

VITA  
Subir Kumar Chakrabarti

PERSONAL

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EDUCATION

Ph.D. in Economics, University of Iowa, 1985  
M.S. in Mathematics, University of Iowa, 1985  
M.A. in Economics, Jawaharlal Nehru University, New Delhi, 1978

WORK EXPERIENCE & APPOINTMENTS

Professor, Department of Economics, IUPUI, since August 1998  
Faculty of the Graduate College, Indiana University, since 1994  
Visiting Professor, Department of Economics, Southern Methodist University, January 2020-August 2020.  
Visiting Professor, Department of Economics, Purdue University, West Lafayette, August 2008 – May 2009.  
Visiting Professor, Department of Economics, Indiana University, Bloomington, Spring Semester, 2002  
Visiting Scholar, Department of Economics, Stanford University, February-June 2001  
Visiting Professor of Economics, Cornell University, August 2000 – January 2001  
Associate Professor, Department of Economics, IUPUI, August 1991 to August 1998  
Visiting Associate Professor of Economics, Department of Economics, Johns Hopkins University, August 1992 to August 1993  
Assistant Professor, Department of Economics, IUPUI, January 1986 to July 1991  
Visiting Assistant Professor at MEDS, Kellogg Graduate School of Management, Northwestern University 1986-1987

HONORS, GRANTS AND AWARDS:

1. Integrated Artificial Intelligence (iAI) Grant, IUPUI, 2021 of \$18,000. Co-PI is Professor Qin Hu of the computer science department, IUPUI.
2. Keynote Speaker at the 17th Annual Mathematics Contest, IUPUI, May 2009
3. Book Writing Grant from Oxford University Press, 1998

4. NSF course development grant 1996-1997
5. Member of Phi Beta Kappa, 1985.

## PUBLICATIONS

### **Books**

*Games & Decision Making*, Oxford University Press, 2000, coauthored with C.D. Aliprantis, 251 pages.

*Games & Decision Making*, Oxford University Press, *enlarged second edition*, 2011, coauthored with C. D. Aliprantis, 470 pages. Translated into Russian in 2016.

### **Refereed Publications**

“Equilibrium Contracts under Adverse Selection in the Infinite Horizon,” with Jaesoo Kim. Current version January 2022. Forthcoming in *Theory and Decision*.

“Stationary equilibrium in Stochastic Dynamic Models: Semi-Markov Strategies.” *Economic Theory Bulletin*, Volume 9, 2021, 177 – 194.

“Minimum Wage and Restaurant Hygiene Violations: Evidence from Seattle,” with Srikant Devaraj and Pankaj Patel. *Managerial and Decision Economics*, volume 42, Issue 1, January 2021, 85-99.

“Stationary Markov Equilibrium in Dynamic Economic Models.” Conditionally Accepted for Symposium volume in honor of Bernard Cornet. Edited by Nicholas Yannelis.

“Reinforcement Learning Algorithms for Uncertain Dynamic Zero-Sum Games,” with S. Mukhopadhyay and O. Tilak. *Proceedings of the IEEE ICMLA Conference*, 48 – 54, December 2018.

“An Extensive-Form Based Proof of the Existence of Sequential Equilibrium,” with Iryna Topolyan. *Economic Theory Bulletin*, Volume 4, Issue 2, 2016, 355- 365.

“Robustness of the Competitive Equilibrium: Utility-improvements and Equilibrium Points.” *Journal of Mathematical Economics*, 55, 2014, 36-47.

“Collusive Equilibrium in Cournot Oligopolies with Unknown Costs,” *International Economic Review*, 51, 2010, 1209-1238.

“Markovian Equilibria in a Dynamic General Equilibrium Model with Heterogeneous Consumers,” in *Dimensions of Economic Theory and Policy*, Essays for Anjan Mukherji, Oxford University Press. Editors K. G. Dastidar, H. Mukhopadhyay, U. B. Sinha, 2011.

“The Dynamics of  $2 \times 2$  Games,” in *Dynamics, Games and Science*, edited by M. Peixoto, Alberto Pinto and D. Rand, Springer Series in Dynamical Systems and Differential Equations. With R. Becker, M. Misiurewicz, W. Geller, B. Kitchens, 2011.

“Hyperbolic Dynamics in Nash Maps,” with Robert Becker, Will Geller, Bruce Kitchens, Michal Misiurewicz, in *Discrete Dynamics and Difference Equations*, edited by S. Elayadi, H. Oliveira, J. M. Ferreira and J. F. Alves, World Scientific Publishing Company, November, 2010.

“A Proof of the Existence of the Minimax Point of a Strategic Game,” joint with C. D. Aliprantis and I. Topolyan. *Economics Letters* 105 (2009), 161-163

“Dynamics of the Nash Map in the Game of Matching Pennies,” with Robert Becker, Will Geller, Bruce Kitchens, Michal Misiurewicz, *Journal of Difference Equations and Applications*, Vol. 13, Nos. 2-3, February-March 2007, 223-235

“Game Theory in Decision Making,” with C. D. Aliprantis, Chapter 21 in *Decision Making in Engineering Design*, edited by Wei Chen, Kemper Lewis and Linda Schmidt. ASME Press, New York, 2006

“Satisficing Behavior, Nash Equilibrium and Brouwer’s Fixed-Point Theorem,” with Robert Becker in *Economic Theory*, 26, 2005, 63-85

“Pure Strategy Markov Equilibrium in Discounted Stochastic Games with a Continuum of Players,” *Journal of Mathematical Economics*, 39, 2003, 693-724

“Markov Equilibria in Discounted Stochastic Games,” *Journal of Economic Theory*, 85, 1999, 294-327

“Finite and Infinite Action Dynamic Games with Imperfect Information,” *Journal of Mathematical Economics*, 32, 1999, 243-266

“Taxation and Trade in Ordered Market Chains,” Co-authored with Edi Karni, *Journal of Public Economics*, volume 64, 1997, pages 241-258

“The Recursive Core,” with Robert Becker, *Econometrica*, 63, 1995, pages 401-423

“Uncertain Altruism and Investment in Children,” with William Lord and Peter Rangazas, *American Economic Review*, 83, 1993, pages 994-1002

“Equilibrium in Behavior Strategies in Infinite Extensive Form Games with Imperfect Information,” *Economic Theory*, 1992, vol. 2, pages 481-494

“Equilibria of Large Games with Imperfect Observability,” with M. Ali Khan, *Positive Operators, Riesz Spaces and Economics*, edited by Aliprantis, C. D., Border, K. C., and W.A.J. Luxemburg, Springer-Verlag, Heidelberg, 1991

“Finite Complexity and the Folk Theorem in Repeated Games,” *Economics Letters*, 35, 1991, pages 355-358

“Characterizations of the Equilibrium Payoffs of Inertia Supergames,” *Journal of Economic Theory*, vol. 51, No. 1, June 1990, pages 171-183

“Refinements of the Beta-core and Strong Equilibrium and the Aumann Proposition,” 1988 *International Journal of Game Theory*, vol. 17, Issue 3, pages 205-222.

### **Book Reviews**

Chakrabarti, S.K. & Ichiishi, T., Review of “Refinements of Nash Equilibrium,” by Eric Van Damme in *Zentralblatt Fur Mathematik*, vol. 50, 1985.

Chakrabarti, S. K., Review of “Transition and Economic Development in India” by Anjan Chakrabarti and Stephen Cullenberg and “India’s Emerging Economy: Performance and Prospects in the 1990s and Beyond,” Kaushik Basu (ed) in *Comparative Economic Studies*, 2006, 48, 706-710.

Chakrabarti, Subir, Review of “Economic Reform in China and India By Joseph Chai and Kartik Roy in *Comparative Economic Studies*, 2007, 49, 480-481.

### **Recent Working Papers and Works in Progress**

1. “Markovian Dynamics in Asynchronous Stochastic Models,” Current Version January 2021. Under Review
2. “Computing stationary Markov equilibrium strategies in stochastic games.” Coauthored with Qin Hu. Current version October 2021.
3. “Stationary Markov Equilibrium in Asynchronous Stochastic games: Existence and Computation.” Coauthored with Qin Hu. February, 2022.

### **Unpublished Working Papers**

“A characterization of Sequential and Perfect Bayesian equilibria in Aligned Games,” with Iryna Topolyan. Current version December 2017.

“A Refinement of a Core Concept,” January, 1989

“Finite Complexity, Bounded Recall and the Folk Theorem in Repeated Games,” August, 1991

“Measurable Selections and an Alternative Proof of the Blackwell-Maitra Theorem in Discounted Dynamic Programming,” August 1993

“Equilibrium with Heterogeneous Agents in an Intertemporal Model of Investment and Savings,” May 2002

“Information Revelation and Collusion in Oligopolies with unknown costs,” Working Paper, Department of Economics, Cornell University, May 2005.

#### PROFESSIONAL ACTIVITIES:

##### **Refereeing**

Referee for *Games and Economic Behavior*, *International Economic Review*, *National Science Foundation*, *Economic Theory*, *International Journal of Game Theory*, *International Journal of Industrial Organization*, *Journal of Economics and Management Strategy*, *American Economic Review*, *Journal of Economic Theory*, *Mathematics of Operations Research*, *Rand Journal of Economics*, *Mathematical Social Sciences*.

##### **Organization of Conferences and Sessions at Conferences**

Organized the 2014 Spring Midwest Economic Theory and International Trade Conference. This was held at IUPUI in May 2014.

Organized the Session on “Dynamic Games and Applications,” at the 13<sup>th</sup> Annual SAET Conference, Paris, France in July 2013.

Organized the Session on “Contract Theory and Dynamic Games,” at the 12<sup>th</sup> Annual SAET Conference, Brisbane, Australia in July 2012.

Organized the 2004 Spring Midwest Economic Theory and International Trade Conference. This was held at IUPUI in April 2004.

##### **Invited Presentations:**

“Markovian Dynamics in Asynchronous Stochastic Models,” Presented at SAET (Society for the Advancement of Economic Theory) Conference, Ischia, Italy, June 2019.

“Markovian Dynamics in Asynchronous Stochastic Models,” Presented at the seminar series of the Department of economics, University of Cincinnati, April 2019.

“Markovian Dynamics in Asynchronous Stochastic Models,” Presented at the seminar series of the department of economics, Vanderbilt University, April 2019.

“Stationary Equilibrium in Stochastic Games: Extended Markov strategies,” Presented at the Seminar Series of the Economic Planning Unit, The Indian Statistical Institute, New Delhi, July 2018.

“Equilibrium Contracts under Adverse Selection in the Infinite Horizon,” Presented at the Workshop in General Equilibrium Theory (EWGET), Paris, France, June 2018.

“Pure Strategy Markov Equilibrium in some classes of Stochastic Games and Applications,” Presented at the XVIII Workshop in General Equilibrium Theory, Paris, France, July 2014.

“Robustness of the Competitive Equilibrium: Utility Improvements and Equilibrium Points.” Presented at the Department of Economics Seminar Series, Indiana University, Bloomington, April 2014.

“On the Existence of Pure Strategy Markov Equilibrium Points in Stochastic Games,” Presented at the Department of Economics, University of California, Santa Barbara, May 2013.

“Equilibrium Contracts under Repeated Adverse Selection with Limited Commitment,” Presented at Mississippi State University, January 2013.

“Equilibrium Contracts under Repeated Adverse Selection with Limited Commitment,” Presented at the *Summer Workshop of the Center for Games and Economic Behavior*, Shandong University, China, June 2012.

“Equilibrium Contracts under Repeated Adverse Selection with Limited Commitment,” Presented at the Indian Statistical Institute, New Delhi, July 2012.

”Robustness of the Competitive Equilibrium: Better Response Maps and Equilibrium Points,” Presented at the NSF/NBER General Equilibrium Conference, University of Iowa, October 2011.

“Robustness of the Competitive Equilibrium: Better Response Maps and Equilibrium Points,” Center for Economic Studies and Planning, Jawaharlal Nehru University, New Delhi, July 2009

“Collusive Equilibrium in Cournot Oligopolies with Unknown Costs,” Planning Unit, Indian Statistical Institute – Delhi Center, July 2009

“Collusive Equilibrium in Cournot Oligopolies with Unknown Costs,” Department of Economics, Southern Methodist University, January 2009

“Robustness of the Competitive Equilibrium: Better Response Maps and Equilibrium Points,” Department of Economics, Purdue University, West Lafayette, November 2008

“Optimal Collusion in Cournot Oligopolies with unknown costs,” Department of Economics, Virginia Polytechnic and State University, Blacksburg, West Virginia, April 2007

“Optimal Collusion in Cournot Oligopolies with unknown costs,” Department of Economics, Ohio State University, Columbus, Ohio, October 2006

“Collusive Equilibrium in Oligopolies with unknown costs,” Department of Economics, University of Cincinnati, Cincinnati, February 2004

“Collusive Equilibrium in Oligopolies with unknown costs,” Department of Economics, University of California, Riverside, April 2001

“Collusive Equilibrium in Oligopolies with unknown costs,” Department of Economics, Arizona State University, March 2001

“Collusive Equilibrium in Oligopolies with unknown costs,” Department of Economics, Jawaharlal Nehru University, New Delhi, January 2001

“Equilibrium in Stochastic Growth Models with Heterogeneous Agents,” Department of Economics, Stanford University, Palo Alto, March 2001

“Equilibrium in Stochastic Growth Models with Heterogeneous Agents,” Department of Economics, Cornell University, November 2000

“Equilibrium in Repeated Games with Unknown Types,” Department of Economics, Ohio State University, Columbus, Ohio, April 2000

“Equilibrium in Stochastic Growth Models with Heterogeneous Agents,” Department of Economics, Indiana University, Bloomington, Indiana, April 2000

“Equilibrium in Stochastic Growth Models with Heterogeneous Agents,” Department of Economics, Florida International University, Miami, March 2000

“Markov Equilibrium in Discounted Stochastic Games,” NSF funded workshop on the Nucleolus and Stochastic Games, University of Illinois-Chicago, Chicago, October 1997

“Markov Equilibrium in Discounted Stochastic Games,” Theory and Industrial Organization workshop of Department of Economics, University of Wisconsin-Madison, October, 1997

“Markov Equilibrium in Discounted Stochastic Games,” Theory workshop of Department of Economics, University of Illinois, April 1997

“Equilibrium in Dynamic Games: Concepts and Solutions,” Theory workshop of Department of Economics, Indiana University, December, 1996

“Pure Strategy Markov Equilibrium in Stochastic Games with a Continuum of Players,” NSF-NBER Decentralization Conference, University of Alabama, April, 1996

“Taxation and Trade in Ordered Market Chains,” Theory Workshop, Department of Economics, Purdue University, October, 1995

“Equilibrium in Discounted Stochastic Games with weak\* Continuous Transition Probabilities,” Microeconomics Workshop of Johns Hopkins University, January 1993

“Finite Complexity, Bounded Recall and the Folk Theorem in Repeated games,” Department of Economics, Indiana University, October, 1990

“Dynamic Games: Related Equilibrium Concepts; Their Existence and Characterization,” Department of Economics, Johns Hopkins University, March 30, 1990

“The Recursive Core,” Department of Economics, University of Cincinnati, November, 1989

“On the Existence of Perfect Equilibrium points in Discrete-Time Dynamic Games,” Theory Workshop of the Department of Economics, Purdue University, September, 1987

“On the Existence of Perfect Equilibrium Points in Discrete-Time Dynamic Games,” Theory workshop of the Department of Economics, Indiana University, Bloomington, November, 1987

### **Presentations at National and International Conferences:**

“On the Existence of Pure Strategy Markov Equilibrium Points in Stochastic Games,” Presented at the 14<sup>th</sup> Annual SAET Conference, Paris, France in July 2013.

“Equilibrium Contracts under Repeated Adverse Selection with Limited Commitment,” Presented at the *North American Summer Meetings of the Econometric Society*, Los Angeles, June 2013.

“On the Existence of Pure Strategy Markov Equilibrium Points in Stochastic Games,” Presented at the Asian Meeting of the Econometric Society, New Delhi in December 2012.

“Equilibrium Contracts under Repeated Adverse Selection with Limited Commitment,” Presented at the 12<sup>th</sup> Annual SAET Conference, Brisbane, Australia in July 2012.

“Markov Equilibrium in Stochastic Games,” Presented at the 11<sup>th</sup> Annual SAET Conference, Faro, Portugal in July 2011.

“Pure Strategy Markov Equilibrium in Stochastic Games with Concave Transition Probabilities,” Third World Congress of Game Theory, Northwestern University, July 2008.

“Collusive Equilibrium in Cournot Oligopolies with Unknown Costs,” North American Summer Meetings of the Econometric Society, Duke University, June 2007.



“Equilibrium in Discounted Repeated Games with Incomplete Information about Payoffs,” Ninth World Congress of the Econometric Society, London, UK, August, 2005.

“Stationary Equilibrium in Stochastic Games,” North American Summer Meetings of the Econometric Society, 2002, University of California, Los Angeles, June 2002.

“Information Revelation and Collusion in Oligopolies with Unknown Costs,” XVIII Latin American Meetings of the Econometric Society, Buenos Aires, Argentina, August 2001.

“Equilibrium in Stochastic Growth Models with Heterogeneous Agents,” Eighth World Congress of the Econometric Society, Seattle, Washington, August 2000.

“Markov Equilibrium in a Stochastic Growth Model,” Current Trends in Economic theory and Labor Market Effects, Society for the Advancement of Economic Theory (SAET), Rhodes, Greece, July 1999

“Pure Strategy Markov Equilibrium in Stochastic Games with a Continuum of Players,” New Directions in the Theory of Market and Games, The Fields Institute, University of Toronto, October 1995

“Pure Strategy Markov Equilibria in Stochastic Games with a Continuum of Players,” Current Trends in Economic Theory and its Applications, Cephalonia, Greece, May, 1995

“Pure Strategy Markov Equilibria in Stochastic Games with Many Players,” The Annual South-Eastern Economic Theory and International Trade Conference, University of Virginia, October, 1994

“Pure Strategy Markov Perfect Equilibrium in Stochastic Games with Many Player,” International Conference in Game Theory, SUNY Stony Brook, July, 1994

“Stationary Strategies in Stochastic Games,” The South-Eastern Economic Theory and International Trade Conference, Duke University, October 1993

“Equilibria in Discounted Stochastic Games with weak\* Continuous Transition Probabilities,” The 20th Annual E.A.R.I.E. Conference, Tel-Aviv, Israel, September 1993

“Equilibria in Discounted Stochastic Games with weak\* Continuous Transition Probabilities,” Mid-West Mathematical Economics Meetings, Fall of 1992, University of Pittsburgh, Pittsburgh, Pennsylvania

“Finite Complexity, Bounded Recall and the Folk Theorem in Repeated Games,” International Conference on Game Theory and Economics, SUNY at StonyBrook, July 1991

“Finite Complexity, Bounded recall and the Folk Theorem in Repeated Games,” The North American Summer Meetings of the Econometric Society, June 1991, University of Pennsylvania

“Equilibria in Large Games with Imperfect Observability,” International Conference on Game Theory and Economic Applications, December 1990, ISI New Delhi, India

“Equilibria in Large Games with Imperfect Observability,” The Columbus Summer 1990 Edwin Smart Symposium on Games and Economic Behavior, July 1990

“Equilibria in Large Games with Imperfect Observability,” International Conference on Game Theory and Economics, SUNY at StonyBrook, July 1990

“The Recursive Core,” The Sixth World Congress of the Econometric Society, August, 1990, Barcelona, Spain

“The Recursive Core,” Edwin Smart Symposium on Games and Economic Behavior, Columbus, Ohio, July 1989. The Paper is co-authored with Robert Becker of Indiana University, Bloomington

“On the Existence of Equilibria in a Class of Discrete-Time Dynamic Games with Imperfect Information,” 1989 North American Summer Meetings of the Econometric Society, Ann Arbor, Michigan, June 1989

“On the Existence of Equilibria in a Class of Discrete-Time Dynamic Games with Imperfect Information,” Third International Conference in Mathematical Game Theory, Oberwolfach, W. Germany, January 1989

“On the Existence of Equilibria in a Class of Discrete-Time Dynamic Games with Imperfect Information,” International Conference in Game Theory in Honor of Lloyd Shapley, Ohio State University, July 1988

“Strong, Perfect Equilibrium Points of Inertia Supergames,” International Conference on Game Theory and Applications, Ohio State University, June 1987.

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