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EDUCATION

1971: A.B. (Mathematics), Harvard College, Cambridge, MA
1976: Ph.D. (Mathematics), Massachusetts Institute of Technology, Cambridge, MA

EMPLOYMENT

1975-1981: Assistant Professor of Mathematics, Union College.
1981-1989: Associate Professor of Mathematics, Union College.
1989- 2006: Professor of Mathematics, Union College.
2006 - : William D. Williams Professor of Mathematics, Union College.

VISITING POSITIONS

1981-1982: York University & University of Toronto.
1998-1999: Universitat Autònoma de Barcelona & London School of Economics.
2004-2005: Universidad de Alicante & Université de Caen.
2013 (Fall): Université Paris Dauphine

EDITORIAL BOARDS

2002 - 2005: Dolciani Publications (Book series of the Mathematical Association of America).
2005 - 2009: International Journal of Game Theory (Research journal).
2005 - Mathematical Social Sciences (Research journal).

AWARDS

2009: Stillman Prize for teaching (awarded to one Union College faculty member per year).

PUBLICATIONS

BOOK

1. Simple Games: Desirability Relations, Trading, and Pseudoweightings (with A. Taylor), Princeton University Press, 1999.

RESEARCH ARTICLES

2. Flipping Properties: A Unifying thread in the Theory of Large Cardinals (with F. Abramson, L. Harrington, and E. Kleinberg), Annals of Math. Logic 12 (1), 1977, 37-58.

3. A Remark on Part*(κ, λ) (with C. A. DiPrisco), Acta Cientifica Venezolana 29, 1978, 365-366.

4. Flipping properties and supercompact cardinals (with C. A. DiPrisco) Fundamenta Mathematicae CIX (1980), 31-36.

5. Ultrafilters on spaces of partitions (with J. Henle), Journal of Symbolic Logic 47 (1982), 137-146.

6. $P_\kappa\lambda$ Combinatorics I: Stationary coding sets rationalize the club filter, in *Axiomatic Set Theory*, Contemporary Mathematics Vol. 31 (1984), American Mathematical Society, Providence R. I., 243-259.

7. $P_\kappa\lambda$ Combinatorics II: The RK ordering beneath a supercompact cardinal, Journal of Symbolic Logic 51 (1986), 605-616.

8. Playing games with games: the hypergame paradox, American Mathematical Monthly 90 (1987), 507-514.

9. Filter spaces: Towards a unified theory of large cardinals and embedding axioms (with A. Apter, C. DiPrisco, and J. Henle), Annals of Pure and Applied Logic 41 (1989), 93-106.

10. A beginning for structural properties of ideals on $P_\kappa\lambda$, in *Set Theory and its Applications* (1987 conference proceedings, York University) Springer Lecture Notes 1401 (1989), 201-217.

11. The voters' paradox, spin, and the Borda count, Mathematical Social Sciences 22 (1991), 187-227.

12. A characterization of weighted voting (with A. Taylor), Proceedings of the American Mathematical Society 115 (1992), 1089-1094.

13. Weighted voting, multicameral representation, and power (with A. Taylor), Games and Economic Behavior 5 (1993), 170-181.

14. Simple games and magic squares (with A. Taylor), Journal of Combinatorial Theory (A) 71 (1995), 67 - 88.

15. Old and new moving-knife schemes (with S. Brams and A. Taylor), Mathematical Intelligencer 7 (1995), 30-35.

16. Social choice and the Catalan numbers (with S. Young, and A. Taylor), Mathematics Magazine 68 (1995), 331-342.

17. Quasi-weightings, trading, and desirability relations in simple games (with A. Taylor), Games and Economic Behavior 16 (1996) 331-346.

18. Interval measures of power (with A. Taylor), Mathematical Social Sciences 33 (February, 1997) 23 - 74.

19. A moving-knife solution to the four-person envy-free cake-division problem (with S. Brams and A. Taylor), Proceedings of the American Mathematical Society 125, No. 2 (Feb., 1997) 547 - 554

20. Two applications of a theorem of Dvoretsky, Wald, and Wolfovitz to cake division (with J. Barbanel), Theory and Decision 43 (1997) 203 - 207.

21. Voting on referenda: the separability problem and possible solutions (with S. Brams and D. M. Kilgour), Electoral Studies 16, No. 3 (1997) 359-357.

22. The Paradox of Multiple Elections (with S. Brams and D. M. Kilgour), Social Choice and Welfare 15, No. 8 (1998) 211 - 236.

23. The bicameral postulates and indices of a priori voting power (with D. Felsenthal and M. Machover), Theory and Decision 44 (1998), 83-116.

24. Trading properties and Alexandrov kernels for boolean functions (with A. Taylor), Discrete Applied Mathematics 107 (2000), 203-214.

25. Coalition formation games with separable preferences (with N. Burani), Mathematical Social Sciences 45 (2003), 27-52

26. Weighted voting, abstention, and multiple levels of approval (with J. Freixas), Social Choice and Welfare 21 (2003), 399-431.

27. Which scoring rule maximizes Condorcet efficiency? (with D. Cervone and W. Gehrlein), Theory and Decision 58 (2005), 145 - 185.

28. Consistency Without Neutrality in Voting Rules: When is a Vote an Average?, Mathematical and Computer Modelling, special issue on Mathematical Modeling of Voting Systems and Elections: Theory and Applications, A. Belenky, ed., 48 (2008), 1357-1373.

29. A Characterization of the Rational Mean Neat Voting Rules, Mathematical and Computer Modelling, special issue on Mathematical Modeling of Voting Systems and Elections: Theory and Applications, A. Belenky, ed., 48 (2008), 1374-1384.

30. Anonymous voting rules with abstention: weighted voting, in Steven J. Brams, William V. Gehrlein, and Fred S. Roberts (eds.), The Mathematics of Preference, Choice, and Order: Essays in Honor of Peter C. Fishburn, Heidelberg: Springer (2009), 239-258.

31. Anonymous yes-no voting with abstention and multiple levels of approval* (with J. Freixas), Games and Economic Behavior 67 (2009), 428-444 * Former title "Anonymous voting games with abstention and multiple levels of approval: classification and counting"

32. Convex Decompositions (with D. Cervone), Journal of Convex Analysis 16 (2009), 367-376.

33. One-way monotonicity as a form of strategy-proofness (with M. Remzi Sanver), International Journal of Game Theory 38 (2009), 553-574.

34. Analysis of binary voting algorithms for use in fault-tolerant and secure computing (with K. Kwait, A. Taylor, D. Hill, S. Wetzonic, and R. Shangping), Proceedings of the IEEE International Conference on Computer Engineering and Systems (2010) 273-285.

35. Voting with rubber bands, weights, and string (with Davide Cervone, Ronghua Dai, Daniel Gnoutcheff, Grant Lanterman, Andrew Mackenzie, Ari Morse, and Nikhil Srivastava), Mathematical Social Sciences 64 (2012) 11-27.

36. Monotonicity properties and their adaptation to irresolute social choice rules (with M. Remzi Sanver), Social Choice and Welfare 39, no. 2-3 (Special Issue in Honor of Maurice Salles on Developments in Social Choice and Welfare Theories), 371-398 (2012).

37. The geometry of influence: weighted voting and hyper-ellipsoids (with Nicolas Houy), Games and Economic Behavior 84, 7–16 (2014).

BOOK REVIEW

1. Review of *Voting and Collective Decision Making: Bargaining and Power* by Annick Laruelle and Federico Valenciano, Games and Economic Behavior 69 (2010), 517-522.

WORKING PAPERS

1. Voting: an introduction, in F. Brandt, V. Conitzer, U. Endriss, J. Lang, and A. Procaccia editors, *Handbook of Computational Social Choice*, Cambridge University Press, under review.

2. Aggregation of binary evaluations: a Borda-like approach (with C. Duddy, A. Piggins), under review.

3. Higher order Condorcet cycles (with Davide Cervone and Christopher Hardin), in preparation.

4. Social Dichotomy Functions (with C. Duddy, N. Houi, J. Lang, A. Piggins), in preparation.

5. Universal and symmetric scoring rules for binary relations, in preparation.