design NARUC Winter Committee Meetings, Committee on International Relations February 12, 2006, invited presentation; Security of Supply and Diversification of Sources of Supply in Europe, NARUC Winter Committee Meetings, Committee on International Relations February 18, 2007, invited panel presentation; Market design and Energy Conservation, Panel Coordinator, World Energy Forum III, October 9 2006, Washington DC, invited presentation; Cross Border Electricity Trade in Europe, Federal Energy Regulatory Commission, October 10, 2006, Invited Lecture; Design of a Spot Market for Regulation reserves, PJM Independent System Operator, October 12, 2006, Philadelphia, PN, invited lecture; Workshop on “The Energy Regulators Community in the Mediterranean Basin”, Rome May 29, 2006, invited presentation on “The development of the SEE Electricity Market- ECSEE Treaty”; European Union Club, April 20, 2007, invited Lecture on “Can the already visible limits to Wind Generation’s contribution to Green House Gas mitigation be lifted?”; Conference of Mechanical and Electrical Engineers, Athens, May 16, 2007, Wind Energy Penetration, Green House Gasses, and the Transportation Sector: Prospects of Favorable Synergies; 4th Poverty Reduction Strategies Western Balkans Forum, Athens, June 27, 2007, invited lecture on “Regional co-operation in the energy sector: Perspectives for the western Balkans and the European Union”; SAE Forum, Washington DC, November 17, 2007, Invited Lecture on “The Geopolitical Role of Energy Markets in Eurasia and the Role of Greece in the Development of the Southern Natural Gas Transportation Corridor”;

Conference of the Hellenic American Chamber of Commerce, The time of the Greek Economy, Athens December 3-4, 2007, Invited Lecture of Energy and the Environment; EU-US Energy Regulator's Roundtable, Athens Dec 5-6, 2007, Invited Lecture on "Update on South East Europe and the role of the ECRB"; ELETAEN Workshop on Energy and the Environment, Athens, February 15, 2008, Impediments to and Solutions for the Widespread Introduction of Clean Energy Generation; The European Community Electricity Regulation and Green Initiative, Invited Lecture to the US Energy Bar Association, Troutman Sanders LLP, Washington DC, October 27, 2008; The Liberalization of Greek Energy Markets: Load Management and the Electrification of the Transportation Sector, Ministry of Exterior International Conference, Athens, Greece, July 8, 2008; Progress in the Competiveness of the European Power Markets, International Energy Conference, Athens, Greece, May 22, 2008; Commercialization of Renewable Electricity Generation Technologies: Lifting Adoption Barriers, European Union, US Roundtable, New Orleans, Louisiana, 14 November 14, 2008; Geopolitics of Energy in Eurasia, European Studies Center, Harvard University, March 31, 2009; Invited to Tufts Energy Forum's 4th Annual Tufts Energy Conference, Tufts U., March 28, 2009; Invited to give a seminar on PHEV load management at the Renewable Energy National Laboratory, Denver Colorado, May 4, 2009; Invited to give a seminar on PHEV load management at the Los Alamos National Laboratory, New Mexico, May 5, 2009; Invited to NSF-NIST-DOE workshop on the Smart Grid, a Cyber Physical Energy System, Baltimore, June 3-4, 2009; World Forum on Energy Regulation WFER IV, Invited Keynote presentation, on Market Extensions for Renewable Generation and Distributed Storage Synergies Athens Greece, October 18-21, 2009; Invited to participate in WNYC's program "Please Explain Electrical Power System" along with Cornell U. Professor of EE Robert Thomas, October 30, 2009, 1:00PM-2:00PM; Invited to Pardee's house seminar, on "Is the Future Renewable?" to lead a discussion along with along with professor William Moomaw of Tufts U. Fletcher School, Boston University, November 17, 2009; Invited to IEEE Demystifying the Smart Grid Symposium, to talk on "The Smart Grid Broadly Construed as a Cyber-Physical Electric Power System Business Platform", MIT, November 21, 2009; Invited to the Jones Seminar Series on Science, Technology and Society to present on the "Widespread adoption of Intermittent Renewable Energy Generation, the Smart Grid and Electric Vehicles: Barriers and Synergies", Dartmouth College. February 19, 2010; Invited presentation at the INFORMS National Meetings, Austin Texas, Nov. 8, 2010. "Renewable Generation Intermittency and Demand Provided Reserves: Are Market Solutions Viable?" Session organized by Professors Uday Shandbhang and Sean Meyn, U.I.U.C.; Invited talk to NEU ECE, Feb 11, 2011 and Yale E&CS, Feb 18, 2011, on Intermittent Renewable Generation, Distributed Resources and Demand Response: Are Smart Grid Enabled Market Solutions Viable? ; Invited Lecture on Market Based Demand Response in Smart Grid Supported Power Markets: Power System Requirements and Computational Method Implications, MIT Seminar on Computational Methods for Sustainability, September 29, 2011; Invited Presentation on Flexible Demand Response in Smart Grid Supported Power Markets, 25th Annual CCW, Smart Grid Session, Hyannis MA, October 10, 2011; Invited Lecture on Market Based Demand Response and efficiency gain opportunities in Smart Grid Supported Electric Power Systems, and Panel participation, United Kingdom Consulate General in Boston, UK/US Innovations in Smart Grids Workshop October 31, 2011; Invited Lecture on "Distributed Demand Control and Power Market Reform" in Optimization and Control For Smart Grids, 32nd CNLS Annual Conference, Santa Fe, New Mexico, May 21-25, 2012; Invited lecture on "Power Market Reform in the Presence of Flexible Schedulable Distributed Loads" Allerton Conference, October 1-5, 2012, CSL at UIUS; Invited Lecture on "Centralized Topology Control and Enhanced Distribution Network LMPs for T&D Resilience", INFORMS, Phoenix Az, October 13-17, 2012; Invited lecture on "Power Market Participation of Flexible Loads and Reactive Power

Providers: Real Power, Reactive Power, and Regulation Reserve Capacity Pricing at T&D Networks”, DIMACS Workshop, at Rutgers University, January 21, 2013; Invited talk on “Power Market Extended from Transmission (HV) Only to Distribution (LV) Participants”, Stanford Workshop in Syri, Greece, July 29-30, 2013; Invited plenary talk on “Multi-period Electricity Markets and Demand Response” at the first Virtual Control Conference <http://www.vcc-13.org/>, Sept 25, 2013; Invited talk on “Short Term Marginal Cost Based Real and Reactive Power Pricing in Distribution Networks: Modeling, Benefits and Computational Challenges” at the NSF sponsored Workshop on Control, Computing, and Signal Processing Challenges in Future Power Systems, Washington DC, November 15-16, 2013; Invited to participate at the 2013 National Workshop on Energy Cyber-Physical Systems, Washington DC, December 16-17, 2013; Invited Keynote address on “Smart Grids: An American Perspective on a New Marginal-Cost-Market-Based Platform”, Workshop on Smart Grids and Dynamic Pricing Opportunities for the Energy Transition, EPFL, June 18, 2014; Plenary talk on “Power Market Reform for Smart Grid and Renewable Generation Adoption”, 3rd International Symposium and 25th National Conference on OR, Volos, Greece, 26-28 June 2014; Invited Plenary talk on “Power Market Reform for Smart Grid and Its Impact on Electricity Consumers”, Energy-Aware Operations in Manufacturing and Service Enterprises, 2014 Biennial Workshop in Service Engineering (BeWiSE), September 16-17, Philadelphia, USA; Invited lecture to the Stanford Smart Grid Seminar on “Spatiotemporal Marginal Costing on T&D Electricity Networks: How are Electricity Markets Different from Other Network Based Markets?” Stanford, CA, November 6, 2014; Invited seminar presentation to Fraunhofer Sustainable Energy Systems, on “Renewables and Distributed Energy Resources: Synergy through Distribution Marginal Cost Based Prices”, Boston, MA, May 21, 2015; Invited lecture to the Harvard JFK Energy Policy Seminar, on “Extending Locational Marginal Cost Pricing to Retail Electricity Markets and Distributed Energy Resources”, Cambridge, MA, September 21, 2015; Invited keynote to NEPower Systems Seminar, on “Renewables and Distributed Energy Resources: Synergy Through Marginal Cost Based Prices Extending from Wholesale to Retail Markets”, Avon, CT, September 22, 2015; Invited presentation to the 80th Harvard Electricity Policy Group (HEPG) plenary, Panel One “Computational Frontiers in Electricity Markets: Not Your Grandfather’s Economic Dispatch”, Houston TX October 1, 2015; Invited Seminar to the Brattle, Brattle Group, Economics Seminar, on “Extending Locational Marginal Cost Pricing to Retail Electricity Markets and Distributed Energy Resources”, Cambridge, MA, October 16, 2015; NSF Workshop on Smart Cities , invited presentation on Marginal Cost Pricing on Distribution Networks, Washington DC, Dec 3, 2015; Panel participant DOE EAC, March 17, 2016, Washington DC. Invited key note address of PJM Grid 20/20: focus on Distributed Energy Resources conference, Chicago, September 21, 2016; Invited panelist, Sloan Foundation Sponsored U. of Chicago workshop on the economic and technical challenges for the future of electricity distribution, October 6, 7 2016; Invited presenter on Nov 3-4, 2016 Workshop on Architecture and Economics of Power Grid: Logistics, Texas A&M; American Mathematical Society Meeting, April 21-22, 2018, Invited lecture on Optimal Day Ahead Bidding of Forecast Error prone Renewable Generation; Sloan Foundation Resources for the Future Workshop, Washington DC, November 29-30, 2018, Panel member; Invited delivery of IEEE Course on Locational Marginal Costs, May 15, 2019, National Grid Waltham MA.

PUBLICATIONS:

A. Articles Published in Refereed Journals

- A1 S. Cavounides and M. Caramanis, "External Economies in Engineering Economic Planning"; Technical Chronicle, 4 1977, pp 50-54, Athens, Greece (in Greek).
- A2 M. Caramanis and S. Cavounides, "Application of Decision Theory in Soil Mechanics"; Technical Chronicle, 1979, pp 48-53, Athens, Greece (in Greek).
- A3 Y. Ioannides and M. Caramanis, "Capital-Labor Substitution in a Developing Country: the Case of Greece - A Note"; 1979 (101-110) European Economic Review. pp 101-110.
- A4 M. Caramanis and Y. Ioannides, "Sources of Growth and The Contribution of Education, Sex and Age to the Growth Rate of the Greek Economy"; Greek Economic Review, Vol.2, No. 2, pp 143-162, August 1980.
- A5 M. Caramanis, "Elasticity of Substitution between Capital and Disaggregated Labor: A Cost Function Application of Greek Industry Data at the Firm Level"; Greek Economic Review, Vol.3, No.2, pp. 187-196, August 1981.
- A6 M. Caramanis, R. Tabors, K. Nochur and F. Scheweppe, "The Introduction of Non-Dispatchable Technologies as Decision Variables in Long-Term Generation Planning Models"; IEEE Transactions on Power Apparatus and Systems (PAS). Vol. PAS-101, No. 8, pp. 2658-2667, August 1982.
- A7 M. Caramanis, R. Bohn and F. Scheweppe, "Optimal Spot Pricing: Practice and Theory"; IEEE Transactions on PAS, Vol. PAS-101, No. 9, pp. 3234-3245, September 1982.
- A8 M. Caramanis, "Investment Decisions and Long-Term Planning Under Electricity Spot Pricing"; IEEE Transactions on PAS, Vol. PAS-101. No. 12, pp. 4640-4648, December 1982.
- A9 M. Caramanis, J. Stremel, W. Fleck and S. Daniel, "Probabilistic Production costing: An Investigation of Alternative Algorithms"; International Journal of electrical Power and energy Systems. Vol. 5, No. 2, pp. 75-86, April 1983.
- A10 M. Caramanis, "Analysis of Non-Dispatchable Options in the Generation Expansion Plan"; IEEE Transactions on PAS. Vol. PAS-102, No. 7, pp. 2098-2103, July 1983.
- A11 P. Cavoulacos and M. Caramanis, "Energy and other Factor Input Demand in Greek Manufacturing 1963-1975"; Greek Economic Review Vol. 5, No. 2 pp. 158-181, August 1983.
- A12 M. Caramanis, J. Stremel and L. Charny, "Modeling Generation Unit Size and Economies of Scale in Capacity expansion with an Efficient Real Number Representation of Capacity Addition"; IEEE Transactions of PAS. Vol. Pas-103 No. 3, pp. 506-515, March 1984.
- A13 J. Bloom, M. Caramanis and L. Charny, "Long-Range Generation Planning Using Generalized Benders' Decomposition: Implementation and Experience"; Operations Research. Vol. 32, No. 2, pp. 290-312, March-April, 1984.
- A14 R. Bohn, M. Caramanis and F. Scheweppe, "Optimal Pricing in Electrical Networks Over Space and time"; The Rand Journal of Economics. vol, 15, No. 3, pp 360-376, Fall 1984. DOI: 10.2307/2555444
- A15 F. Scheweppe, M. Caramanis, and R. Tabors, "Evaluation of Spot Price Based Electricity Rates" IEEE Transactions on PAS. Vol. PAS-104, No. 7, pp. 1644-1655, July 1985.
- A16 M. Caramanis, "Production costing of Interconnected Electrical Utilities Under Spot Pricing"; Large Scale Systems: Theory and Applications, 9 (1985) pp. 1-18.
- A17 M. Caramanis, F. Scheweppe and R. Bohn, "The Cost of Wheeling and Optimal Wheeling Rates"; IEEE Transactions on Power Systems (PS). Vol. PWRS-1, No. 1, pp. 63-73, February 1986.
- A18 E. Ramsden, M. Ruane, A. Mavretic, M. Caramanis and H. D'Angelo, "The Use of Hardware Simulators in Modeling Networks"; Large Scale Systems; Complex Systems in Manufacturing, 11 (1986) pp 149-164.

- A19 M. Caramanis, "Production System Design: A Discrete Event Dynamic System and Generalized Benders' Decomposition Approach"; International Journal of Production Research. Vol. 25, No. 8, 1987, pp. 1223-1234.
- A20 M. Caramanis, R. Bohn, and F. Schweppe, " System Security Control and Optimal Pricing of electricity"; International Journal of Electrical Power and Energy Systems; Vol. 9, No. 4, pp 217-224, October 1987.
- A21 H. D'Angelo, E. Ramsden, M. Caramanis, S. Finger, A. Mavretic and Y. Phillis, "Event Driven Model of Unreliable Production Lines with Storage", International Journal of Production Research, Vol. 26, No. 7, pp. 1173-1182, July 1988.
- A22 M. Caramanis, N. Roukos and F. Schweppe, "WRATES: A Tool for Evaluating the Marginal Cost of Wheeling"; IEEE Transactions on PS, Vol. 4, No. 2, pp 594-605, May 1989.
- A23 R. Tabors, F. Schweppe and M. Caramanis, "Utility Experience with Real Time Rates"; IEEE Transactions on PS, Vol. 4, No. 2, pp 463-471, May 1989.
- A24 A. J. Coneho, M. Caramanis and J. A. Bloom "An Efficient Algorithm for Optimal Reservoir Utilization in Probabilistic Production Costing" IEEE Transactions on PS, Vol 5, No. 2, pp 439-447, May 1990.
- A25 M. Caramanis and A. Sharifnia, "Near Optimal Manufacturing Flow Controller Design," The International Journal of Flexible Manufacturing Systems, Vol. 3, No. 3/4, pp 321-336, 1991.
- A26 A. Sharifnia, M. Caramanis, S. B. Gershwin, "Dynamic Set-up Scheduling and Flow Control in Manufacturing Systems " Discrete Event Dynamic Systems: Theory and Applications, Vol. 1, No. 2, pp 149-175, 1991.
- A27 M. Caramanis and G. Liberopoulos, "Perturbation Analysis for the Design of Flexible Manufacturing System Flow Controllers," Operations Research, Vol. 40, No. 6, pp 1107-1125, Nov-Dec 1992.
- A28 G. Liberopoulos and M. Caramanis, "Production Control of Manufacturing Systems with Production Rate Dependent Failure Rates," IEEE Transactions on Automatic Control, Vol. 39, No. 4, pp. 889-895, April 1994.
- A29 G. Liberopoulos and M. Caramanis, "Infinitesimal Perturbation Analysis for Second Derivative Estimation and Design of Manufacturing Flow Controllers," Journal of Optimization Theory and Applications, Vol. 81, No. 2, pp. 297-327, May 1994.
- A30 G. Liberopoulos and M. Caramanis, "Dynamics and Design of a Class of Parameterized Manufacturing Flow Controllers", IEEE Transactions on Automatic Control, Vol 40, No. 6, pp 1018-1028, June 1995.
- A31 G. Liberopoulos and M. Caramanis "Numerical Investigation of Optimal Policies for Production Flow Control and Set-Up Scheduling: Lessons from Two-Part-Type Failure-Prone FMSs" International Journal of Production Research, Vol. 35, No. 8, pp 2109-2133, 1997.
- A32 C. Kaskavelis and M. Caramanis "Efficient Lagrangian Relaxation Algorithms for Real-Life-Size Job-Shop Scheduling Problems" IIE Transactions on Scheduling and Logistics, vol. 30, no 11, pp 1085-1097, November 1998.
- A33 E. Khmelnitsky and M. Caramanis "One-Machine n-Part-Type Optimal Set-up Scheduling: Analytical Characterization of Switching Surfaces" IEEE Transactions on Automatic Control, Vol. 43, No. 11, pp 1584-1588, November 1998.
- A34 M. Veatch and M. Caramanis "Optimal Average Cost Manufacturing Flow Controllers: Convexity and Differentiability" IEEE Transactions on AC Vol. 44, No. 4, pp 779-783, 1999.
- A35 M. Veatch and M. Caramanis "Optimal Manufacturing Flow Controllers: Zero-Inventory Policies and Control Switching Sets" IEEE Transactions on AC Vol. 44, No 5, pp 914-921, 1999.

- A36 Irad Ben-Gal and M. Caramanis “Sequential DOE via Dynamic Programming” IIE Transactions on Quality and Reliability Engineering, Vol. 34, No 12, 2002.
- A37 I. C. Paschalidis, C. Su, and M. C. Caramanis “Target-Pursuing Scheduling and Routing Policies for Multiclass Queueing Networks”, IEEE Transactions on AC, V. 49, N 10, pp. 1709-1722, October 2004.
- A38 O. M. Anli, M. C. Caramanis, I. C. Paschalidis" Tractable Supply Chain Production Planning Modeling Non-Linear Lead Time and Quality of Service Constraints ". Journal of Manufacturing Systems. Vol 26 No. 2, pp 116-134, 2007.
- A39 Y.C. Paschalidis, B. Li, M. C. Caramanis “Demand-Side Management for Regulation Service Provisioning through Internal Pricing” IEEE Transactions on Power Systems, Vol. 27, No. 3, pp. 1531- 1539, August, 2012.
- A40 Pablo A. Ruiz, Justin M. Foster,Aleksandr Rudkevich, and Michael C. Caramanis, “Tractable Transmission Topology Control using Sensitivity Analysis” IEEE Transactions on Power Systems, Vol. 27, No. 3, pp. 1550-1559, August, 2012.
- A41 J. M. Foster, G. Trevino, M. Kuss, and M. C. Caramanis, “Plug-In Electric Vehicle Coordination with Renewable Generation: Theory and Application” IEEE Systems Journal, V 7 No 4, pp 881-888, 2013.
- A42 J. M. Foster, M. C. Caramanis “Optimal Power Market Participation of Plug-In Electric Vehicles Pooled by Distribution Feeder” IEEE Transactions on Power Systems, Vol. 28, No. 3, pp. 2065-2076, August, 2013. DOI: [10.1109/TPWRS.2012.2232682](https://doi.org/10.1109/TPWRS.2012.2232682)
- A43 E. Bilgin, M. Caramanis, I. Paschalidis, and C. Cassandras, “Provision of Regulation Service by Smart Buildings” IEEE TSG, V. 7, N3, pp1683-1693, 2016.
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