

# Curriculum Vita

SHAWNA P. GROSSKOPF

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## Address

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## Personal

Born: February 27, 1950, Detroit, Michigan

## Education

2000, Honorary Doctorate: Gothenburg University, Sweden  
1977, Ph.D. and M.S.: Syracuse University  
1972, B.A.: Kalamazoo College

## Employment:

July 2012–June 2013: Adjunct Professor, Economics, Business School, Umea University, Sweden  
Fall 1998–2012: Professor of Economics, Oregon State University.  
1987-1998: Professor of Economics, Southern Illinois University.  
1983-1987: Associate Professor of Economics, Southern Illinois University.  
1978-1983: Assistant Professor of Economics, Southern Illinois University.  
1977: Instructor of Economics, Southern Illinois University.

## Visiting Appointments:

January-March 2009: Visiting Scholar, Auckland University of Technology, Auckland, New Zealand.  
January-March 2005: Visiting Scholar, Auckland University of Technology, Auckland, New Zealand.  
June 2001-2005: Research Associate, R.R. Institute of Applied Economics, Malmö, Sweden  
Feb 15-25, 2005, Visiting Scholar, Center for Efficiency and Productivity, Univ. of Queensland, Brisbane, Australia  
summer 1988-2000: Research Associate, The Swedish Institute for Health Economics, Lund, Sweden.  
July-August 2000: Visiting Scholar, Economics, UNSW, Sydney, Australia.  
Visiting Scholar, Institutet för Arbetsmarknads Politisk Utvärdering, Uppsala, Sweden

August-December 1996: Kerstin Hesselgren Professor, Sweden.  
August-December 1996: Guest Professor, Department of Economics, Göteborg University, Göteborg, Sweden.  
July-August 1995: Visitor, Center for Economic Studies, University of Munich, Germany.  
January-February 1993: Visiting Professor, Waikato University, Hamilton, New Zealand.  
February-March 1993: Visiting Professor, The Australian National University, Canberra, Australia.  
July-August 1992: Visiting Scholar, Resources and Technology Division, Economic Research Service, U.S.D.A., Washington, D.C.  
May-June 1991: Research Associate, Center for Operations Research and Econometrics (CORE), Louvain-la Neuve, Belgium.  
June-July 1990: Visiting Professor, Bilkent University, Ankara, Turkey.  
December 1989: Visiting Fellow, Adelaide University, Adelaide, SA, Australia  
Sept.-Nov. 1989: Visiting Fellow, The Australian National University, Canberra, ACT, Australia.  
August 1989: Visiting Fellow, LaTrobe University, Bundoora, Vic, Australia.  
1984-1985: Visiting Associate Professor of Economics, Vanderbilt University.

## **Professional Activities:**

2003:

Advisory Committee, European Workshop on Efficiency and Productivity

2002, 2004:

Advisory Committee, North American Workshop on Efficiency and Productivity

2001:

Scientific Committee, European Workshop on Efficiency and Productivity

2000-present:

(with R. Färe, R. R. Russell), coeditors for *Studies in Productivity and Efficiency*, Kluwer Academic Publishers.

1997-present:

Editorial Board, *Health Care Management Science*

1986-present:

Associate Editor, *Journal of Productivity Analysis*.

1981-1982:

Illinois Tax Reform Commission: Consultant for Excise and Consumption Tax Task Force (with K. Hayes).

## **Areas of Specialization:**

Public (State and Local) Finance

Performance Measurement

Labor/Public Employment

## Honors and Awards

1977:

Mattersdorf Award (NTA-TIA) for best student in public finance

1996:

Kerstin Hesselgren Chair: awarded by the Swedish parliament in honor of the first woman in the Swedish parliament.

2000:

Honorary Doctorate, Gothenburg University, Sweden.

2002:

Researcher of the Year Award, College of Liberal Arts

Who's Who in Economics

2005-present

ISI Web of Knowledge: one of the 250 most highly cited scholars in Economics and Finance

2007

Emerald Literati Network Highly commended award for Färe, Grosskopf, Førsund, Hayes and Heshmati, Measurement of productivity and quality in non-marketable services: with application to schools,' *Quality Assurance in Education* (2007) 14.

## Published Papers:

1. (R. Färe, D. Margaritis) 'Pricing Decision-Making Units,' *Journal of the Operational Research Society*, doi:10/1057/jors/2012.84.
2. (R. Färe) DEA, Directional Distance Functions and Positive, Affine Data Transformation, *Omega*, 41, 2013, 28-30.
3. (R. Färe, D. Margaritis, W.L. Weber) Technological Change and Timing Reductions in Greenhouse Gas Emissions, *Journal of Productivity Analysis*, (in press).
4. (R. Färe, V. Tremblay) Market Power and Technology, RIO Series Market Structure and Efficiency, (in press).
5. (N. Chau, R. Färe), 'Trade Restrictiveness and Pollution', *Journal of Public Economic Theory*, forthcoming.
6. (R. Färe, H. Fukuyama and D. Margaritis), 'DEA and Endogenous Technical Change,' *European Journal of Operational Research*, 210:2, 2011, 457-458.
7. (R. Althin, L. Behrenz, R. Färe, E. Mellander) 'Swedish Employment Offices: A New Model for Evaluating Effectiveness,' *European Journal of Operational Research*, 207:3, 2010, 1535-1544.
8. (C.H. Tremblay, K. Yang) 'Brainstorm: Occupational Choice, Bipolar Illness and Creativity,' *Journal of Economics and Human Biology*, 8(10), July 2010, 233-241.
9. (R. Färe, D. Margaritis) 'The Diet Problem and DEA,' *Journal of the Operational Research Society*, (in press).

10. (R. Färe, C. Pasurka, W.L. Weber) ‘Substitutability Among Undesirable Outputs,’ *Applied Economics* (in press).
11. (R. Färe, D. Margaritis), ‘Time Substitution with Application to Data Envelopment Analysis,’ *European Journal of Operational Research*, 2010, 686-690.
12. (R. Färe), ‘Directional Distance Functions and Slack-Based Measures of Efficiency: Some clarifications,’ *European Journal of Operational Research*, 206, 2010, 702.
13. (R. Färe), ‘Directional Distance Functions and Slack-Based Measures of Efficiency,’ *European Journal of Operational Research*, 2010, 320-322.
14. (R. Färe, C. Pasurka) ‘Toxic Releases: An Environmental Performance Index for Coal-Fired Power Plants,’ *Energy Economics*, 32, 2010, 158-165.
15. (D. Aiken, R. Färe, C. Pasurka), ‘Pollution Abatement and Productivity Growth: Evidence from Germany, Japan, the Netherlands and the United States,’ *Environmental and Resource Economics*, 44, 2009, 11-28.
16. (P. Bogetoft, R. Färe, ), ‘Rational (In)efficiency and Price Coordination,’ *Zeitschrift für Betriebswirtschaft* 2009, 1-6.
17. (R. Färe), ‘A Comment on dynamic DEA,’ *Applied Mathematics and Computation*, 2009, 275-276.
18. (P. Bogetoft, R. Färe, K. Hayes and L. Taylor) ‘Dynamic Network DEA: An Illustration,’ *Journal of the Operations Research Society of Japan* 52:2, 2009, 147-162.
19. (R. Färe, B.E. Roland and W.L. Weber), ‘License Fees: Norwegian Salmon Farming,’ *Agricultural Economics and Management*, 13:1, 2009, 1-21.
20. (R. Färe), ‘A Comment on Weak Disposability in Nonparametric Production Analysis,’ *American Journal of Agricultural Economics*, 2009, 1-21.
21. (K. Hayes and L. Taylor), ‘The Relative Efficiency of Charter Schools,’ *Annals of Public and Cooperative Economics*, Vol. 80, No. 1, 2009, 67-88.
22. (G. Whittaker, R. Confesor, S. Griffith, R. Färe, J. Steiner, G. Mueller-Warrant, G. Banowetz), ‘A Hybrid Genetic Algorithm for Multi-objective Activity Analysis Models,’ *European Journal of Operational Research*, 193, 2009, 195-203.
23. (R. Färe, K. Hayes, D. Margaritis), ‘Estimating Demand with Distance Functions: Parameterizations in the Primal and Dual,’ *Journal of Econometrics*, 147, 2008, 266-274.
24. (R. Färe and V. Zelenyuk), ‘Aggregation of Nervolian Profit Indicator”, *Applied Economics*, 15, 2008, 845-847.
25. (R. Färe, D. Margaritis), ‘U.S. Productivity in Agriculture and R & D,’ *Journal of Productivity Analysis* 30, 2008, 7-12.
26. (R. Färe, D. Margaritis), ‘Rejoinder’ *Journal of Productivity Analysis* 30, 2008, 77-79.
27. (B. Balk, R. Färe, and D. Margaritis), ‘Exact Relations Between Luenberger Productivity Indicators and Malmquist Productivity Indexes,’ *Economic Theory* 35, 2008, 187-190.
28. (R. Färe, R. Sickles), ‘Productivity of U.S. Airlines After Deregulation,’ *Journal of Transport Economics and Policy*, 41:1, 2007, 93-112.

29. (R. Färe, D. Margaritis), 'Productivity, Convergence and policy: a study of OECD countries and industries, *Journal of Productivity Analysis* 28, 2007, 87-106.
30. (R. Färe and C. Pasurka), 'Pollution Abatement Activities and Traditional Productivity,' *Ecological Economics*, 62, 2007, 673-682.
31. (R. Färe and C. Pasurka), 'Environmental Production Functions and Environmental Directional Distance Functions,' *Energy*, 2007, 1055-1066.
32. (S. Self, O. Zaim), Estimating the Efficiency of the System of Healthcare Financing in Achieving Better Health, *Applied Economics*, 38:13, July 2006, 1477-1488.
33. (R. Färe), 'Resolving a Strange Case of Efficiency,' *Journal of the Operational Research Society*, 57, 2006, 1366-1368.
34. (Färe, R. and C. Pasurka), 'Social Responsibility: U.S. Power Plants 1985-1998,' *Journal of Productivity Analysis*, 26, 2006, 259-267.
35. (R. Färe, F. Forsund, K. Hayes, A. Heshmati), 'Measurement of Productivity and Quality in Non-marketable Services: with application to schools,' *Quality Assurance in Education*, 14, no. 1, 2006, 21-36.
36. (R. Färe, D. Margaritis), Productivity Growth and Convergence in the European Union, *Journal of Productivity Analysis*, 25:1, 2006, 111-141.
37. (S. Self), 'Factor Accumulation or TFP? A Reassessment of Growth in Southeast Asia,' *Pacific Economic Review*, 11:1, 2006, 39-58.
38. (Färe, R., W. Weber), 'Shadow Prices and Pollution Costs in U.S. Agriculture,' *Ecological Economics* 56, 2006, 89-103.
39. (E. Ball, R. Färe, O. Zaim ), 'Accounting for Externalities in the Measurement of Productivity Growth: The Malmquist Cost Productivity Measure,' *Structural Change and Economic Dynamics*, 16, 2005, 374-394.
40. (T. Helvoigt) 'Productivity Growth, Technical Efficiency and Returns to Scale in the Washington State Sawmill Industry.' *International Journal of Information Technology & Decision Making* 4:3, 2005, 1-14.
41. (R. Färe, D. W. Noh, W. Weber), ' Characteristics of a Polluting Technology: Theory and Practice,' *Journal of Econometrics*, 126, 2005, 469-492.
42. (R. Färe, B. Seldon, V. Tremblay), ' Advertising Efficiency and the Choice of Media Mix: A Case of Beer,' *International Journal of Industrial Organization*, 2004, 503-522.
43. (R. Färe, F. Hernandez-Sancho), 'Environmental Performance: An Index Number Approach,' *Resource and Energy Economics*, 26, 2004, 343-352.
44. (R. Färe, W. Weber), 'The Effect of Risk-based Capital Requirements on Profit Efficiency in Banking,' *Applied Economics* 36, 2004, 1-13.
45. (R. Färe, V. Zelenyuk), 'Aggregation of Cost Efficiency: Indicators and Indexes Across Firms,' *Academic Economic Papers*, 32:3, 2004, 397-409.
46. (R. Färe, V. Zelenyuk), 'Aggregation Bias and Its Bounds in Measuring Technical Efficiency,' *Applied Economics Letters*, 2004, 343-352.

47. (R. Färe, G. Whittaker), ‘On Value Efficiency and Data Envelopment Analysis,’ Special Issue in Honor of W.W. Cooper, *Indian Economic Review*, 39:1, 2004, 81-88.
48. (R. Färe), “Modeling Undesirable Factors in Efficiency Evaluation: Comment,” *European Journal of Operational Research*, 157, 2004, 242-245.
49. (B. Balk, R. Färe), The Theory of Economic Price and Quantity Indicators,’ *Economic Theory*, 23, 2004, 149-164.
50. (D. Margaritis, V. Valdmanis), ‘Competitive Effects on Teaching Hospitals,’ *European Journal of Operational Research*, 154, 2004, 515-525.
51. (R. Färe, D. Margaritis), ”Productivity Growth in New Zealand: 1978-1998” *New Zealand Economic Papers*, vol 37 (1), June, 2003, pp 93-118.
52. (N. H. Chau and R. Färe ), “Trade Restrictiveness and Efficiency,” *International Economic Review*, vol. 44, No. 3, August 2003, 1079-1095.
53. (R. Färe), “Nonparametric Productivity Analysis with Undesirable Outputs: Comment,” *American Journal of Agricultural Economics*, 2003, 1070-1074.
54. (J.C. Bureau, N. Chau, R. Färe), ‘Economic Performance, Trade Restrictiveness and Efficiency,’ *Review of Development Economics*, vol. 7, No. 4, 527-542, 2003.
55. “Some Remarks on the Malmquist Productivity Index and Its Decomposition,” *Journal of Productivity Analysis*, 20, 2003, 459-474.
56. (R. Färe, V. Zelenyuk), ‘Comment on How not to Measure the Efficiency of Public Services,’ *Journal of the Royal Statistical Society*, Series A, Vol 165, part 3, 429-430, 2002.
57. (R. Färe, D. Margaritis), ”Economic Reform and Productivity Growth: The Case of Australia and New Zealand”, *Mathematics and Computers in Simulation*, 59, 143-152, 2002.
58. (R. Färe, Zaim, O.), ‘Hyperbolic Efficiency and Return to the Dollar,’ *European Journal of Operational Research*, 136, 671-679, 2002.
59. (R. Färe), ‘Two Perspectives on DEA: Unveiling the Link between CCR and Shephard,’ *Journal of Productivity Analysis*, 17:1/2, January 2002, 41-48.
60. (K. Hayes, L. Taylor and W. Weber), ‘On the Determinants of School District Efficiency: Competition and Monitoring,’ *Journal of Urban Economics*, 49, 2001, 453-478.
61. (O. Zaim, R. Färe ), ‘An Economic Approach to Achievement and Improvement Indexes,’ *Social Indicators Research*, 56, 2001, 91-118.
62. (R. Färe, D. Margaritis), ‘APEC and the Asian Economic Crisis: Early Signals from Productivity Trends,’ *Asian Economic Journal* 15:3, September 2001, 325-341.
63. (T. Anderson, R. Färe, L. Inman and X. Song), ‘Further Examination of Moore’s Law with data envelopment analysis,’ *Technological Forecasting and Social Change* 69, 465-477, 2002.
64. (R. Färe, W. Weber), ‘Shadow Pricing of Missouri Public Conservation Land,’ *Public Finance Review*, 29:6, November 2001, 444-460.
65. (R. Färe, C. Pasurka), ‘Accounting for Air Pollution Emissions in Measuring State Manufacturing Productivity Growth,’ *Journal of Regional Science*, 381-409, 2001.

66. ((R. Färe and P. Roos), ‘The Use of Indicators for the Measurement of Price and Quantity Changes,’ *Statistics and Democracy*, Statistics Sweden, 2001.
67. (R. Färe, W. F. Lee), ‘Productivity and Technical Change: The Case of Taiwan,’ *Applied Economics*, 33, 1911-1925, 2001.
68. (D. Margaritis, V. Valdmanis) “The Effects of Teaching on Hospital Productivity”, *Socio-Economic Planning Sciences*, 35, 189-204, 2001.
69. (R. Färe), ‘When Can Slacks be used to Identify Congestion? An Answer to W. W. Cooper, L. Seiford and J. Zhu,’ *Socio-economic Planning Sciences*, 35, 217-221, 2001.
70. (J. E. Kirkley, R. Färe, K. McConnell, D. E. Squires and I. Strand) ‘Assessing Capacity and Capacity Utilization in Fisheries when Data are Limited,’ *North American Journal of Fisheries Management*, 21:3, 482-497, August 2001.
71. (R. Färe, D. Margaritis), ‘Productivity Trends in Australian and New Zealand Manufacturing,’ *Australian Economic Review* 34:2, 125-34, 2001.
72. (R. Färe, F. Førsund, K. Hayes, A. Heshmati), “A Note on Decomposing the Malmquist Productivity Index by Means of Subvector Homotheticity,” *Economic Theory* 17, 239-245, 2001.
73. (D. Margaritis, V. Valdmanis), ‘Comparing Teaching and Non-teaching Hospitals: A Frontier Approach (Teaching vs. Non-Teaching Hospitals),’ *Health Care Management Science* 4, 83-90, 2001.
74. (C. Moutray), “Evaluation of School Reform in Chicago Public Schools,” *Economics of Education Review*, vol. 20, no. 1, 2001, 1-14.
75. (D. Boisso, K. Hayes), “Productivity and Efficiency in the U.S.: Effects of Business Cycles and Public Capital,” *Regional Science and Urban Economics*, vol. 30, 2000, 663-681.
76. (R. Färe). ‘Outfoxing a Paradox,’ *Economics Letters*, 69, 2000, 159-163.
77. (R. Färe), “On Separability of the Profit Function,” *Journal of Optimization Theory and Applications*, 2000, 609-620.
78. (R. Färe), “Theory and Application of Directional Distance Functions,” *Journal of Productivity Analysis*, 13, 2000, 93-103.
79. (R. Färe), “Network DEA,” *Socio-economic Planning Sciences*, 34:1, 2000, 35-49.
80. (R. Färe) “Decomposing Technical Efficiency with Care,” *Management Science*, 46:1, 2000, 1667-168.
81. (R. Färe) “Notes on Some Inequalities in Economics,” *Economic Theory*, 15:1, 2000, 227-234.
82. (R. Färe and J. Kirkley), ‘Multi-Output Capacity Measures and Their Relevance for Productivity,’ *Bulletin of Economic Research* 2000, 101-112.
83. (R. Färe) “Slacks and Congestion: A Comment,” *Socio-economic Planning Sciences*, 34:1, 2000, 27-34.
84. (K. Hayes, L. Taylor, and W. Weber) “Anticipating the Consequences of School Reform: A New Use of DEA,” *Management Science*, 45:4, 1999, 608-20.
85. (R. Brännlund, Y. Chung, R. and R. Färe) “Emissions Trading and Profitability: The Swedish Pulp and Paper Industry,” *Environmental and Resource Economics*, 1998, 345-356.
86. (R. Färe) “Congestion: a Note,” *Socio-Economic Planning Sciences* 32:1, 1998, 21-23.

87. (R. Färe) "Shadow Pricing of Good and Bad Commodities," *American Journal of Agricultural Economics* 80, 1998, 584-590.
88. (R. Färe and M. Norris) "Productivity Growth, Technical Progress, and Efficiency Change in Industrialized Countries: Reply," *American Economic Review*, 87:5, 1997, 1040-1043.
89. (Y.H. Chung and R. Färe) "Productivity and Undesirable Outputs: A Directional Distance Function Approach," *Journal of Environmental Management*, 51, 1997, 229-240.
90. (R. Färe) "Profit Efficiency, Farrell Decompositions and the Mahler Inequality," *Economics Letters*, 57, 1997, 283-287.
91. (R. Färe, B. Lindgren, J. P. Poullier) "Productivity Growth in Health Care Delivery: A Comparison of OECD Countries," *Medical Care*, 35:4, 1997, 354-366.
92. (R. Färe, R. Grabowski and S. Kraft), "Efficiency of Fixed but Allocatable Inputs: A Non-Parametric Approach," *Economics Letters*, 56, 1997, 187-193.
93. (K. Hayes, L. Taylor and W. Weber) "Budget-Constrained Frontier Measures of Fiscal Equality and Efficiency in Schooling," *Review of Economics and Statistics*, 79:1, February 1997, 116-124.
94. (R. Färe, E. Grifell-Tatjé, C.A.K. Lovell), "Biased Technical Change and the Malmquist Productivity Index," *Scandinavian Journal of Economics*, 99:1, 1997, 119-127.
95. "Statistical Inference and Nonparametric Efficiency: A Selective Survey," *Journal of Productivity Analysis* 7, 1996, 161-176.
96. (R. Chambers, R. Färe), "Productivity Growth in APEC Countries," *Pacific Economic Review*, 1:3, December 1996, 181-190.
97. (R. Färe, P. Roos) "On Two Definitions of Productivity," *Economics Letters*, 53, 1996, 269-274.
98. (J. Clement, V. Valdmanis) "A Comparison of Shadow Prices and Reimbursement Rates of Hospital Services," *Annals of Operations Research*, 67, 1996, 163-182.
99. (R. Färe, R. Althin) "Profitability and Productivity Changes: An Application to Swedish Pharmacies," *Annals of Operations Research*, 66, 1996, 219-230.
100. (R. Färe) "Productivity and Intermediate Products: A Frontier Approach," *Economics Letters*, 50, 1996, 65-70.
101. (R. Färe, D. Tyteca) "An Activity Analysis Model of the Environmental Performance of Firms—application to fossil-fuel-fired electric utilities," *Ecological Economics*, 18, 1996, 161-175.
102. (J. C. Bureau, R. Färe) "Nonparametric Measures of Productivity Growth in European and U.S. Agriculture," *Journal of Agricultural Economics*, 1995, 309-326.
103. (R. Färe), "Nonparametric Tests of Regularity, Farrell Efficiency and Goodness-of-Fit," *Journal of Econometrics*, 69, 1995, 415-425.
104. (K. Hayes, J. Hirschberg), "Fiscal Stress and the Production of Public Safety: A Distance Function Approach," *Journal of Public Economics* 57, 1995, 277-296.
105. (R. Brännlund, R. Färe) "Environmental Regulation and Profitability: An Application to Swedish Pulp and Paper Mills," *Environmental and Resource Economics* 6, 1995, 23-36.
106. (R. Färe, W.-F. Lee) "Productivity in Taiwanese Manufacturing Industries," *Applied Economics*, 27, 1995, 259-265.



107. (D. Margaritis and V. Valdmanis) "Estimating Output Substitutability of Hospital Services: A Distance Function Approach," *European Journal of Operational Research*, 80, 1995, 575-587.
108. (R. Färe, P. Roos) "Productivity and Quality Changes in Swedish Pharmacies," *International Journal of Production Economics*, 39, 1995, 137-144.
109. (R. Färe, P. Roos) "Productivity and Quality Changes in Swedish Pharmacies: Reply," *International Journal of Production Economics*, 39, 1995, 147.
110. (R. Färe) "Measuring Productivity: A Comment," *International Journal of Operations and Production Management*, 14:9, 1994, 83-88.
111. "Discussion: Linear Programming Approaches to the Measurement and Analysis of Productive Efficiency," *TOP* 2:2, 1994, 51-56.
112. (R. Färe) "Estimation of Returns to Scale Using Data Envelopment Analysis: A Comment," *European Journal of Operational Research*, 79, 1994, 379-382.
113. (R. Färe, M. Norris, Z. Zhang) "Productivity Growth, Technical Progress and Efficiency Change in Industrialized Countries," *American Economic Review*, 84:1, March 1994, 66-83.
114. (R. Chambers, R. Färe) "Efficiency, Quantity Indexes and Productivity Indexes: A Synthesis," *Bulletin of Economics Research*, 46:1, January 1994, 1-22.
115. (G. Ferrier, K. Hayes, S. Yaisawarng) "Economics of Diversification in the Banking Industry: A Frontier Approach," *Journal of Monetary Economics*, 31, 1993, 229-249.
116. (M. English, K. Hayes, S. Yaisawarng) "Output Allocative and Technical Efficiency of Banks," *Journal of Banking and Finance*, 17:2-3, April 1993, 349-366.
117. (V. Valdmanis) "Evaluating Hospital Performance with Case Mix Adjusted Outputs," *Medical Care*, 31:6, 1993, 525-532.
118. (K. Hayes) "Local Public Sector Bureaucrats and Their Input Choices," *Journal of Urban Economics*, 33, 1993, 151-166.
119. (R. Färe, C.A.K. Lovell, S. Yaisawarng) "Derivation of Shadow Prices for Undesirable Outputs: A Distance Function Approach," *Review of Economics and Statistics*, 1993, 374-380.
120. (K. Hayes and S. Yaisawarng) "Measuring Economies of Diversification: A Frontier Approach," *Journal of Business Economics and Statistics*, 10:4, 1992, 453-459.
121. (R. Färe, C.A.K. Lovell) "Indirect Productivity Measurement," *Journal of Productivity Analysis* 2, 1992, 283-298.
122. (R. Färe, B. Lindgren, P. Roos) "Productivity Changes in Swedish Pharmacies 1980-1989: A Non-parametric Malmquist Approach," *Journal of Productivity Analysis* 3, 1992, 85-101.
123. (R. Färe) "Malmquist Productivity Index and Fisher Ideal Indexes," *The Economic Journal* 102:410, 1992, 158-160.
124. (R. Färe, S.K. Li) "Linear Programming Models for Firm and Industry Performance," *The Scandinavian Journal of Economics*, 1991, 599-608.
125. (R. Färe) "A Distance Function Approach to Price Efficiency," *Journal of Public Economics* 43, 1990, 123-126.

126. (R. Färe, S. Yaisawarng, S. Li, Z. Wang) "Productivity Growth in Illinois Utilities," *Resources and Energy* 12, 1990, 383-398.
127. (R. Färe) "The Fisher Ideal Index and the Indirect Malmquist Productivity Index: A Comparison," *New Zealand Economic Papers* 24, 1990, 66-72.
128. (D. Margaritis, V. Valdmanis) "Nurse Productivity and Wages," *New Zealand Economic Papers* 24, 1990, 73-86.
129. (S. Yaisawarng) "Economies of Scope in the Provision of Local Public Services," *National Tax Journal* 43, March 1990, 61-74.
130. (R. Färe, J. Nelson) "On Price Efficiency," *International Economic Review*, 1990, 709-720.
131. (R. Färe, H. Lee) "A Nonparametric Approach to Expenditure Constrained Profit Maximization," *The American Journal of Agricultural Economics*, 1990, 574-581.
132. (R. Färe, C.A.K. Lovell, C. Pasurka) "Measuring Efficiency when some Outputs are Undesirable: A Nonparametric Approach," *Review of Economics and Statistics* 71:1, 1989, 90-98.
133. (R. Färe, W. Weber) "Measuring School District Performance," *Public Finance Quarterly* 17:4, 1989, 409-428.
134. (R. Färe, V. Valdmanis) "Capacity, Competition and Efficiency in Hospitals: A Nonparametric Approach," *Journal of Productivity Analysis* 1, 1989, 123-128.
135. (R. Färe, E. Kokkelenberg) "Measuring Plant Capacity Utilization, and Technical Change: A Non-parametric Approach," *International Economic Review*, 1989, 655-666.
136. (R. Färe, C. Pasurka) "The Effect of Environmental Regulations on the Efficiency of Electric Utilities: 1969 vs. 1975," *Applied Economics* 21, 1989, 225-235.
137. (R. Färe, C.A.K. Lovell) "An Indirect Approach to the Evaluation of Producer Performance," *Journal of Public Economics* 37, 1988, 71-89.
138. (R. Färe, C.A.K. Lovell) "Scale Elasticity and Scale Efficiency," *Zeitschrift für die gesamte Staatswissenschaften* 144, No. 4, September 1988, 721-729.
139. (R. Färe, D. Njinkou) "On Piecewise Reference Technologies," *Management Science* 34, No. 12, December 1988, 1507-1511.
140. (P. Byrnes, R. Färe, C.A.K. Lovell) "The Effect of Unions on Productivity: U.S. Surface Mining of Coal," *Management Science* 34, No. 9, September 1988, 1037-1053.
141. (K. Hayes, S. Porter-Hudak) "Pension Funding and Local labor Costs: A Dynamic Analysis of Illinois Police Pension Funds," *Southern Economic Journal* 54, No. 3, January 1988, 572- 82.
142. (P. Byrnes, R. Färe, S. Kraft) "Technical Efficiency and Size: The Case of Illinois Grain Farms," *European Review of Agricultural Economics* 14, No. 4, 1987, 395-412.
143. (V. Valdmanis) "Measuring Hospital Performance: A Nonparametric Approach," *Journal of Health Economics* 6, 1987, 89-107.
144. (R. Färe, C.A.K. Lovell) "Nonparametric Disposability Tests," *Zeitschrift für Nationalökonomie* 47, 1987, 77-85.
145. (R. Färe, J. Logan) "The Comparative Efficiency of Western Coal-Fired Steam-Electric Generating Plants: 1977-1979," *Engineering Cost and Production Economics* 11, 1987, 21-30.

146. (K. Hayes) "The Demand for Local Public Goods: Choosing an Appropriate Functional Form," *Applied Economics* 18, November 1986, 1179-1192.
147. (R. Färe, C.A.K. Lovell) "Scale Economics and Duality," *Zeitschrift fr Nationalökonomie* 46, No. 2, 1986, 175-182.
148. (R. Färe, C. Pasurka) "Effects on Relative Efficiency in Electric Power Generation Due to Environmental Controls," *Resources and Energy* VIII, No. 2, 1986, 167-184.
149. "The Role of the Reference Technology in Measuring Productive Efficiency," *The Economic Journal*, 96, June 1986, 499-513.
150. (P. Byrnes, K. Hayes) "Efficiency and Ownership: Further Evidence," *Review of Economics and Statistics* 68, No. 2, May, 1986, 337-341.
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1. Review of *Industrial Price, Quantity and Productivity Indices: the Micro-Economic Theory and an Application*, by B. M. Balk, for *Zeitschrift für Nationalökonomie*, 71:3, 2000, 324-325.
2. (R. Färe, K. Kerstens, J.E. Kirkley, D. Squires), 'Assessing Short-Run and Medium-Run Fishing Capacity at the Industry Level and its Reallocation,' *IIFET 2000 Proceedings*.
3. (R. Färe, J.E. Kirkley, D. Squires), 'Data Envelopment Analysis (DEA): A Framework for Assessing Capacity in Fisheries when Data are Limited,' *IIFET 2000 Proceedings*.
4. (R. Färe), 'Primal and Dual Measures of Capacity Utilization,' *PICMET*, Proceedings Vol. 2 (1999).
5. (K. Hayes, L. Taylor and W. Weber), "Allocative Inefficiency and School Competition," *National Tax Association Proceedings: 91st Annual Conference on Taxation*, 1998, 282-292.
6. (R. Färe, P. Roos), "Profit, Productivity and Quality: A Directional Distance Function Approach," in *Register Statistics, Respondent Costs, and Survey Process Improvement*, Proceedings of the 2nd International Conference on Methodological Issues in Official Statistics, Stockholm September 23-24, 1996, 55-61, ISBN 91-618-0873-3.
7. Review of *Productivity* by Dale Jorgenson, for *Zeitschrift für Nationalökonomie*, forthcoming. (with Jean-Christophe Bureau)
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1. (R. Färe, C.A.K. Lovell) *The Measurement of Efficiency of Production*, Kluwer-Nijhoff Publishing, Boston (1985).
2. (R. Färe) *Cost and Revenue Constrained Production*, Bilkent University Lecture Series, Springer-Verlag, Berlin (1994).
3. (R. Färe, C.A.K. Lovell) *Production Frontiers*, Cambridge University Press, Cambridge (1994).
4. (R. Färe) *Intertemporal Production Frontiers*, Kluwer-Nijhoff, 1996.
5. (R. Färe and R. R. Russell), eds., *Index Numbers: Essays in Honor of Sten Malmquist*, Kluwer Academic Publishers, Boston, 1998.
6. (R. Färe), *Efficiency and Productivity: New Directions*, Kluwer Academic Publishers, Boston, 2004.
7. (R. Färe), *Efficiency and Productivity: New Directions*, Kluwer Academic Publishers, Boston, 2005. (softcover version)
8. (R. Färe, D. Primont), eds., *Aggregation, Efficiency and Measurement*, Studies in Efficiency and Productivity, Springer Science+Business Media, LLC, 2007.

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1. (R. Färe), ‘Homogeneous and homothetic production (and utility) functions,’ in M. Blaug and P. Lloyd, eds, *Famous Figures and Diagrams in Economics*, Edward Elgar, forthcoming.
2. (V.E. Ball, R. Färe and D. Margaritis) ‘Productivity and Profitability of US Agriculture: Evidence from a Panel of States,’ V.E. Ball, R. Fantini and L Gutierrez (eds) *The Economic Impact of Support to Agriculture: an international perspective*, Springer, New York, (in press).
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4. (R. Färe, D. Margaritis), ‘Productivity and Efficiency: Malmquist and More,’ H. Fried, C.A.K. Lovell, and S. Schmidt, *The Measurement of Productive Efficiency and Productivity Growth*, Cambridge University Press, 2008.
5. (R. Färe, V. Zelenyuk) ‘Finding Common Ground: Efficiency Indices’, in *Aggregation, Efficiency and Measurement*,(R. Färe, D. Primont), eds., Springer Science+Business Media, LLC, 2007.
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7. (R. Färe, V. Zelenyuk), ‘Finding Common Ground: Efficiency Indexes,’R. Färe and S. Grosskopf, eds., *Aggregation, Efficiency and Measurement*, Springer Verlag, 2007.
8. (R. Färe, G. Whittaker), ‘Network DEA’, in *Modeling Data Irregularities and Structural Complexities in Data Envelopment Analysis*, eds. Joe Zhu and Wade D. Cook, Springer, 2007.
9. (B. M. Balk, R. Brännlund, R. Färe, M. Lindmark), ‘Environmental Performance in Swedish Manufacturing, 1913-1990,’ *Contributions in Environmental Economics: in Honour of Karl Gustaf Löfgren*, T. Aronsson, R. Axelson and R. Brännlund, eds., Edward Elgar, 2006, 287-306.

10. (R. Färe, G. Whittaker), ‘Distance Functions: with Applications to DEA,’ in L. M. Seiford and J. Zhu (eds.) *DEA Handbook*, Kluwer Academic Publishers (2004), 139-152.
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12. (R. Färe, O. Zaim), ‘An Index Number Approach to Measuring Environmental Performance: An Environmental Kuznets Curve for the OECD Countries,’ in *New Directions: Efficiency and Productivity* Kluwer Academic Publishers, Boston, 2004, 77-89.
13. (R. Färe, D. Margaritis), ‘Productivity, Growth and Macroeconomic Policy,” in F. N. De Simone and A. Chin (eds.) *Monetary and Fiscal Policy in Singapore*, forthcoming, McGraw Hill.
14. (R. Färe, P. Roos), ‘Integrating Consumer Satisfaction into Productivity Index,’ K. Fox (ed.) *Efficiency in the Public Sector*, Kluwer Academic Publishers (2002) 201-217.
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20. (R. Färe, P. Roos), ‘Price Indexes for Nonmarketed Goods,” in Georg Westermann, ed., *Data envelopment analysis in the service sector*, Deutscher Universitäts-Verlag, Wiesbaden, 1999.
21. (R. Färe) ‘Efficiency and Productivity in Rich and Poor Countries”, in Bjarne Jensen and Kar Yiu Wang, eds., *Dynamics, Economic Growth and International Trade*, Ann Arbor: Michigan University Press, 1997, 243-264.
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23. (R. Färe, D. Margaritis), ‘Productivity Change in the New Zealand Manufacturing Sector: 1979-91,’ in *A Study of Economic Reforms: the Case of New Zealand*, B. Silverstone, A. Bollard, R. Lattimore, eds, North-Holland, 1996, 73-100.
24. (R. Färe, S. Yaisawarng) ‘Intertemporal Budgeting and Efficiency,” in *Intertemporal Production Frontiers*, by R. Färe and S. Grosskopf, Kluwer-Nijhoff Academic Publishers, Newton, MA, 1996.
25. (R. Färe, Y.He, J. Horvath) ‘Industrial Productivity Growth in China:1980-84 vs 1984-85” in *Intertemporal Production Frontiers*, by R. Färe and S. Grosskopf, Kluwer-Nijhoff Academic Publishers, Newton, MA, 1996.

26. (R. Färe, B. Lindgren, P. Roos) "Productivity Developments in Swedish Hospitals: A Malmquist Output Index Approach," in *Data Envelopment Analysis: Theory, Methodology and Applications*, A. Charnes, W.W. Cooper, A. Lewin, L. Seiford (eds.) Kluwer-Nijhoff, 1994, 253-272.
27. (R. Färe, P. Roos) "Den Offentliga Sektorns Produktivitetsutveckling inom Sjukhussektorn 1970-1992," *Den Offentliga Sektorns Produktivitetsutveckling 1980-1992* DS, 1994 3-27.
28. (R. Färe) "Theory and Calculation of Productivity Indexes," *Models and Measurement of Welfare and Inequality*, W. Eichhorn (ed.) Springer Verlag (1994), pp. 921-940.
29. (R. Färe) "Nonparametric Tests for Cost Constrained Technologies," in *Mathematical Modeling in Economics*, W.E. Diewert, K. Spreman and F. Stehling (eds.), Springer-Verlag, Berlin (1993), pp. 142-148.
30. "Efficiency and Productivity," ed. H. Fried, C.A.K. Lovell, and S. Schmidt, *The Measurement of Productive Efficiency: Techniques and Applications*, Oxford University Press, Oxford, 1993, 160-194.
31. (R. Färe, B. Lindgren, P. Roos) "Productivity Changes in Swedish Pharmacies 1980-1989: A Non-Parametric Malmquist Approach," *International Applications of Productivity and Efficiency Analysis*, T. Gullledge and C.A.K. Lovell (eds.) Kluwer Academic Publishers (1992), pp. 81-97. (Also published in Journal of Productivity Analysis.)
32. (R. Färe) "Measuring Shadow Price Efficiency," *Applications of Modern Production Theory: Efficiency and Productivity*, ed. A. Dogramaci and R. Färe, Kluwer-Nijhoff, 1988.
33. (R. Färe, J. Logan, C.A.K. Lovell) "Measuring Efficiency in Production: With an Application to Electric Utilities," *Managerial Issues in Productivity*, ed. A. Dogramaci and N. Adam, Kluwer-Nijhoff Publishing, 1985, 185-214.
34. (R. Färe, C.A.K. Lovell) "The Structure of Technical Efficiency," *Topics in Production Theory*, ed. F. Forsund, MacMillan Press, London, 1984, reprinted from The Scandinavian Journal of Economics, 1983.
35. (M. Johnson) "Land Value Tax Revenue Potentials: Methodology and Measurement," in R. Lindholm and A. Lynn, eds. *Land Value Taxation: The Progress and Poverty Centenary*, Published for the Committee on Taxation, Resources, and Economic Development by the University of Wisconsin Press, 1982, 41-68.
36. (J. Burkhead) "Recent Trends in Public Employment and Compensation," in R. Bahl, J. Burkhead, B. Jump (eds.) *Public Employment and State and Local Government Finance*, 1980, Cambridge: Ballinger Publishing Company, 1-30.
37. "Labor Force Characteristics of Public Employees" *Ibid.*, 31-64.

## Government Documents:

1. (K. Hayes) "Report to the Excise and Consumption Taxes Task Force," Tax Reform Commission, State of Illinois, December 1982.
2. (D. Arey and G. Provenzano) "The Prospects for Controlled Trading of Air Pollution Rights in the Metro East Area of Illinois," Illinois Institute of Natural Resources, Document No. 81/26, August, 1981.

3. (D. Arey, et al.) "PSD: A Study to Determine the Potential Effects of Reclassifying Portions of Madison, Monroe and St. Clair Counties from Class II to Class III," Illinois Environmental Protection Agency, 1980.
4. (J. Myers, et al.) "The Impact of Western Coal on the Illinois Economy," for the Attorney General of Illinois, 1979.
5. (D. Arey, J. Crenshaw, O. Ervin, J. Myers, W. Patula) "Prevention of Significant Deterioration of Air Quality: An Analysis of Policy Alternatives in Illinois," Coal Extraction and Utilization Research Center and the Illinois Environmental Protection Agency, 1979.

## Grant Activity:

1979:

"Prevention of Significant Deterioration of Air Quality," with D. Arey, et al., for the Ford Foundation.  
 "The Economic Impact of Western Coal on the Illinois Economy," for the Attorney General of Illinois (contributor), J. Myers, et al.

1980:

"Prevention of Significant Deterioration: A Study to Determine the Potential Effects of Reclassifying Portions of Madison, Monroe and St. Clair Counties from Class II to Class III (contributor), IEPA, December 1980.

1981:

Controlled Trading in Air Pollution Rights in the Metro-East Area of Illinois," with D. Arey and G. Provenzano, Illinois Institute of Natural Resources.

1987:

SIU Summer Research Award.

1988-91:

"Expenditure Constrained Profit Maximization," ERS-USDA, with R. Färe.

1991-92:

"Accounting for Inefficiency in Agricultural Productivity," ERS-USDA, with R. Färe.  
 "Can America Compete? An International Comparison of Productivity, Innovation and Efficiency Change," Center for International Business and Culture, with R. Färe.

1993-95

"Agricultural Productivity When Some Outputs are Undesirable," USDA, ERS, with R. Färe.

1994-96

"Frontier Production and Environmental Issues" USEPA, with R. Färe.

1995-96

"Estimation of Environmental and Economic Effects of Production Using Survey Data," USDA, ERS, with R. Färe.

1997-98

"Application of Frontier Production Models to Environmental Issues," USEPA, with R. Färe.



1999-00: “Effect of Accounting for Undesirable Environmental Effects on Farm Income,” ERS/USDA, with R. Färe.

2002-2009 ‘Modeling Enterprise Efficiency, Innovation and Growth,’ New Zealand Foundation for Research, Science and Technology, with R. Färe and D. Margaritis, \$370,000.

2004-2006: ‘Conservation Effects Assessment,’ ARS Grant, with J. Whittaker and R. Färe, \$230,000.

2006-2009: ‘Assessing Trade-Offs between crop production and ecological services: the Calapooia basin’, USDA CSREES, \$640,000, co-PI.

2008-09: ‘Energy in the U.S. Agricultural Sector,’ USDA, Office of the Chief Economist, Office of Energy Policy and New Uses, with R. Färe, co-PI, \$20,000.

## **Doctoral Dissertations Under My Direction:**

P. Byrnes (1985) “Ownership and Efficiency in U.S. Utilities” (Co-chair).

D. Njinkeu (1988) “A Monte Carlo Comparison of Alternative Measurements of Returns to Scale in Non-stochastic Models” (Co-chair).

W. Weber (1988) “Estimating Demand Prices for Public Goods From Private Aggregate Demand Functions (Co-chair).

S. Yaisawarng (1989) “Measuring Short-Run Price Efficiency: Theory and Application” (Co-chair).

C.S. Kim (1995) “Productivity Change, Efficiency Change and Technical Change in the Newly Industrializing Countries”.

Chad Moutray (1996) “Assessing the Performance of Market-Based Education Reforms.”

Brian Sloboda (1997) “The Economic Impact of Southern Illinois University on the State of Illinois: The Human Capital Approach”.

V. Zelenyuk, (2002) “Essays in Productivity and Efficiency Analysis of Economic Systems,” (Co-chair).

Dong Wong Noh (2002) “Essays on Applied Microeconomics.” (co-chair)

Natasha Konstandina (2007) ‘Measuring Efficiency and Dealing with Failures in Banking: Application to the Russian Banking Sector.’

Moriah Bellenger (2010) ‘Essays in Environmental Economics.’

Kandice Kleiber, current.

## **Doctoral Dissertations: External Examiner**

Magnus Tambour (1997) “Essays on Performance in the Health Care Sector” Stockholm University, Stockholm, Sweden .

Staffan Waldo (2003) “Essays on Education Performance,” University of Lund, Sweden.

Chunping Liu, (2007) "Three essays on Health Economics," University of Guelph, Guelph, Ontario, Canada.

Julie A. Harrison (2007) "Results or Processes? Alternative Approaches to the Performance Measurement of New Zealand Secondary Schools," University of Auckland, New Zealand.

## **OSU Master's Students under my Direction**

Natasha Konstandina

Xiuying Jin

Stanislav Khrapov

Kandice Kleiber

Yuko Igarashi

## **Refereeing**

Agricultural Economics

American Economic Review

American Journal of Agricultural Economics

Annals of Operations Research

Annals of Public and Cooperative Economics

Applied Economics

Bulletin of Economic Research

Canadian Journal of Economics

Contemporary Economic Policy

Eastern Economic Journal

Ecological Economics

Economica

Economic Development and Cultural Change

Economic Inquiry

Economics Letters

The Energy Journal

Environment and Development Economics

Environmental and Resource Economics

European Economic Review

European Journal of Operational Research

Global Economic Review

Health Care Management Science

Health Economics

International Economic Review

International Journal of Production Economics

International Journal of Manpower

International Tax and Public Finance

Journal of Agricultural Economics

Journal of Business Economic and Statistics

Journal of Comparative Economics

Journal of Development Economics

Journal of Economic Education  
Journal of Economic Development  
Journal of Economic Behavior and Organization  
Journal of Econometrics  
Journal of Economic Theory  
Journal of Environmental Economics and Management  
Journal of Health Economics  
Journal of Human Resources  
Journal of Institutional and Theoretical Economics  
Journal of Productivity Analysis  
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National Tax Journal  
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Southern Economic Journal  
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## 1 Papers under Review

1. (R. Färe, C. Pasurka), 'Stated vs revealed Abatement Costs: The Case of Electric Utilities,' submitted to *JEEM*, 2007.
2. (L. Taylor and K. Hayes), 'Is a Low Instructional Share an Indicator of School Inefficiency: Exploring the 65 percent solution,' submitted to *Journal of Policy Administration and Management*, Oct. 2007.
3. (D. Vaughn-Aiken, R. Färe, and C. Pasurka), 'Least Cost Air Pollution Control: A CGE Joint Production Framework,'
4. G. Whittaker, R. Färe, R. Confesor, 'A Malmquist Index Approach to Construction of a Water Quality Index,' submitted to *Water Resources Review*, 2008.

## Recent Conferences

2001:

(R. Färe, C. Pasurka), 'Stated vs Production Costs of Regulation: The Case of Electric Utilities,' ASSA meetings, New Orleans, Jan. 2001.

(R. Färe, B. Seldon, V. Tremblay), 'Advertising Efficiency and the Choice of Media Mix: A Case of Beer,' WEA meetings, San Francisco, July 2001

(S. Self), 'Growth, Human Capital and TFP,' WEA meetings, San Francisco, July 2001

'Some Remarks on Productivity and its Decomposition,' Exclusive Workshop on DEA, University of South Denmark, Odense, Denmark, Sept. 2001

(R. Färe, R. Sickles), 'Productivity? Of U.S. Airlines after Deregulation,' 7th Workshop on Efficiency and Productivity, Oviedo, Spain, Sept. 2001

(R. Färe, O. Zaim), 'An Economic Approach to Achievement and Improvement Indexes,' 7th Workshop on Efficiency and Productivity, Oviedo, Spain, Sept. 2001

(R. Färe), 'Optimization Models Applied to Productivity and the Environment,' Brazilian Society of Operations Research, Campos de Jordao, Brazil, Nov. 2001

(C. Tremblay), 'Manic Depression, Occupational Choice and Creativity,' SEA meetings, Nov. 2001

(R. Färe), 'The Practice of Production Theory in Environmental Economics,' Occasional California Workshop on Environmental and Resource Economics, Santa Barbara Oct. 2001

2002

(K. Hayes, L. Taylor), 'Productivity, Innovation and Diffusion in the United States: Can Policy Put the States on the Technology Frontier?', CSWEP session, ASSA meetings, Atlanta, Jan. 2002.

(R. Färe, C. Pasurka), 'Environmental Regulations and Traditional Measures of Productivity: A Joint Production Perspective,' AERE session, ASSA meetings, Atlanta, Jan. 2002.

(K. Hayes, L. Taylor), 'Competition and Efficiency: the Impact of Charter Schools on Public School Performance,' North American Productivity Workshop, Schenectady, NY, June 20-22.

(R. Färe, V. Zelenyuk), 'Finding Common Ground: Efficiency Indexes,' North American Productivity Workshop, Schenectady, NY, June 20-22.

(R. Färe, C. Pasurka), 'Stated vs Revealed Approaches to Measuring Pollution Abatement Costs,' Second World Congress of Environmental and Resource Economics, Monterey, June 23-27.

(R. Färe, W. Weber), 'Shadow Prices and Pollution Costs in U.S. Agriculture,' Second World Congress of Environmental and Resource Economics, Monterey, June 23-27.

(R. Färe, V. Zelenyuk), 'Aggregation of Cost Efficiency Indicators and Indexes across Firms,' Asia Conference on Efficiency and Productivity Growth, Taipei, July 19-20.

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2003

(S. Self, O. Zaim), 'To What Extent is the Efficiency of Public Health Expenditure Determined by the Status of Health?', ASSA meetings, CSWEP session, January.

(R. Färe, V. Zelenyuk), 'Finding Common Ground: Efficiency Indices,' Conference on Aggregation, Efficiency and Measurement in honor of R. Robert Russell, U.C. Riverside, CA.

(R. Brännlund, R. Färe, M. Lindmark), 'Environmental Performance in Swedish Manufacturing 1913-1980,' Karl-Gustav Lövgren Symposium, Ulvön, Sweden. (K. Hayes, L. Taylor), 'Competition and Efficiency: the Impact of Charter Schools on Public School Performance,' SEA Meetings, Nov.

(R. Färe, K. Hayes, L. Taylor), 'Dynamic Efficiency: Is the Public Sector Investing too Little?', European

Conference on Efficiency and Productivity, Oviedo, Spain, September.  
'Modeling a Pollution Technology: Theory and Practice', University of Patras, Patras, Greece, HEWPEM, keynote address.

2004

(D. Vaughn-Aiken, R. Färe, C. Pasurka), 'Least Cost Air Pollution Control: A CGE Joint Production Framework,' ASSA, San Diego, CA.  
(P. Bogetoft, R. Färe, K. Hayes, L. Taylor) 'Dynamic Efficiency: Is the Public Sector Investing too Little?', special workshop, Copenhagen, DK, June 10. (K. Hayes, L. Taylor), 'Competition and Efficiency: the Impact of Charter Schools on Public School Performance,' APPC, Brisbane Australia, July.  
(N. Chau, R. Färe), 'Trade Restrictiveness and Pollution,' APPC, Brisbane Australia, July. (R. Färe, R. Sickles), 'Productivity? Of U.S. Airlines,' NAPW, Toronto.

2005:

(R. Färe, E. Tortosa-Ausina), 'Efficiency and Market Power in Banking,' European Workshop on Productivity and Efficiency Analysis, Brussels, summer.  
(R. Färe and D. Margaritis), 'The Role of R and D in U.S. Agricultural Productivity,' European Workshop on Productivity and Efficiency Analysis, Brussels, summer, also presented at the New Zealand Econometrics Workshop in Christchurch in February.  
(R. Färe, P. Roos), 'Optimizing Cataract Surgery,' American Public Health Association Meetings, Philadelphia, December.  
(K. Hayes, L. Taylor), 'Are Charter Schools More Efficient? Comparing the Technical, Allocative and Scale Efficiency of Texas Public Schools,' Southern Economic Association Meetings, Washington, D.C.

2006:

(R. Färe, D. Margaritis), 'Sectoral Productivity Trends Across OECD Manufacturing Industries,' Hellenic Efficiency and Productivity Workshop, Patras, Greece, June.  
(R. Färe), 'Assessing Trade-Offs between farm profits and ecological services,' Asian Pacific Productivity Conference, Seoul, South Korea.  
(R. Färe, P. Roos, M. Lundström), 'Evaluating Health Care Efficiency,' Asian Pacific Productivity Conference, Seoul, South Korea.

2007:

(R. Färe), 'Assessing Trade-Offs between farm profits and ecological services,' Salinity Workshop, Sydney, Australia, February.  
(R. Färe, D. Margaritis), 'Efficiency and Productivity: Malmquist and More,' keynote address, European Workshop on Efficiency and Productivity, Lille, France, June.  
(L. Taylor, K. Hayes), 'Is a Low Instructional Share an Indicator of School Inefficiency: Exploring the 65 percent solution,' European Workshop on Efficiency and Productivity, Lille, France, June.  
(R. Färe, P. Roos, M. Lundström), 'Evaluating Health Care Efficiency', preconference workshop, IHEA, Lund, Sweden, July.

2008:

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