

STEVEN R. WILLIAMS

Curriculum Vita

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Office:

Economics Department
University of Illinois
30 David Kinley Hall
1407 W. Gregory Drive
Urbana, IL 61801

office ph: (217) 333-4516

fax: (217) 244-6571

e-mail: swillia3@illinois.edu

<http://faculty.las.illinois.edu/swillia3/index.htm>

Education:

1982: Ph.D., Mathematics, Northwestern University.

Title: "A Geometric Study of Smooth Decentralized Economic Mechanisms."

Advisor: Donald Saari.

1977: M.S., Mathematics, Northwestern University.

1976: B.A., Mathematics, Kenyon College.

Research Interests: models of market mechanisms, mechanism design, game theory, and information economics.

Employment History:

2003 - 2007: Head, Department of Economics, University of Illinois.

2001- : Professor of Economics, University of Illinois

1992-2001: Associate Professor of Economics, University of Illinois.

1988-1992: Associate Professor of Economics, Northwestern University.

1989, 6/15-7/14: Visitor, USSR Academy of Sciences, Central Economics and Mathematics Institute, Moscow.

1985-1988: Assistant Professor of Economics, Northwestern University.

1984-1985: Post-Doctoral Fellow, Information Sciences Division, AT&T Bell Laboratories, Murray Hill, NJ (supervised by Roy Radner).

1983-1984: Post-Doctoral Fellow, Institute for Mathematics and Its Applications, Minneapolis, MN.

1982-1985: Assistant Professor of Mathematics, Southern Methodist University, Dallas, TX.

1981-1982: Instructor, Mathematics and Computer Science Dept., Lake Forest College, Lake Forest, IL.

1979-1982: Research Assistant for Leonid Hurwicz, Stanley Reiter, and Donald Saari.

Research Support:

1995-1996: "The Existence of Incentive Compatible Mechanisms that Achieve Efficient Social Choice," UIUC Campus Research Board.

1987-1989: "Information, Uncertainty and Incentives in Bargaining and Partnership," National Science Foundation Grant No. SES-8705649, Economics Program.

1986-1987: "A Comparison of Bargaining Procedures," Northwestern University Research Grants Committee.

1983-1985: "The Informational Equivalence of Decentralized Economic Mechanisms," National Science Foundation Research Grant No. IST-8308283, Division of Information Science and Technology.

Awards:

2007: Economics Graduate Student Association Award for Excellence in Teaching a Core Class, Department of Economics, University of Illinois.

2005-2006: Fellow, Committee on Institutional Cooperation Academic Leadership Program

1996, 2001, 2002: Incomplete List of Teachers Ranked as Excellent by Their Students, University of Illinois.

1994: Economics Graduate Student Association Award for Best Instructor of a Large Graduate Class, Department of Economics, University of Illinois.

1976-1981: Department of Mathematics Fellowship, Northwestern University.

1976: Summa cum laude graduate of Kenyon College with high honors in mathematics.

1975: Phi Beta Kappa.

Books:

Communication in Mechanism Design: A Differential Approach, Cambridge: Cambridge University Press, 2008. Paperback edition, 2012.

Publications:

"On Bidding with Securities: Risk Aversion and Positive Dependence," by V. Abhishek, B. Hajek and S. R. Williams, *Games and Economic Behavior* 90, 2015, 66-80.

"Optimality Versus Practicality in Market Design: A Comparison of Two Double Auctions," by M. A. Satterthwaite, S. R. Williams, and K. E. Zachariadis, *Games and Economic Behavior* 86, 2014, 248-263.

"Auctions with a Profit Sharing Contract," by V. Abhishek, B. Hajek and S. R. Williams, *Games and Economic Behavior* 77, 2013, 247-270.

"Limited Observability as a Constraint in Contract Design," by S. Krasa and S. R. Williams, *Journal of Economic Theory* 134, 2007, 379-404.

“The Optimality of a Simple Market Mechanism,” by M. A. Satterthwaite and Steven R. Williams, *Econometrica* 70, 2002, 1841-1863.

“Sufficient Conditions for Nash Implementation,” *Review of Economic Design* 6, 2002, 325-342. Reprinted in *Markets, Games, and Organizations: Essays in Honor of Roy Radner*, T. Ichiishi and T. Marshak, eds., Springer-Verlag, New York, 2002, 193-210.

“Ex Post Efficiency in the Buyer’s Bid Double Auction When Demand can be Arbitrarily Larger than Supply,” by E. Zacharias and S. R. Williams, *Journal of Economic Theory* 97, 2001, 175-190.

“A Characterization of Efficient, Bayesian Incentive Compatible Mechanisms,” *Economic Theory* 14, 1999, 155-180.

“The Robustness of the Independent Private Value Model in Bayesian Mechanism Design,” by G. Kosmopoulou and S. R. Williams, *Economic Theory* 12, 1998, 393-421.

“Efficiency in Partnership When the Joint Output is Uncertain,” by S. R. Williams and R. Radner, in *The Economics of Informational Decentralization: Complexity, Efficiency, and Stability*, J. Ledyard, ed., Kluwer, Boston, 1995.

“Convergence to Efficiency in a Simple Market with Incomplete Information,” by A. Rustichini, M. A. Satterthwaite and S. R. Williams, *Econometrica* 62, 1994, 1041-1064. Reprinted in *The Economic Theory of Auctions*, Paul Klemperer, ed., in *The International Library of Critical Writings in Economics*, vol. 113, Mark Blaug, series ed., Edward Elgar, Cheltenham, 2000.

“The Bayesian Theory of the k-Double Auction,” by M. A. Satterthwaite and S. R. Williams, in *The Double Auction Market: Institutions, Theories, and Evidence*, D. Friedman and J. Rust, eds., Santa Fe Institute Studies in the Sciences of Complexity, Proceedings Volume XV, Addison-Wesley, Reading, 1993, 99-123.

“Existence and Convergence of Equilibria in the Buyer’s Bid Double Auction,” *Review of Economic Studies* 58, 1991, 351-374.

“The Transition from Bargaining to a Competitive Market,” *American Economic Review Papers and Proceedings*, 80, No. 2, 1990, 227-231.

“The Rate of Convergence to Efficiency in the Buyer's Bid Double Auction as the Market Becomes Large,” by M. A. Satterthwaite and S. R. Williams, *Review of Economic Studies* 56, 1989, 477-498. Reprinted in *Bargaining with Incomplete Information*, P. Linhart, R. Radner and M. A. Satterthwaite, eds., Academic Press, San Diego, 1992, 498-519.

“Bilateral Trade With the Sealed Bid k-Double Auction: Existence and Efficiency,” by M. A. Satterthwaite and S. R. Williams, *Journal of Economic Theory* 48, No. 1, 1989, 107-133. Reprinted in *Bargaining with Incomplete Information*, P. Linhart, R. Radner and M. A. Satterthwaite, eds., Academic Press, San Diego, 1992, 128-154.

“Efficient Performance in Two Agent Bargaining,” *Journal of Economic Theory* 41, No. 1, 1987, 154-172.

“On the Local Convergence of Economic Mechanisms,” by D. G. Saari and S. R. Williams, *Journal of Economic Theory* 40, 1986, 152-167. Reprinted in *Nonlinear Economic Dynamics*, Jean-Michel Grandmont, ed., Academic Press, Orlando, 1986, 152-167.

“Realization and Nash Implementation: Two Aspects of Mechanism Design,” *Econometrica* 54, No. 1, 1986, 139-151.

“Necessary and Sufficient Conditions for the Existence of a Locally Stable Message Process,”
Journal of Economic Theory 35 No. 1, 1985, 127-154.

“Implementing a Generic Smooth Function,” *Journal of Mathematical Economics* 13, 1984, 273-288.

Working Papers:

“Price Discovery Using a Double Auction,” by M. A. Satterthwaite, S. R. Williams, and K. E. Zachariadis, 2015.

“Equations on the Derivatives of an Initial Allocation Competitive Equilibrium Mapping for an Exchange Economy,” University of Illinois, May 2002.

“Informational Externalities and the Scope of Efficient Dominant Strategy Mechanisms,” by S. R. Williams and R. Radner, Northwestern University CMSEMS No. 761, February 1988.

University Service:

2012-2014: Chairman, Faculty Appeals Committee, College of Liberal Arts and Sciences

2006-2007: Provost’s Committee to Evaluate the Budget of the College of Liberal Arts and Sciences

2005-2006: Provost’s Committee on Retention
 Co-organizer (with Leo Rezende and In-Koo Cho), 2005 NSF/NBER Conference on Economic Decentralization, April 2005.

1996 -1999: Associate Head of the Economics Department and Director of Graduate Studies, University of Illinois. Designed and implemented a complete revamping of the Ph.D. program.

1994-1995: Chairman, Assistant Professor Recruiting Committee.
 Organizer, 1995 NSF/NBER Decentralization Conference, April 1995.
 Member, Economics Department Advisory Committee.

1992-1994: Head Professor, Economics 173 (second semester statistics), annual enrollment –1400.

DOCTORAL DISSERTATION COMMITTEES:

Name	Department	Year	Major Supervision	Reading Member
Sung-Soo Yoon	Accountancy	1995	No	Yes
Hector Chade	Econ	1996	No	Yes
Guangsug Hahn	Econ	1996	No	Yes
Bobbi Jones	Accountancy	1996	No	Yes
Georgia Kosmopolou	Econ	1996	Yes	No
Andre Oliveira	Econ	1997	Yes	No
Mauricio Bugarin	Econ	1998	Yes	No
Wongun Song	ACES	1998	No	Yes
Eleftherios Zacharias	Econ	1999	Yes	No
Ron Stauber	Econ	2004	Yes	No
Soonho Lee	Econ	2006	No	Yes
David Bernotas	Econ	2006	Yes	Yes
Sujay Sanghavi	ECE	2006	No	Yes
Hongxia Shen	ECE	2007	No	Yes
Sichao Yang	ECE	2007	No	Yes
Mehdi Shadmir	Econ	2011	No	Yes

Name	Department	Year	Major Supervision	Reading Member
Dennis O'Dea	Econ	2011	Yes	No
Lusha Zhu	Econ	2011	No	Yes
Vineet Abhishek	ECE	2012	No	Yes
Kang Rong	Econ	2012	Yes	No
Chia-ling Hsu	Econ	2015	Yes	No
Juan Fung	Econ		Yes	No
Blake Riley	Econ		Yes	No
Rachel Shafer	Econ		Yes	No
Tom Sahajdack	Econ		Yes	No
Kwanghyun Kim	Econ		Yes	No
Bei Yang	Econ		Yes	No

Professional Service:

2014: Examiner, PhD Thesis, Indian Statistical Institute

2007: National Science Foundation Graduate Research Fellowship Program, panel member for economics.

2006: Chairman, External Review Committee, Department of Economics, University of Arizona.

1993-2006: Editorial Board, *Journal of Mathematical Economics*.

1993-1997: Editorial Board, *Economic Theory*.

1989-: Reviewer, *Mathematical Reviews*.

1984: National Science Foundation, Division of Information Science and Technology, panel to evaluate research initiation grants.