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Curriculum Vitae

Name: Mohammed Aliuddin Khan

Address: Department of Economics
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Date of Birth: July 20, 1948

Citizenship: U. S. A.

Marital Status: Married, with two children

Degrees:

B. Sc. (Econ.), 1st Class Honours, London School of Economics, June 1969.
Special Subject: Economics and Econometrics.

M.Phil., Yale University, March 1972.
Oral Fields: Mathematical Economics, Public Finance.

Ph. D., Yale University, June 1973.
Dissertation Committee: Professors D. J. Brown, H. E. Scarf, R. M. Starr.
Dissertation Title: "Large Exchange Economies."

Awards and Honours:

Gonner Prize, 1969. Awarded by The London School of Economics.

Yale University Fellowship, 1969-1973.

Quaid-E-Azam Lecture to The Pakistan Society of Development Economists, Islamabad, May 1985.

Voted excellent teacher in every year (1984-88) taught at The University of Illinois. One of two outstanding graduate instructors of 1986 (Microeconomic Theory ranked first in large class category).

Nominated for the Distinguished Teaching Award at The Johns Hopkins University, 1991, 1992.

National Lecture titled “Perfect Competition and Economic Development,” Pakistan Planning Commission, September 6, 2007.

Ph. D Students

Completed Ph.D.’s: Scott Saunders, A. Bandyopadhyay, S. Rashid (Yale), L. Lewis (Yale), Y. Tal, Po-Sheng Lin, T. Datta Chaudhuri, R. Vohra, N. Yannellis (Rochester), Y. Nomura, S. Ishizawa, D. Emmons, T. Hamano, Min Tang, K. Rath, V. Chandra, C. S. Liu, Eshi Motahar, Jane Shieh, Shinji Yamashige, P. Gerson, Saleha Jilani, M. Upadhyay, S. Broca, N. Chau, Muslehuddin, Y. Yakutake, A. Rajan (Mathematics), S. Alpay, Sung Kim, M. Khawar, A. Basu, M. Rauh, Nehme Ayoub (Mathematics), Sanjik Lee, Daniel Hinze, Alain Dhoore, M. Fujio, Zhixiang Zhang, Haifeng Fu (NUS), Haomiao Yu, Maia Linask, James Lake, Metin Uyanik, Liuchun Deng, Jong Jae Lee, Sezer Yasar.

Employment:

Assistant Professor, The Johns Hopkins University, July 1973-June 1977.

Associate Professor, The Johns Hopkins University, July 1977-June 1981.

Professor, The Johns Hopkins University, July 1981-June 1984.

Professor, The University of Illinois, July 1984-June 1988.

Professor, The Johns Hopkins University, July 1988-June 1989.

Abram Hutzler Professor of Political Economy, The Johns Hopkins University, July 1989-

Publications:

1974

“Approximately Convex Average Sums of Unbounded Sets,” *Proceedings of the American Math. Soc.*, Vol. 43, no. 1 (1974), 181-185. MR 49/3691.

“Some Remarks on the Core of a Large Economy,” *Econometrica*, Vol. 44, no. 4 (1974) 633-42. MR 56/10821; *ZBl* 318/90015; JEL 75/747.

“Some Equivalence Theorems,” *Review of Economic Studies*, Vol.41, no. 4 (1974), 549-65. *ZBl* 294/90021.

1975

“Nonconvexity and Pareto Optimality in Large Markets,” (co-author: S. Rashid), *International Economic Review*, Vol. 16, no. 1 (1975), 222-45. MR 53/12531 – 32; *ZBl* 342/90008; JEL 75/1176.

“Some Approximate Equilibria,” *Journal of Mathematical Economics*, Vol. 2, no. 1 (1975), 63-86. MR 54/2151; *ZBl* 76/90010.

1976

“Oligopoly with a Continuum of Traders: An Asymptotic Interpretation,” *Journal of Economic Theory*, Vol. 12, no. 2 (1976), 273-97. MR 53/15305; *ZBl* 345/90007; JE 76/1545.

“Fertility Decisions and Desires in Bangladesh: An Econometric Investigation,” (co-authors: I. Sirageldin, Senior author; F. Shah, A. Ariturk), *Bangladesh Development Studies*, Vol. IV, no. 3 (1976), 329-50.

1977

“Some Remarks on Sets with Unbounded Non-convexities,” *Metro-economica*, Vol. 29, no. 3 (1977), 151-58. MR 80i/52004; *ZBl* 415/03056.

“Son Preference and the Demand for Additional Children in Pakistan,” (co-author: I. Sirageldin), *Demography*, Vol. 14, no. 4 (1977), 481-95. Republished in B. Boulier (ed.), *Household Models of Economic Demographic Decision Making*, IUSSP, Belgium, 1979.

1978

“Unequal Treatment in the Core,” (co-author: H. Polemarchakis), *Econometrica*, Vol. 46, no. 6 (1978), 1475-1481. MR 80d/90010; *ZBl* 399/90014; JEL 79/823.

“A Limit Theorem for an Approximate Core of a Large but Finite Economy,” (co-author: S. Rashid), *Economic Letters* (1978), 297-302. Abridged version of “Limit Theorems on Cores with Costs of Coalition Formation,” Johns Hopkins Working Paper No. 24. MR 81a/19005.

1979

“A Multisectoral Model of a Small, Open Economy with Non-Shiftable Capital and Imperfect Labor Mobility,” *Economic Letters*, Vol. 2 (1979), 369-75. MR 80g/90030.

“Relevance of Human Capital Theory to Fertility Research: Comparative Findings for Bangladesh and Pakistan,” in *Research in Human Capital and Development*, Vol. 1 (1979), 3-43.

“Education, Income and Fertility in Pakistan,” (co-author: I. Sirageldin), *Economic Development and Cultural Change*, Vol. 27 (April 1979), 519-47. Abstract in Sociological Abstracts.

1980

“A Factor Price and Public Input Equalization Theorem,” *Economic Letters*, Vol. 5 (1980), 1-5.

“Dynamic Stability, Wage Subsidies and the Generalized Harris-Todaro Model,” *Pakistan Development Review*, Vol. XIX, Spring 1980, 1-24.

“The Harris-Todaro Hypothesis and the Heckscher-Ohlin-Samuelson Trade Model: A Synthesis,” *Journal of International Economics*, Vol. 10 (1980), 527-47.

“An Extension of the Brown-Robinson Equivalence Theorem,” (co-author: D. J. Brown), *Applied Mathematics and Computation* (1980), Vol. 6, no. 2, 167-75. MR 81d/90023; ZBl 429/90012.

1981

“On the Cores of Economies with Indivisible Commodities and a Continuum of Traders,” (co-author: A. Yamazaki), *Journal of Economic Theory* (1981), Vol. 24, no. 2, 218-25, JEL 81/218 – 225; ZBl 457/90015.

“Approximately Convex Average Sums of Sets in Normed Spaces.” *Applied Mathematics and Computation*, Vol. 9 (1981), 27-34. MR 83c/46020.

“Intrafamily Interaction and Desired Additional Fertility in Pakistan: A Simultaneous Equation Model with Dichotomous Dependent Variables,” (co-author: I. Sirageldin), *Pakistan Development Review*, Vol. XX (Spring 81), 37-60.

1982

“Approximate Equilibria with Indivisible Commodities,” (co-author: S. Rashid), *Journal of Economic Theory*, 28 (1982), 82-101. JEL 83/382. MR 85d-90023.

“An Elementary Existence Theorem,” (co-authors: R. Anderson and S. Rashid), *Review of Economic Studies*, 1982, July, XLIX, 473-475. Zbl 483 – 90023; JEL 83/381; MR 83i/90025.

“Social Opportunity Costs and Immiserizing Growth: Observations on the Long Run Versus the Short,” *Quarterly Journal of Economics* (1982), 353-362.

“Tariffs, Foreign Capital and Immiserizing Growth with Urban Unemployment and Specific Factors of Production,” *Journal of Development Economics*, Vol. 10 (1982), 245-256.

“Sub-Optimal Tariff Policy and Gains from Trade with Urban Unemployment,” (co-author: Po-Sheng Lin), *Pakistan Development Review*, Vol. XXI (1982), 105-126.

1983

“Public Inputs and the Pure Theory of Trade,” *Zeitschrift für Nationalökonomie*, Vol. 43 (1983), 131-156. JEL 84/447.

“Capital Markets and Urban Unemployment,” (co-author: S. N. H. Naqvi), *Journal of International Economics*, 15 (1983), 367-385.

“How Meaningful are Statements About the Desired Number of Additional Children? An Analysis of 1968 Pakistani Data,” (co-author: I. Sirageldin), *Pakistan Development Review*, Vol. 22 (Spring 1983), No. 1, 1-22.

1984

“An Alternative Proof of Diestel’s Theorem,” *Glasgow Math. Journal*, 25 (1984), 45-46. Zbl 534 – 46025. MR 85h-40647.

“A Remark on the Existence of Equilibria in Markets without Ordered Preferences and with a Riesz Space of Commodities,” *Journal of Mathematical Economics*, 13 (1984), 165-169. MR 86c-90021. JEL 85/962.

“Equilibrium in Abstract Economies without Ordered Preferences and with a Measure Space of Agents,” (co-author: R. Vohra), *Journal of Mathematical Economics*, 13 (1984), 133-142. MR 86j-90033.

“Sector-Specific Capital, Interconnectedness in Production and Multinationals,” (co-author: T. Datta Chaudhuri), *Canadian Journal of Economics*, 17 (1984), 489-507. JEL 85/1018.

“Educated Unemployed, Educational Subsidies and Growth,” (co-author: T. Datta Chaudhuri), *Pakistan Development Review*, XXIII (1984), 395-411.

“International Trade and Foreign Investment: A Model with Asymmetric Production,” *Pakistan Development Review*, XXIII (1984), 509-530.

“Comments on Reproductive Behavior in Pakistan,” *Pakistan Development Review*, Vol. 23 (1984), 219-223.

1985

- “On the Existence of Lindahl Equilibria in Economies with a Measure Space of Non-Transitive Consumers,” (co-author: R. Vohra), *Journal of Economic Theory*, 36 (1985) No. 2, 319-332. *Zbl* 586 – 90012. MR 87d-90047. JEL 86/1018.
- “On the Integration of Set-Valued Mappings in a Non-reflexive Banach Space, II,” *Simon Stevin*, 59 (1985) No. 3, 257-267. MR 87g-28009. *Zbl* 606 – 28007.
- “Equilibrium Points of Non-Atomic Games over a Non-reflexive Banach Space,” *Journal of Approximation Theory*, Vol. 43 (1985) No. 4, 370-376. MR 86k-90154. *Zbl* 594 – 90103.
- “Development Policies in LDCs with Several Ethnic Groups – A Theoretical Analysis,” (co-author: T. D. Chaudhuri), *Zeitschrift für Nationalökonomie*, 45 (1985), 1-19.
- “On Neglected Topics in Development Economics,” Quaid-E-Azam Lecture in Economic Theory, May 1985. *Pakistan Development Review*, Autumn, 1985, 237-259.

1986

- “Weak Sequential Convergence in $L_1(\mu, X)$ and an Approximate Version of Fatou’s Lemma,” (co-author: M. Majumdar), *Journal of Mathematical Analysis and Applications*, 114 (1986) No. 2, 569-573. MR 87n-28004.
- “On the Extensions of the Cournot-Nash Theorem,” in C.D. Aliprantis, O. L. Burkinshaw, N. Rothman (eds.) *Advances in Equilibrium Theory*, Springer-Verlag. *Zbl* 563–90105. MR 88d-90129.
- “On a General Existence Theorem for Marginal Cost Pricing Equilibria,” (co-authors: D. J. Brown, G. Heal, R. Vohra), *Journal of Economic Theory*, Vol. 38 (1986) No. 2, 371-379. MR 87f-90030.
- “On the Existence of a Stationary Optimal Stock for a Multi-Sector Economy: A Primal Approach,” (co-author: T. Mitra), *Journal of Economic Theory*, 40 (1986), 371-379.
- “Equilibrium Points of Non-Atomic Games over a Banach Space.” Paper presented at an invited talk at the NBER-NSF Meetings in April 1983 held at Yale University. *Transactions of the American Mathematical Society*, 293 (1986) No. 2, 737-749. *Zbl* 594 – 90104. MR 87f-90035.
- “Commercial Policy in an Asymmetric Economy,” (co-author: T. Datta Chaudhuri), *Zeitschrift für Nationalökonomie*, 46 (1986), 143-161.

1987

- “On Cournot-Nash Equilibrium in Generalized Qualitative Games with a Continuum of Players,” (co-author: N. Papageorgiou), *Nonlinear Analysis*, 11 (1987) 741-755. MR 88h-90042a.
- “On Cournot-Nash Equilibrium in Generalized Qualitative Games with an Atomless Measure Space of Players,” (co-author: N. Papageorgiou), *Proceedings of the American Mathematical Society*, 100 (1987), 505-510. MR 88h-90042b. Zbl 621 – 90102.
- “An Extension of the Second Welfare Theorem to Economics with Non-Convexities and Public Goods,” (co-author: R. Vohra), Brown University Working Paper No. 84-27. Presented at the World Congress of the Econometric Society, 1985, *Quarterly Journal of Economics*, (1987) 223-245. MR 88d-90034.
- “On Sufficient Conditions for the Sum of Two Weak * Closed Convex Sets to be Weak * Closed,” (co-author: R. Vohra), *Archiv der Mathematik*, 48 (1987), 328-330. Zbl 605–46014.
- “Lindahl-Hotelling Equilibria,” (co-author: R. Vohra), Brown Working Paper No. 86-00, July 1986. Paper presented at the Econometric Society’s Meetings in New Orleans, December 1986. *Journal of Public Economics*, 34 (1987) 143-158. JEL 88/1485.
- “Technical Progress and Structural Change,” (co-authors: T. Datta Chaudhuri, Min Tang), *Zeitschrift fur die Gesamte Staatswissenschaft*, 143 (1987) 310-323.
- Entries on “Perfect Competition, Correspondences, Harris-Todaro Model, L. M. Court” in J. Eatwell et al. (eds.) *The New Palgrave*, (Macmillan: London).

1988

- “On Approximate Decentralization of Pareto Optimal Allocations in Locally Convex Spaces,” (co-author: R. Vohra), *Journal of Approximation Theory*, 52 (1988) 149-161. MR 89h-90045
- “Pareto Optimal Allocations of Non-Convex Economies in Locally Convex Spaces,” (co-author: R. Vohra), Brown University Working Paper No. 85-03. Presented at the Yale Conference on Increasing Returns, August 1985, *Nonlinear Analysis*, 12 (1988) 943-950. MR 89k-90032
- “Ioffe’s Normal Cone and the Foundations of Welfare Economics: An Example,” *Economics Letters*, 28 (1988), 15-19. MR 90c-90038
- “Development Policy in the Multi-Provincial Economy,” Invited Presentation at the Fifth Meeting of Pakistan Society of Development Economists, Islamabad, *Pakistan Development Review*, Vol. 27 (1988) 399-418.

1989

“On the Interiors of Production Sets in Infinite Dimensional Spaces,” (co-author: N. T. Peck), *Journal of Mathematical Economics*, 18 (1989), 29-39. MR 90e-90035.

“On Cournot-Nash Equilibrium Distributions for Games with a Non-Metrizable Action Space and Upper Semi-Continuous Payoffs,” Presented at the 7th Latin American Meetings of the Econometric Society, Sao Paulo, August 1987, *Transactions of the American Mathematical Society*, 315 (1989) 127-146. MR 90f-90026

“In Praise of Development Economies,” Invited Presentation at the Sixth Meeting of The Pakistan Society of Development Economists, Islamabad. *Pakistan Development Review*, Vol. 28 (1989) 337-378.

“Comment on Professor Malinvaud,” *Pakistan Development Review*, Vol. 28 (1989) 331-333.

Review of Y. Balasko, Foundations of General Equilibrium Theory, *Journal of Economic Literature*, September 1989.

1990

“On a Reformulation of Cournot-Nash Equilibria,” (co-author: Y. Sun), B.E.B.R. Faculty Working Paper No. 1328, February 1987. Presented at *The International Conference on Game Theory and Applications*, Ohio, June 1987, *Journal of Mathematical Analysis and Applications*, 146 (1990) 442-460. MR 91d-90111

“On Complete Regularity of Spaces of Economic Agents Endowed with the Order Topology,” (co-author: Y. Sun), *Archives der Mathematik*, 54 (1990) 389-396. MR 91a-90045

“Education, Income and Desired Fertility in Egypt,” (co-authors: S. Cochrane and I. Taha), *Economic Development and Cultural Change*, Vol. 38 (1990) 313-339.

“On the Languages of Markets,” Invited Presentation at the Seventh Meeting of The Pakistan Society of Development Economists, Islamabad, Pakistan. *Pakistan Development Review*, Vol.30 (1990) 503-549.

“Comment on Professor Klein,” *The Pakistan Development Review*, Vol. 28 (1990) 331-333.

1991

“Ioffe’s Normal Cone and the Foundations of Welfare Economics: The Infinite Dimensional Theory,” B.E.B.R. Faculty Working Paper No. 1391, November 1987, *Journal of Mathematical Analysis and Applications*, Vol. 161 (1991) 284-298. MR 92h-49014.

“Differential Information and a Reformulation of Cournot-Nash Equilibria,” (co-author: A. Rustichini), Invited Presentation at *Colloque International: Theorie du Point Fixe*

- et Applications*, Luminy, France, June 1989. In M. A. Théra and J. B. Baillon (eds.), *Fixed Point Theory and Applications*, Pitman Research Notes in Mathematics No. 252, (Longman Scientific Publications: London) (1991), 245-259. MR 49k-90143
- “Equilibria of Large Games with Imperfect Observability,” (co-author: S. Chakrabarti), in C. D. Aliprantis, K. C. Border, W. A. J. Luxemburg (eds.) *Positive Operators, Riesz Spaces and Economics* (Springer Verlag: New York) (1991), 49-68.
- “Some Unpleasant Objects in a Non-Separable Hilbert Space,” (co-author: A. Rustichini), in C. D. Aliprantis, K. C. Border, W. A. J. Luxemburg (eds.) *Positive Operators, Riesz Spaces and Economics* (Springer Verlag: New York) (1991) 179-188.
- “On a Symmetric Cournot-Nash Equilibrium Distributions in a Finite-Action, Atomless Game,” (co-author: Y. Sun), B.E.B.R. Faculty Working Paper No. 1327, February 1987. In M. Ali Khan, N. C. Yannelis (eds). *Equilibrium Theory in Infinite Dimensional Spaces* (Springer Verlag: New York) (1991), 325-333.
- “Equilibria in Markets with a Continuum of Goods,” in M. Ali Khan, N. C. Yannelis (eds). *Equilibrium Theory in Infinite Dimensional Spaces* (Springer Verlag: New York) (1991), 233-248.
- Equilibrium Theory in Infinite Dimensional Spaces* (Springer Verlag: New York) 1991; book edited jointly with N. C. Yannelis.
- “Ethnic Groups and the Heckscher-Ohlin-Samuelson Trade Model, *Economic Theory*, Vol. 1 (1991) 355-371.
- “Distributive Justice and Need Fulfillment in an Islamic Economy: A Review, *Journal of King AbdulAziz University* Vol. 3 (1991) 97-117.

1992

- “The Economics of the Atlantic Slave Trade” in W. Neufeind and R. Reizman (eds.) *Economic Theory and international Trade* (Springer-Verlag, New York) (1992), 211-243.
- “Theoretical Studies in Money and Banking: A Review Article,” *Journal of King AbdulAziz University*, 4 (1992), 51-79
- “On the Relevance of Functional Analysis to Economic Theory,” Invited Presentation at the *Second Chittagong Conference on Mathematical Economics*, in the *Proceedings of Research Centre for Mathematical and Physical Sciences*, Chittagong, Bangladesh.
- “The Essential Role of Science in Technological Progress and Economic Development: Some Comments,” *Third World Academy of Sciences*, Trieste, Italy.
- “On Measuring the Social Opportunity Cost of Labour in the Presence of Tariffs and an Informal Sector,” Invited Presentation at the Eighth Meeting of The Pakistan Society

of Development Economists, Islamabad, Pakistan. *Pakistan Development Review*, 31 (1992) 535-562.

“Professor Summers on Investing in all the People,” *The Pakistan Development Review*, 31 (1992) 394-400.

1993

“Lionel McKenzie and the Existence of Competitive Equilibrium,” Invited Presentation at a Conference at the University of Rochester, May 1989, in M. Boldrin et al. (eds.), 1993, *General Equilibrium and Growth* (Academic Press, New York), pp. 1-50.

“Trade and Development in the Presence of an Informal Sector: A Four Factor Model, pages 142-190 in K. Basu, M. Majumdar and T. Mitra (eds.), *Capital Investment and Development* (Oxford: Basil-Blackwell).

“On Cournot-Nash Equilibrium Distributions for Games with Uncertainty and Imperfect Information,” (co-author: A. Rustichini), Paper Presented at the Far Eastern Meetings of the Econometric Society, Kyoto, Japan, June 1989. *Journal of Mathematical Economics*, 22 (1993) 35-59.

“Foreign Investment in the Presence of an Informal Sector,” (co-author: V. Chandra), *Economica* 60 (1993) 79-103.

“On Economics and Language,” *Journal of Economic Studies* 20 (1993), 51-69.

“On the Irony in/of Economic Theory,” Invited Presentation at the Colloquium on *Intercultural Comparisons*, Johns Hopkins University, 1992. *Modern Language Notes* 108 (1993) 759-803.

“On Education as a Commodity,” preliminary versions presented at the Ninth Meeting of The Pakistan Society of Development Economists, Islamabad, Pakistan; and at the Sociology Department at Johns Hopkins, November-December 1992. *The Pakistan Development Review*, 32 (Winter 1993), 541-579.

“Professor Ron Jones on *The New Protectionism and the Nature of World Trade*, *The Pakistan Development Review*, 32 (Winter 1993), 583-589.

1994

“On Large Games with Finite Actions: A Synthetic Treatment,” (co-author: Y. Sun), based on an invited presentation at *The Conference on Nonlinear and Convex Analysis in Economic Theory*, held in Keio University, July 1993. Japanese translation in *Mita Gakkai Zasshi (Mita Journal of Economics)*, 87 (1994), 73-84. Also in T. Maruyama and W. Takahashi (eds.), *Nonlinear and Convex Analysis in Economic Theory* (Berlin: Springer-Verlag), 1995, pp. 149-161.

1995

- “Extremal Structures and Symmetric Equilibria with Countable Actions,” (co-author: Y. Sun), *Johns Hopkins Working Paper* no. 316, *Journal of Mathematical Economics* 24 (1995) 239-248.
- “Pure Strategies in Games with Private Information,” (co-author: Y. Sun), *Johns Hopkins Working Paper* no. 321, presented at the *Brown-Columbia-Hopkins Workshop in Economic Theory*, December 11, 1993 ; and at the NBER Conference on General Equilibrium Theory, June 1993, *Journal of Mathematical Economics*, 24 (1995) 633-653.
- “The Marriage Lemma and Symmetric Equilibria with Countable Actions,” (co-author: Y. Sun), *Mathematical Proceedings of the Cambridge Philosophical Society*, 117 (1995) 385-387.

1996

- “Free Trade and the Environment,” *The Journal of International Trade and Economic Development*, 5 (1996) 113-136.
- “Integrals of Set-Valued Functions with a Countable Range,” (co-author: Y. Sun), *Mathematics of Operations Research*, 21 (1996) 946-954.
- “Population and Economic Development” Chapter 11 in M. G. Quibria (ed.) *Current Issues in Economic Development: An Asian Perspective*, pp. 348-395, (New York: Oxford University Press).
- “Nonatomic Games on Loeb Spaces,” *Proceedings of the National Academy of Sciences, USA*, (co-author: Y. Sun), 93 (1996) 15518-15521.

1997

- “On Research in Mathematical Economics,” pp. 21-24 in M. Albers, B. Hu and J. Rosenmuller (eds.) *Current and Future Directions in Applied Mathematics*, (Berlin: Birkhauser).
- “On Loeb Measure Spaces and their Significance for Non-Cooperative Game Theory,” (co-author: Y. Sun), CORE Discussion Paper No. 9712. Also pp. 183-218 in M. Albers, B. Hu and J. Rosenmuller (eds.) *Current and Future Directions in Applied Mathematics*, (Berlin: Birkhauser).
- “The Capital-Asset-Pricing Model and Arbitrage Pricing Theory: A Unification,” (co-author: Y. Sun), *Proceedings of the National Academy of Sciences, USA*, 94 (1997) 4229-4232.

“On the Existence of Pure Strategy Equilibria in Games with a Continuum of Players,” (co-authors: K. Rath and Y. Sun), *Journal of Economic Theory*, 76 (1997) 13-46.

“On Private Information Games without Pure-Strategy Nash Equilibrium Points in Large Non-Anonymous Games,” (co-authors: K. Rath and Y. Sun), in *Game Theoretical Applications to Economics and Operations Research*, eds. B. Dutta, T. Parthasarathy, J. Potters, T. E. S. Raghavan. D. Ray and A. Sen. (Amsterdam: Kluwer Academic Publishers).

1998

“A result on large anonymous games: an elementary and self-contained exposition,” pp. 206-236 in J. Moore, R. Reizman and J. Melvin (eds.), *Trade, Theory, and Econometrics: Essays in Honour of John S. Chipman* (New York: Routledge).

“Srinivasan on choice of technique once again,” pp. 9-19 in G. Ranis and L. K. Raut (eds.), *Trade, Growth and Development: Essays in Honor of Professor T. N. Srinivasan* (Elsevier Science, New York).

1999

“On private information games without pure strategy equilibria,” (co-authors: K. Rath and Y. Sun), *Journal of Mathematical Economics* 31 (1999), 341-359.

“Weak measurability and characterizations of risk,” (co-author: Y. Sun), *Economic Theory* 13, May 1999, 441-460.

“Non-cooperative games on hyperfinite Loeb spaces,” (co-author: Y. Sun), *Journal of Mathematical Economics* 31 (May 1999), 455-492.

“The Mordukhovich normal cone and the foundations of welfare economics,” *Journal of Public Economic Theory* 1 (1999), 309-338.

“The supremum argument in the new approach to the existence of equilibrium in vector lattices,” (co-authors: Rabee Tourky and Rajiv Vohra), *Economics Letters* 63 (1999) 61-65.

2000

“North-South Investment and Strategic Environmental Policies,” (co-authors: H. Beladi and N. H. Chau), *Journal of Environmental Economics and Management*, 40 (2000) 275-296.

“Globalization of Financial Markets and Islamic Financial Institutions,” *Islamic Economic Studies*, Vol. 8, October 2000, pp. 19-67.

2001

- “Optimal Urban Employment Policies: Notes on Calvo and Quibria,” (co-author: Nancy H. Chau), *International Economic Review*, 42 (2001) 557-568.
- “Asymptotic arbitrage and asset pricing models on general index sets and on the Lebesgue continuum,” (co-author: Yeneng Sun), *Journal of Economic Theory*, 101 (2001) 222-251.
- “International treaties on trade and global pollution,” (co-author: Parkash Chander), Core Discussion Paper No. 9903, Universite Catholique de Louvain, January 1999. *International Review of Economics and Finance*, 10 (2001) 303-324.

2002

- “Trust as a Commodity and on the Grammar of Trust,” *Journal of Banking and Finance*, 26 (2002) 1719-1766. An erratum (publisher’s mistakes) in 27 (2003) 773.
- “Non-Cooperative Games with Many Players,” (co-author: Y. Sun), Chapter 46, pages 1761-1808 in *Handbook of Game Theory*, Vol. 3, (eds.) R. J. Aumann and S. Hart. Amsterdam: Elsevier Science.

2003

- “Exact Arbitrage, Well-Diversified Portfolios and Asset Pricing in Large Markets,” (co-author: Yeneng Sun), *Journal of Economic Theory*, 110 (2003) 337-373.
- “Exact Arbitrage and Portfolio Analysis in Large Asset Markets” (co-author: Yeneng Sun), *Economic Theory*, (2003) 22, 495-528.

2004

- “Composite photography and statistical prejudice: Levy-Peart and Marshall on the theorist and the theorized,” *European Journal of Political Economy*, Vol. 20, 2004, 23-30.
- “Review of *How Economics Became a Mathematical Science* by E. Roy Weintraub,” *History of Political Economy*, Vol. 36, 2004, 212-214.
- “Self-Interest, Self-Deception and the Ethics of Commerce,” Invited Lecture at the University of Notre Dame, *Journal of Business Ethics* 52 (2): 189-206.
- Regional (East-West/North-South) Cooperation and Peter Singer’s Ethics of Globalization,” The Mahbub-ul-Haq Memorial Lecture given at the 20th Annual General Meeting of the *Pakistan Society of Development Economists* held at Islamabad, January 10-12, 2005. *Pakistan Development Review* Winter 2004, 1-39.

2005

- “Choice of Technique in the Robinson-Solow-Srinivasan Model,” (co-author: T. Mitra), *International Journal of Economic Theory* (2005) 1:83-109.
- “On Hayek’s *Road to Serfdom*: sixty years later,” *European Journal of Political Economy*, (2005) 21:1026-1041. Reprinted in *The Street Porter and the Philosopher: Conversations on Analytical Egalitarianism*, Sandra J. Peart and David M. Levy (eds.), 269-289, University of Michigan Press, Ann Arbor.
- “On Topological Chaos in the Robinson-Solow-Srinivasan Model,” (co-author: T. Mitra), *Economics Letters*, (2005) 88: 127-133.
- “Intertemporal Ethics, Modern Capital Theory and the Economics of Forestry,” Chapter 2 in S. Kant and A. Berry (eds.) *Sustainability, Economics and Natural Resources: Economics of Sustainable Forest Management*, Springer Publishers, Netherlands, 39-65.

2006

- “Undiscounted Optimal Growth under Irreversible Investment: A Synthesis of the Value-Loss Approach and Dynamic Programming,” (co-author: T. Mitra), *Economic Theory* 29 (2006) 341-362.
- “Ronald W. Jones and Two-sector Growth: Ramsey Optimality in the RSS and Leontief Cases,” (co-author: M. Fujio), *Asia-Pacific Journal of Accounting and Economics* 13 (2006) 87-110.
- “The Dvoretzky-Wald-Wolfowitz Theorem and Purification in Atomless Finite-action Games,” (co-authors: K. Rath, Y. Sun), *International Journal of Game Theory*, 34, 2006, 91-104.
- “Optimal Growth in the Two-sector RSS Model: A Continuous Time Analysis,” (co-author: T. Mitra), *Proceedings of the Seventh Portuguese Conference on Automatic Control*, electronic publication.
- “Discounted Optimal Growth in the Two-Sector RSS Model: A Geometric Investigation,” (co-author: T. Mitra), *Advances in Mathematical Economics*, 8 (2006) 349-381.

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- “Optimal Growth under Discounting in the Two-sector Robinson-Solow-Srinivasan Model: A Dynamic Programming Approach,” (co-author: T. Mitra), *Journal of Difference Equations and Applications* 13 (2007) 151-168.

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“On Games with Incomplete Information and the Dvoretzky-Wald-Wolfowitz Theorem with Countable Partitions,” (co-author: Kali P. Rath), *Journal of Mathematical Economics* **45** (2009), 830-837.

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- “Optimal Growth in a Two-Sector RSS Model with Discounting: A Further Geometric Investigation,” (co-author: T. Mitra), to be issued as *Advances in Mathematical Economics* 17 (2013) 1-33.

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- Book review of “Mathematics and Economics,” by Geoffrey M. Hodgson (ed.), *Journal of the History of Economic Thought*, March 2014.
- “On the Existence of Pure-strategy Equilibria in Games with Private Information: A Complete Characterization,” (co-author: Y. Zhang), *Journal of Mathematical Economics*, 50 (2014) 197-202.

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- “Strategic Uncertainty and the Ex-post Nash Property in Large Games,” (co-authors: K. P. Rath, Y. Sun, H. Yu), *Theoretical Economics*, 10 (2015), 103-129.

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- “Money-Metrics in Applied Welfare Analysis: A Saddlepoint Rehabilitation,” (co-author: E. E. Schlee), *International Economic Review*, 63(1) (2022), 189-210.
- “On abstract economies with an arbitrary set of players and action sets in locally-convex topological vector space,” (co-authors: R. M. Anderson, H. Duanmu, M. Uyanik), *Journal of Mathematical Economics*, on line. [https : //doi.org/10.1007/s00199 – 021 – 01395 – 0](https://doi.org/10.1007/s00199-021-01395-0)
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- “The continuity postulate in economic theory: a deconstruction and an integration,” (co-author: M. Uyanik), *Journal of Mathematical Economics*, 101 (2022) 1-26, 102704.
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- “Fuzzy core equivalence in large economies: A role for the infinite-dimensional Lyapunov theorem,” (co-author: N. Sagara), *Communications in Economics and Mathematical Sciences*, forthcoming.
- Book review of “The Wisdom of Finance,” by Mihir Deai, *Journal of the History of Economic Thought*, 44(1) 150-155.
- “Continuous unimodal maps in economic dynamics: On easily verifiable conditions for topological chaos,” (co-authors: L. Deng, T. Mitra), *Journal of Economic Theory*, forthcoming.
- “Preface to a Memorial Issue in Honour of Roy Radner,” (co-author: Alexander J. Zaslavski), *Pure and Applied Functional Analysis* Volume 7 (2022) Number 6, pp. 1-23.

2023

- “Necessary and sufficient conditions for a set in R^n to be closed or open, and for a binary relation to be continuous,” (co-author: Metin Uyanik), *Bulletin of the Australian Mathematical Society*, forthcoming.
- “Optimal growth in the miniature two-sector model with and without discounting: A synthesis,” (co-authors: L. Deng, M. Fujio), to appear in M. Ali Khan, Nobusumi Sagara, A. Zaslavski (eds.) *David Gale: Mathematical Economist: Essays in Appreciation on his 100th Birthday*, Springer-Verlag, Berlin.
- “The random two-sector RSS model: On discounted optimal growth without Ramsey-Euler conditions,” (co-author: Zhixiang Zhang), *Journal of Dynamics and Control* online.
- “Money-metrics in local welfare analysis: Pareto improvements and equity considerations,” (co-author: E. E. Schlee), *Journal of Economic Theory*, online.
- Book review of “Topology for Beginners,” by Noor Muhammad, Asghar Qadir and Imran Parvez Khan, *Newsletter of the London Mathematical Society*, forthcoming, May issue.

Ongoing Work

- “A Hybrid Approach to Equilibrium Existence in Qualitative and Generalized Games,” (co-authors: Richard McLean, Metin Uyanik), paper presented at the *Society for the Advancement of Economic Theory* at Paris, July 20, 2023.
- “Nash Equilibria: Foundational Issues,” (co-authors: Massimiliano Amarnate, Richard McLean), paper presented at the *Society for the Advancement of Economic Theory* at Paris, July 20, 2023.
- “Money-Metric Complementarity and Price-Dependent Normal Demand for Non-ordered Preferences,” (co-author: Edward E. Schlee), paper presented at the *Society for the Advancement of Economic Theory* at Paris, July 18, 2023.
- “Hidden Assumptions in Decision Theory,” (co-authors: Aniruddha Ghosh, Arthur Paul Pedersen), paper presented at the *Society for the Advancement of Economic Theory* at Paris, July 17, 2023.
- “On Existence of Berk-Nash Equilibria in Misspecified Markov Decision Processes with Infinite Spaces,” (co-authors: R. M. Anderson, H. Duanmu, A. Ghosh), submitted for publication, April 2023.
- “On Existence of Berk-Nash Equilibria in Misspecified Markov Decision Processes with Infinite Spaces,” (co-authors: R. M. Anderson, H. Duanmu, A. Ghosh), submitted for publication, April 2023.

- “On the Permissible and the Forbidden: Social Norms and the Existence of a Normative Equilibrium,” (co-authors: R. M. Anderson, H. Duanmu, A. Ghosh), July 2023.
- “Separately convex and separately continuous preferences: On results of Shafer and Bergstrom-Parks-Rader,” (co-authors: A. Ghosh, M. Uyanik), September 2023.
- “Some remarks on the role of group variances in stereotype formation,” (co-authors: A. Ghosh, S. Yasar), paper to be presented at *2023 Markets & Society Conference*, October 20-23, 2023.
- “Irreversible Investment in Technology and the Dynamics of Public Good Provision,” (co-authors: Ying Chen, Liuchun Deng, Minako Fujio), submitted for publication, paper presented at the *Society for the Advancement of Economic Theory* at Paris, July 18, 2023.
- “On Equilibria in Constrained Generalized Games with the Weak Continuous Inclusion Property,” (co-authors: Richard McLean, Metin Uyanik), submitted for publication, August 2023.
- “On the Optimal Dynamics in the Two-Sector Robinson-Shinkai-Leontief Model with and without Discounting: A Synthesis,” (co-authors: Minako Fujio, Liuchun Deng), paper presented at the *Society for the Advancement of Economic Theory* at Paris, July 17, 2023.
- “Methodological individualism, Emersonian impersonal and Paretian social conformity: the one-many ordering in the neoclassical theory of choice,” (co-authors: Alfio Giarlotta, Angelo Petralia, Francesco Reito), mimeo, University of Catania.
- “Information Structures on a General State Space: Theory and Application,” (co-authors: Haomiao Yu and Zhixiang Zhang), mimeo, Ryerson University.
- “On the Commodification of Information: A Non-Bayesian Formulation,” *Australian National University, mimeo*, (co-author: P. Beissner), paper presented at SAET, Ischia and at the *NBER-NSF Conference* in Berkeley, October, 2019. Also presented at the *Society for the Advancement of Economic Theory* at Paris, July 17, 2023.
- “On reading Rawls as a reader of Debreu: The equilibrium notion in *A Theory of Justice*,” *Johns Hopkins University, mimeo*, (co-author: Aniruddha Ghosh).
- “Gèrard Debreu as a mathematical economist: A 2020 reading of his *oeuvre*,” *Johns Hopkins University, mimeo*, (co-author: Aniruddha Ghosh).
- “On the existence of continuous binary relations on a topological space,” *University of Queensland, mimeo*, (co-author: M. Uyanik).
- “Decision theory in economics and in psychology: a productive interface,” *Johns Hopkins University, mimeo*, (co-authors: Aniruddha Ghosh, M. Uyanik).
- “On ambiguity and revealed preference: a critical and expository reconsideration,” *Johns Hopkins University, mimeo*, (co-author: Aniruddha Ghosh).

Seminars and Invited Talks (2018-2023)

- “On the Foundations of Welfare Economics: Observations on a Medley of Classical and Non-Classical Results,” Talk at the *SWET-SAET Conference in honor of Jean-Marc Bonnisseau*, Université Paris I, Paris, France, July 17, 2023.
- “Separately Convex and Separately Continuous Preferences: On Results of Shafer and Bergstrom-Parks-Rader,” Talk at the *XXXI European Workshop on Economic Theory*, Naples, Italy, July 2-4, 2023.
- “On the Foundations of Rational Choice: Two Consolidatory Lectures,” Two Invited Talks in the Series *Bounded Rationality, Preference Modeling and Decision Theory*, University of Catania, Sicily, Italy, May 26, 2023.
- “The Digital Revolution and the Future of Economic Analysis,” Invited talk at a Symposium at Yildiz Technical University Technology on *Digitalisation, Industry 4.0 and Sustainability Economic Theory?Thought?History?Analysis*, April 27, 2023.
- “The Economics in the “Economics of Climate Change?, ” Invited talk at the Departmental Seminar at Ozygun University, Istanbul, Turkey, April 24, 2023.
- “Ronald W. Jones as a General Equilibrium Theorist in a Classical Mold: International Trade through the Ricardo-Viner-Jones Model,” Invited Talk in the Series *Imperfect Resource Mobility and Economic Adjustments in a Changing World - Celebrating 50 years of the Specific Factor Model*, at St. Xavier’s College (Autonomous), Kolkata, India, February 15, 2023.
- “The Intermediate Value Theorem and Decision making in Mathematical Psychology and Economics,” Talk at the *Society for the Advancement of Economic Theory* at Paris, July 19, 2022.
- “On the Economics of Information in the light of the Mirowski-Khah distinction between Knowledge and Information,” Invited Talk at *Rajiv Vohra’s 65th Birthday Conference*, Brown University, Providence, May 13, 2022.
- “Microeconomic Theory with Non-Ordered Preferences,” Invited talk at the Departmental Seminar, ITAM, Mexico City, October 28, 2022.
- “Orderly or Disorderly Development: Mukul Majumdar and Development Economics,” Invited Plenary panel in honor of Mukul Majumdar:Reflections on economic theory and development,” Cornell University, September 17, 2022.
- “Optimal Chaotic Dynamics, the Checkmap and the 2-sector RSS model,” Zoom Talk at the *New York Number Theory Seminar*, July 28, 2022
- “Identity, Tolerance and Backwardness: An Aspiration towards an Undisciplined Discipline,” Zoom Lecture given on to the *Society of Indian Academics in America (SIAA)*, December 12, 2021.

- “Economics, Language and Theory: A Mathematical Economist Looks at his Discipline,”
Invited talk in the DISTINGUISHED SCHOLAR SERIES, International Business
School Suzhou (IBSS) Xi’an Jiaotong-Liverpool University Suzhou, China, November
29, 2021.
- “The Harris-Todaro Hypothesis: a Post 2008 Framing as a Spatio-Temporal-Cultural
Bridge– MR Gupta: A Development Economist,” Invited Talk at the Symposium
on CONTEMPORARY ISSUES IN GROWTH AND DEVELOPMENT. Webinar in
Honour of Professor Manash R Gupta, Kolkata, India, November 13, 2021.
- “Nonstandard Analysis and Economics: A Fifty-Year Trajectory,” Invited Talk at the
Department of Economics, University of Surrey, May 12, 2021
- “Approximate Equilibria in Games and Economies over Finitely Additive Measure Spaces.”
Talk at the *19th SAET Conference*, Ischia, Italy, June-July 2019.
- “On Mathematics in the Human Sciences: An Epistemological Inquiry in the light of
C. P. Snow’s Two Cultures,” Invited talk at the New School University, New York
City, February 13, 2018.

Seminars and Other Unpublished Work

- “The Public and the Private: On Contending Vocabularies from the Human Sciences,”
Invited paper at a conference organized by JHU’s WGS on April 9, 2004.
- “Poverty and Population: Self-Interest and the Ethics of Institutional Change,” mimeo.
- “On Reading Hayek’s *Road to Serfdom* sixty years later,” Discussant of papers presented
at the *Eastern Economic Association Meetings*, February 20-22, 2004.
- “Optimal Growth in a Two-Sector Model without Discounting: A Geometric Investi-
gation,” (co-author: T. Mitra), paper presented at the *International Conference in
Trade and Development in honor of Lionel McKenzie*, Kyoto, Japan, February 2-4,
2004. Also presented at the Johns Hopkins Departmental Economic Theory seminar.
Submitted for publication.
- “The Dvoretzky-Wald-Wolfowitz Theorem and Purification in Atomless Finite-action
Games,” (co-authors: K. Rath, Y. Sun), paper presented at the *Midwest Economic
Theory Conference* held at Indiana University, Bloomington in October 2003.
- “On the Ethics of (Economic) Theorizing,” Invited presentation at an *American Sta-
tistical Association* panel on ethics at the *JSM Meetings* held on August 3-7, 2003.
Also presented at (i) the 4th Summer Institute for the Study of History of Economics
at *George Mason University*, July 14-18, 2003 and (ii) the Colloquium on *Ethics in
Organizations and Markets: A Comparative Perspective*, March 26, 2004.
- “Optimal Growth in a Two-Sector Model with Discounting: A Geometric Investigation,”
(co-author: T. Mitra), to be issued as *Cornell Working Paper*.

- “Optimal Growth under Irreversible Investment: the von Neumann and McKenzie Facets,” (co-author: T. Mitra), mimeo.
- “Hyperfinite Asset Pricing Theory,” (co-author: Y. Sun), Cowles Foundation Paper No. 1139.
- Invited talk on “Conceptual Foundations of Social Capital” at the World Bank, April 18, 2000.
- Invited talk “On Reading the Language of Markets in the Quran,” a Conference organized by the IBRD at Islamabad, March 25-27, 2000.
- “Non-atomic games: theory and counterexamples,” paper presented at SITE Conference, Stanford University, June 2, 1998. The same paper presented at the University of Melbourne (July 30 1998), and at the Research School of Social Sciences, Australian National University (July 24).
- “Representation, language and theory: Georgescu-Roegen on methods of economic science,” paper presented at the *Colloque International L’Oeuvre Scientifique de Nicholas Georgescu-Roegen* held at Strasbourg on November 7-9, 1998.
- “Large but finite games,” (co-authors: Kali P. Rath and Yeneng Sun), paper presented at the Department of Economics, University of Arizona, Tempe (April 9, 1999). The same paper also presented at the Department of Economics, College of William and Mary, Williamsburg (April 23, 1999).
- “More on non-cooperative games on hyperfinite Loeb spaces,” (co-author: Yeneng Sun), invited talk at the “Special Session in Nonstandard Analysis”, 941st Meeting of the “American Mathematical Society” held at Urbana, Illinois, March 18-21 (1999). Abstract in the program published by the Society.
- Invited talk on “Asset Pricing and Loeb Spaces” at the Department of Mathematics, University of Munich, May 14, 1999.
- Invited talk on “Modelling ‘Negligibility’ in Mathematical Economics: an Application of Loeb Spaces” at a conference on *Reuniting the Antipodes: Constructive and Non-standard Views of the Continuum*, held at Venice International University, Venice, 17-22 May, 1999.
- Invited talk on “Social Capital and Economic Development” at a conference on *Equity, Health and the World’s Resources: Food Security and Social Justice*, held at Kyoto, Japan, August 9-12, 1999.
- Invited Talk on the “Law of Large Numbers with a Continuum of Random Variables” at the *University of Arizona*, Phoenix, Fall 1999.
- Invited talk on “Development Strategies: India and Pakistan 1947-1972” to the South Asia Society, Cornell University, Ithaca, October 18, 1999.
- “On the Desirability of Free International Trade: Rule and/or Rhetoric,” presented at

the Johns Hopkins Colloquium *On Rules and Rule-Making: An Interdisciplinary Perspective*, February 18-20, 1994.

“On Economies with a Loeb Space of Agents,” (co-author: Y. Sun), presented at the Fields Institute Workshop on *Geometry, Topology and Markets*, held at Waterloo, June 1994.

“Models as Narratives: Instances in Development Economics,” paper presented at the *Social Sciences Research Council* Workshop held at Berkeley, October 1994. Also presented at the *Colloquium on Comparative and International Development*, Sociology Department at Johns Hopkins.

Selected Invitations:

Invited Panelist at a Colloquium on “The Essential Role of Science in Technological Progress and Economic Development,” held at The Third World Academy of Sciences, Trieste, Italy, May 1992.

Invited Lecture to The Academia Sinica, hosted by the National Science Council, Republic of China, July 1992.

Shaw Lecturer, Chinese University of Hong Kong, Hong Kong, June 1994.

Invited Presentation at the *Social Sciences Research Council* Workshop on “Languages of Development,” held at the University of California, Berkeley, October 1994.

Invited Lecture, Third Conference on Development Economics, Manila, Asian Development Bank, November 1994.

Invited Presentation at the Mellon Seminar on “Equality and Racial Discrimination,” held at the University of North Carolina, January 1996.

Invited Panelist at a Colloquium on “Current and Future Directions in Applied Mathematics,” held at University of Notre Dame, Notre Dame, June 1996.

Invited Panelist at a Colloquium on “Liberty and Christianity in the Thought of Josiah Tucker,” Liberty Fund, held at the University of Illinois, Champaign, October 1996.

“Social Policy: Population, Education and the Environment,” Iqbal Lecture at the 13th Annual General Meeting of the *Pakistan Society of Development Economists* held at Islamabad, December 15, 1997.

Invited Panelist at a Colloquium on “Freedom and Responsibility in Rhetoric,” Liberty Fund, held in Indianapolis, March 1998.

Eminent Scholars’ Lecture, delivered at the Islamic Development Bank, Jeddah, Saudi Arabia, June 1998.

Invited by the Department of Economics at Brown University to give three lectures on the Economics of the 18th Century, March 10-17, 1999.

Invited Panelist for a Conference on “Liberty and Economic Development” hosted by The Liberty Fund, Indianapolis, October 28-31, 1999.

Minicourse consisting of four lectures on “Negligibility in Economic Theory: Games and Finance”, delivered at CERMSEM, *Université de Paris 1 Panthéon-Sorbonne*, May 16-June 21, 2000.

Three Invited Lectures at the Institute of Public Policy, The George Mason University on the “Economics of the 18th-Century,” July 2000.

Invited presentation at the *Conference on Economic Design* to be held at New York University on June 6-9, 2002.

Invited Lecture at the *Econometric Society’s Meetings* in Lahore, December 2002. Title of talk: “Asset Pricing Theory with Large Markets: An Exposition.”

Invited Lecture at the 4th Summer Institute for the Study of History of Economics at George Mason University July 14-18, 2003.

Invited Lecture at an *American Statistical Association* Panel on Ethics at the Joint Statistical Meetings held on August 3-7, 2003 in San Francisco, California. Title of talk: “On the Ethics of (Economics) Theorizing.”

Keynote Address titled “On an Austrian Model of International Trade: A Re-Reading” presented at a conference on *Recent Advances in International Economics II* held on August 21 and 22, 2003 at *The City University of Hong Kong*.

Invited Discussant at *Scientific Conference in Honor of Henry Y. Wan Jr.* to be held at Cornell University September 6-7, 2003.

On a Space for Islam in Economics,” invited talk given at a *Round Table on “Islamic Economics: Current State of Knowledge and Development of the Discipline* convened by the *Islamic Research and Training Institute (IRTI)* and the *Arab Planning Institute (API)*, May 26-27, 2004 at Jeddah, Saudi Arabia.

“Sustainability, Structural Change and the Ethics of Globalization,” invited talk at a conference on *Agricultural Competitiveness and Change under Globalization*, held at the “Center for Agriculture and Policy” at *North Dakota State University* on October 11-12, 2004.

“On Money as a Commodity and on the Trust in Money,” invited talk given at the *International Seminar on “Macroeconomics from an Islamic Perspective”* held on September 22-24, 2004 in Kuala Lumpur, Malaysia.

“Regional (East-West/North-South) Cooperation and Peter Singer’s Ethics of Globalization,” The Mahbub-ul-Haq Memorial Lecture given at the 20th Annual General Meeting of the *Pakistan Society of Development Economists* held at Islamabad, January 10-12, 2005.

“The Grand Disillusionment: Hayek and Modern Economic Theory,” three invited lec-

tures given at the *George Mason University*, April 11-15, 2005.

“On Lionel McKenzie’s 1957 Intrusion into 20th-Century Demand Theory,” Invited paper to be given at the 2005 Hope Conference, Duke University, April 21-23, 2005.

“Integration of Correspondences and the Dvoretzky-Wald-Wolfowitz Theorem,” (co-authors: K. Rath, Y. Sun), paper presented at the SAET Conference on *Current Trends in Economics*, Vigo, Spain, July 2, 2005.

“Gerard Debreu on the Integration of Correspondences Berkeley,” paper presented at the NSF/CME Conference on *Mathematical Economics: The Legacy of Gerard Debreu*, Berkeley October 20 – October 23, 2005.

“Notes on Growth in the Robinson-Solow-Srinivasan Model: Undiscounted Optimal Policy with a Strictly Concave Welfare Function,” (co-author: T. Mitra), paper presented at the *Conference in honor of Roko Aliprantis* held at Purdue University, October 17-18, 2005.

“Social Capital and Economic Development: Lessons from Pierre Bourdieu,” Distinguished Lecture given at the 21st Annual General Meeting of the *Pakistan Society of Development Economists* held at Islamabad, December 19-21, 2005.

“Optimal Policies with Discounting: Geometry and Computation in the Two-Sector RSS Model,” (co-authors: C. Metcalf, T. Mitra). Paper presented at the *First GE Conference* held in Rio February 8-9, 2006.

Talk at the 7th SAET Conference in Kos, 2007. “On games with incomplete information and the Dvoretzky-Wald-Wolfowitz theorem with countable partitions,” (co-author: Kali Rath).

Talk at the Positivity Conference in Queens University, Belfast, July 2007. “Positivity and General Equilibrium Theory.”

Talk at the Second General Equilibrium Workshop in Rio January, 2008. “Pure Strategy Equilibria in Games with a Continuum of Players and a Multiplicity of Types,” (co-authors: K. Rath, Y. Sun, H. Yu.)

“The Economics in the “Economics of Climate Change”,” The Gustav Ranis Lecture at the 28th Annual General Meeting of the *Pakistan Society of Development Economists* held at Islamabad, November 13-15, 2012.

Other Employment:

Management Sciences Division, American Telephone and Telegraph Co., Summer 1970.

Visiting Lecturer, The London School of Economics, January-June 1975.

Visitor, Applied Economics Research Centre, University of Karachi, Summer 1976.

Visiting Associate Professor, Northwestern University, January-July, 1978.

Visiting Senior Fellow (United Nations TOKTEN Program), Pakistan Institute of Development Economics, May-June 1981.

Visiting Professor, Cornell University, July 1983-July 1984

Visiting Fellow, Aacdaemia Sinica, Summer 1989.

Visiting Professor, Bilkent University (Turkey), May 1991.

TOKTEN (United Nations) Fellow, Pakistan Institute of Development Economics, January 1991.

Consulting Professor, Bilkent University (Turkey), 1991 – 1993.

Research Fellow, International Monetary Fund, June 1995.

Visitor, CORE, Louvain, Belgium, November 1996.

Visiting Fellow, The Australian National University, July-August 1998.

Distinguished Fellow, Department of Mathematics, The National University of Singapore, Singapore, January 1-31, 1999.

Professeur Invité, CERMSEM, *Université de Paris 1 Panthéon-Sorbonne*, May-June 2000.

Visiting Research Fellow, Universidad de Vigo, August 2007.

Visitor, *Centro Modelamiento Matematico (CMM)* at the Universidad de Chile. December 2005, December 2006.

Visitor, *Center for Analytic Economics* at Cornell University, July 2004, July 2005.

Goh Keng Swee Visiting Professor, Department of Economics, The National University of Singapore, July 1 to December 30, 2008.

Work for the World Bank:

“A Proposal for Linking the W.F.S. and H.I.E.S. Data Sets for the Study of Fertility in Malaysia,” a paper written for the Population and Human Resource Division of the World Bank, December 1977.

Consultant to the World Bank Mission to Jordan, Summer 1978. Prepared a paper on “Shadow Prices in Jordan,” September 1978.

“A Proposal for Analysis Determinants of Fertility and Age at Marriage in Kerala-Karnataka.” A paper written for the Population and Human Resource Division of the World Bank, August 1979.

“The Determinants of Desired Fertility, Desired Education, Labor Force Participation and Completed Family Size: A Proposal for the Analysis of the Egyptian Fertility Survey,” July 1983.

“Son Preference and the Demand for Additional Children in Egypt,” (co-authors: S. Cochrane and I. Taha), December 1985.

Panel Member for the review of research proposals submitted to the “Development Marketplace”, World Bank, February 8 and 9, 2000.

Work for the International Food Policy Research Institute:

USAID Evaluator for the HRD Component of the Pakistan Project.

“Comment and Queries on the Pakistan Project,” mimeo, IFPRI, December 1992, 25 pages.

“Raven’s Tests as a Measure of Innate Ability: A Plea for Reconsideration,” (co-authors: S. J. Malik, S. Broca, M. Gill), July 1993

“Son Preference, Interspousal Communication and Fatalistic Attitudes in Desired Fertility in Pakistan,” (co-author: S. J. Malik), July 1993

“Education, Income and Nutrition: An Exploration of Pakistani Data,” (co-author: S. J. Malik), July 1994.

Other Professional Activities:

Reviews for the Zentralblatt fur Mathematik and for Mathematical Reviews.

Co-editor of Vol. 2 of Research in Human Capital and Development, JAI Press, Westport, 1980.

Editorial Board: Pakistan Development Review, Journal of Mathematical Economics, Economic Theory (1990-92), Pacific Economic Review, Japanese Economic Review, Review of development economics, Journal of Economic Integration, Journal of Public Economic Theory, International Journal of Economic Theory.

Refereeing for NSF, AER, Econometrica, Economica, REStud., JET, IER, Pop. Devl. Rev., Pak. Dev. Rev., Can. Journ. of Econ., JIE, JME, EDCC, Math. Op. Res., J. App. Th., Jour. Math. Anal. App., JDE, European J. Pol Econ., J. Opt. and Appl.

Member of a panel appointed by the Editor of the *Journal of Economic Theory*, May 1992, to handle a case of alleged plagiarism.

Research Support: N.S.F. Grant No. 8410229 to Brown University. Support for the month of August in 1984 and 1985. N.S.F. Grant No. 8605630 to University of Illinois. Support for two summer months in 1986 and 1987. B.E.B.R. Grant for 1 month in 1986.

Member of the Committee, *Program on Comparative International Development*, (Professor A. Portes, Director).

Member, Organizing Board, Indian Meetings of the Econometric Society, 1992, 1996.

At The University of Illinois: Promotion Committee (1984-88; Chairman 1985), Research Committee (1984-87).

At The Johns Hopkins University: University Budget Committee (1991-94), The Johns Hopkins University Press (1991-94), Academic Council (1991-1996), (2002-2007).

Organizer, Colloquium on *On Rules and Rule Making*, held at Hopkins in February 1994. Supported, in part, by the Provost's Office.

Organizer, Colloquium on *Ethics in Organizations and Markets: A Comparative Perspective*. March 26, 2004.

Member, Organizing Committee, Workshop on Geometry, Topology and Markets, 1994, The Fields Institute for Research in Mathematical Sciences.

Member of the Advisory Committee, *Global Studies Institute*, Anthropology Department (Professor Rolph Trouillot, Director). Interview in *Crosscurrents*, 1994.

Member of the Advisory Committee, *Louis Marin Institute*, French Department (Professors M. Detienne and S. Nichols, Directors), 1993-94.

Research Evaluation Panel: 8th SANEI Annual Conference, Kathmandu, Nepal, August 31-September 1, 2007.