

February, 2010

DAVID E. TYLER

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EDUCATION

Princeton University
Ph.D., Department of Statistics, 1979
M.A., Department of Statistics, 1976
University of Massachusetts, Amherst
M.A., Department of Mathematics and Statistics, 1974
Indiana University of Pennsylvania
B.A., Department of Mathematics, 1972

EMPLOYMENT

1983-present Department of Statistics, Rutgers University
Chairman: 1993-1996 Undergraduate Director: 2000-2001
Professor II: 2004-present Professor I: 1993-2004
Associate Professor: 1986-1993 Assistant Professor: 1983-1986
1983-2000 Statistical Consultant, New Jersey Agricultural Experiment
Station and Cook College, Rutgers University
1979-1983 Assistant Professor, Department of Mathematical Sciences
Old Dominion University (Promoted to Associate Professor)
1978-1979 Assistant Professor, Department of Statistics
University of Florida

FELLOW: Institute of Mathematical Statistics, Elected 1994.

PH.D. DISSERTATION: Redundancy analysis and associated distribution theory, 1979. Department of Statistics, Princeton University Adviser: Lawrence Mayer

RESEARCH PAPERS

1. Asymptotic inference for eigenvectors, *Annals of Statistics*, 1981, Vol. 9 No. 4, 725-736
2. Radial estimates and the test for sphericity, *Biometrika*, 1982, Vol. 69, No. 2, 429-436.
3. A counterexample to Miller and Farr's algorithm for the index of redundancy, *Multivariate Behavior Research*, 1982, Vol. 17, No. 1, 131-135.
4. On the optimality of the simultaneous redundancy transformations, *Psychometrika*, 1982, Vol. 47, No. 1, 77-85.

5. Robustness and efficiency properties of scatter matrices, *Biometrika*, 1983, Vol. 70, No. 2, 411-420.
6. The asymptotic distribution of principal component roots under local alternatives to multiple roots, *Annals of Statistics*, 1983, Vol. 11, No. 4, 1232-1242.
7. A class of asymptotic tests for principal component vectors, *Annals of Statistics*, 1983, Vol. 11, No. 4, 1243-1250.
8. Magnitudinal effects in the normal multivariate model (with I. Guttman and V. Mensifricke), *Annals of Statistics*, 1986, Vol. 14, No. 4, 1544-1554.
9. Breakdown properties of the M-estimators of multivariate scatter. Rutgers University Technical Report, 1986. Abstract in: *Inst. Math. Stat. Bull.*, 1986, Vol. 15, 116.
10. A distribution-free M-estimate of multivariate scatter, *Annals of Statistics*, 1987, Vol. 15, No. 1, 234-251.
11. Statistical analysis for the angular central Gaussian distribution, *Biometrika*, 1987, Vol. 74, No. 3, 579-590.
12. Some results on the existence and computation of the M-estimates of multivariate location and scatter, *SIAM J. Sci. Stat. Comput.*, 1988, Vol. 9, No. 2, 354-362.
13. Maximum likelihood estimation for the wrapped Cauchy distribution (with John Kent), *Journal of Applied Statistics*, 1988, Vol. 15, No. 2, 247-254.
14. On Wielandt's inequality and its application to the asymptotic distribution of the eigenvalues of a random symmetric matrix (with Morris Eaton), *Annals of Statistics*, 1991, Vol. 19, 260-271.
15. Some issues in the robust estimation of multivariate location and scatter, in *Directions in Robust Statistics and Diagnostics Part II*, Stahel, W. and Weisberg, S. (eds.), The IMA Volumes in Mathematics and its Applications, Springer-Verlag: New York, 1991, Vol. 34, 327-336.
16. Redescending M-estimates of multivariate location and scatter (with John Kent) *Annals of Statistics*, 1991, Vol. 19, 2102-2119.
17. Spectral analysis of DNA sequences, (with David Stoffer, Andrew McDougall, and Gabriel Schachtel), *Bulletin of the International Statistical Institute*, 1993, Vol. 49, Book 1, 345-361.
18. Spectral analysis for categorical time series: scaling and the spectral envelop (with David Stoffer and Andrew McDougall). *Biometrika*, 1993, Vol. 80, 611-622.
19. Finite sample breakdown points of projection based multivariate location and scatter statistics. *Annals of Statistics*, 1994, Vol. 22, 1024-1044.
20. Asymptotic distributions of singular values with applications to canonical correlations and correspondence analysis (with Morris Eaton). *Journal of Multivariate Analysis*, 1994, Vol. 50, 238-264.

21. A curious likelihood identity for the multivariate t-distribution (with John Kent and Yehuda Vardi.) *Communications in Statistics: Simulations and Computations*, 1994, Vol. 23, 441-453.
22. M-estimates, S-estimates and CM-estimates: A Review. In IEEE Proceedings of NSF/AFPA Workshop: *Performance versus Methodology in Computer Vision*, Seattle, June 24-25, 1994, 1-6.
23. Constrained M-estimation for Regression (with Beatriz Mendes) in *Robust Statistics, Data Analysis, and Computer Intensive Methods*: In Honor of Peter Huber's 60th Birthday, H. Rieder(ed.), Lecture Notes in Statistics, Springer-Verlang: New York, 1996, Vol. 109, 299-320.
24. Constrained M-estimates of multivariate location and scatter (with John Kent). *Annals of Statistics*, 1996, Vol. 24, 1346-1370.
25. A more general framework for the EM algorithm?. Discussion of the paper "The EM algorithm - an old folk-song sung to a new fast tune" by X. Ming and D. van Dyk. *J. R. Statist. Soc. B*, 1997, Vol. 59, No. 3, 511-567. Discussion: 550-551.
26. Robust statistics and data analysis (with R. J. Carroll and L. Fernholz). *J. Statist. Plan. Inference*, 1997, Vol. 57, No. 2, i-iii.
27. The spectral envelop for continuous-valued and multivariate time series (with Andrew McDougall and David Stoffer). *J. Statistical Planning and Inference*, 1996, Vol. 57, No. 2, 195-214.
28. Matching sequences: Cross spectral analysis of categorical time series (with David Stoffer). *Biometrika*, 1998, Vol. 85, No. 1, 201-203.
29. Smoothing the gap between statistics and image understanding (with Peter Meer). Comments on the paper "Edge preserving smoother for image processing" by C.K. Chu, I.K. Glad, F. Godtliebsen and J.S. Marron. *J. Amer. Statist. Assoc.*, Vol. 93, 548-553.
30. Performance assessment by resampling: Rigid motion estimators (with Bogdan Matei and Peter Meer). *Empirical Evaluation Techniques in Computer Vision*, K.W. Bowyer, P.J. Phillips (Eds.), IEEE CS Press, Los Alamitos, CA, 1998, 72-95.
31. Illustrating the behavior of CM-estimates of location and scale (with Beatriz Mendes). *Brazilian Journal of Probability and Statistics*, 1998, Vol. 12, 41-53.
32. S-estimators. *Encyclopedia of Statistic Science*, S. Kotz, C. B. Read, D. L. Banks(eds.), Wiley, New York, 1999, 659-662.
33. Retrieval performance improvement through low rank corrections (with Dorin Comaniciu, Peter Meer and Kun Xu). IEEE Workshop on: *Content-based Access of Image and Video Libraries (CBAIVL-99)*, Fort Collins, CO, June 1999, 50-54.
34. Robust computer vision: An interdisciplinary challenge (with Peter Meer and Charles Stewart). *Computer Vision and Image Understanding*, 2000, Vol. 78, 1-7.

35. The spectral envelope and its applications (with David S. Stoffer and David A. Wendt). *Statistical Science*, 2000, Vol. 15, 224-253.
36. The uniqueness of S and M-functionals under non-elliptical distributions (with Kay Tatsuoka). *Annals of Statistics*, 2000, Vol. 28, 1219-1243.
37. Robust estimation for chemical concentration data subject to detection limits (with Leo Korn). *Statistics in Genetics and in the Environmental Sciences*. L. T. Fernholz, S. Morgenthaler, W. Stahel (eds.), Birkhäuser-Verlag, 2001, 41-64.
38. Regularity and uniqueness for constrained M-estimates and redescending M-estimates (with John Kent). *Annals of Statistics*, 2001, Vol. 29, 252-265.
39. Robust regression for data with multiple structures (with Haifeng Chen and Peter Meer). *2001 IEEE Conference on Computer Vision and Pattern Recognition*, Vol. I, 1069-1075.
40. Local spectral envelope: An approach using dyadic tree-based adaptive segmentation (with David S. Stoffer and Hernando C. Ombao). *Annals of the Institute of Statistical Mathematics*, 2002, Vol. 54, 201-223.
41. The influence function of Tukey's deepest depth median (with Zhiqiang Chen). *Annals of Statistics*, 2002, Vol. 30, 1737-1759.
42. High breakdown point multivariate M-estimation. *Estadística*, 2002, Vol. 54, 213-247.
43. Dissimilarity Computation through Low Rank Corrections (with Dorin Cominciuc and Peter Meer). *Pattern Recognition Letters*, 2003, Vol. 24, 227-236.
44. Preface to "Contemporary data analysis: Theory and methods" (with Luisa Fernholz and Victor Yohai). *J. Statist. Plan. Inference*, 2004, Vol. 122, 1-2.
45. On the behavior of Tukey's depth and median under symmetric stable distributions (with Zhiqiang Chen). *J. Statist. Plan. Inference*, 2004, Vol. 122, 111-124.
46. On the finite sample breakdown point of redescending M-estimator of location (with Zhiqiang Chen). *Statist. Prob. Letters*, 2004, Vol. 69, 233-242.
47. Discussion of "Breakdown and Groups" by L. Davies and U. Gather. *Ann. Statist.*, 2005, Vol. 33, 1009-1015.
48. On the breakdown properties of some multivariate M-functionals (with Lutz Dümbgen). *Scand. J. Statist.*, 2005, Vol. 32, 247-264.
49. On the efficiency of invariant multivariate sign and rank tests (with Klaus Nordhausen and Hannu Oja). In *Festschrift for Tarmo Pukkila on His 60th Birthday*, J. Isotalo, E.P. Liski, S. Puntanen, and G.P.H. Styan (eds.), University of Tampere, Finland, 2006, 217-232.

50. On the maximum bias functions of MM-estimates and constrained M-estimates of regression (with Josè R. Berrendero and Beatriz V.M. Mendes). *Ann. Statist.*, 2007, Vol. 35, 13-40.
51. Book review for “Robust Statistical Methods with R” by J. Jurečková and J. Picek. *J. Amer. Statist. Assoc.*, 2007. Vol. 102, 759-760.
52. Discussion on “Robustness and Data Analysis” (with Anne Ruiz-Gazen). *Bull. Internat. Statist. Inst.*, 2007. Vol. 56.
53. A graphical method for detecting asymmetry (with Jue Wang), *Transactions of 63rd Deming Conference*, December, 2007.
54. \mathcal{R} -package ICS: Tools for Exploring Multivariate Data via ICS/ICA, 2007 <http://cran.r-project.org/web/packages/ICS/index.html> (with Klaus Nordhausen and Hannu Oja).
55. \mathcal{R} -package ICSNP: Tools for Multivariate Nonparametrics, 2007. <http://cran.r-project.org/web/packages/ICSNP/index.html> (with Klaus Nordhausen, Seiji Sirkiä and Hannu Oja).
56. Book review for “Robust Statistics: Theory and Methods” by R.A. Maronna, R.D. Martin, and V.J. Yohai. *J. Amer. Statist. Assoc.*, 2008. Vol. 103, 888-889.
57. Tools for exploring multivariate data: The package ICS. (with Klaus Nordhausen and Hannu Oja). *J. Statist. Software*, 2008. Vol. 28, Issue 6.
58. Quantile scale curves. (with Kesar Singh, Jingshan Zhang and Sommath Mukherjee). *J. Comput. Graph. Statist.*, 2009. Vol. 18, 92-105.
59. Tests and estimates of shape based on spatial signs and ranks. (with Seija Sirkiä, Sara Taskinen, and Hannu Oja). *J. Nonparametr. Stat.*, 2009. Vol. 21, 155-176.
60. Invariant co-ordinate selection. (with Frank Critchley, Lutz Dümbgen, and Hannu Oja). Read Paper with discussion: *J. Roy. Statist. Soc. Ser. B*, 2009, Vol. 71, 549 - 592.
61. A note on affine equivariant location and scatter statistics for sparse data. *Statist. and Prob. Letters*, 2010, Vol. 80, 1409-1413
62. Generalized MM-tests for asymmetry. (with Jue Wang). Under revision.
63. Robust functional principal components: a projection-pursuit approach (with Lucas Bali, Graciela Boente, and JaneLing Wang). Submitted.
64. Multivariate analysis using marginal signs and ranks - the package ICSNP (with Klaus Nordhausen and Hannu Oja). Submitted.
65. On the inefficiency of the spatial median. (with Andrew Magyar). In preparation.

GRANTS AND FELLOWSHIPS

- NSF GRANT DMS-0906773, 2009-2012, \$222,207. “Robust Multivariate Statistics: Beyond Ellipticity and Affine Equivariance”.
- NSF GRANT DMS-0604596, 2006-2009, \$138,000. “Invariant Coordinate Selection (ICS): A Robust Statistical Perspective on Independent Component Analysis (ICA)”.
- Minerva Research Foundation Grant, 1994-2009, Organizing funds for conferences on , “Future Directions of Robust Statistical Methods and Data Analysis”, “Statistics and the Sciences”, “Contemporary Data Analysis: Theory and Practice”, and the International Conferences of Robust Statistics(ICORS): 2002, 2003, 2004, 2006, and 2007.
- NSF GRANT DMS-0305858, 2003-2006, \$211,155. “Robust Methods for Exploring Multivariate Data”.
- NSF GRANT IRI-9987695, 2000-2003 (with Peter Meer), \$379,514. “Modern Statistical Techniques for Computer Vision”.
- Great Britain NSERC travel grant, June - July 2000. Sponsor: John Kent, University of Leeds. Topic: Robust Statistics, Computer Vision and Shape Theory.
- NSF GRANT IRI-9530546, 1996-1999 (with Peter Meer and Javier Cabrera), \$359,997. Statistical Problems in 3D structure recovery.
- New Jersey Department of Environmental Protection, July 1992-December 1996, Contract: Development of robust statistical methods for the estimation of pollution concentrations with observations below detection limits.
- NSF Grant DMS-9106706, 1991-93, \$75,000. Robust multivariate analysis: Theory, methodology and algorithms.
- Great Britain NSERC travel grant, May - June 1992. Sponsor: John Kent, University of Leeds. Topic: Constrained M-estimation.
- NSF SCREMS DMS Computer Equipment Grant, 1991 (with J. Cabrera, J. Kemperman, A. McDougall, W. Strawderman, Y. Vardi.)
- NSF Grant DMS-87-01198, 1987-91, \$75,000. Topics in robust multivariate analysis and directional data.
- Henry Rutgers Research Fellow, 1985-87.
- NSF Grant DMS-84-05325, 1984-86, \$60,000. A study of the affine equivariant M-estimates of multivariate scatter.
- NSF Grant MCS-83-01354, 1983-84, \$20,000. Reducing the bias of robust estimates of principal component roots.
- Old Dominion University Summer Research Grant, 1981. Statistical inference in reduced discriminant spaces.

CONFERENCES (since 1986)

- 2nd Princeton Day of Statistics. Princeton University, NJ. October, 2010. “On the inefficiency of the spatial median and spatial covariance matrix”
- International Conference on Robust Statistics (ICORS-2010), Prague, Czech Republic. June, 2010. Session Organizer and Invited Speaker. “Robust Multivariate Analysis”.
- Interface 2010: Computational Statistics and Human Behavior (41st Symposium on the Interface), Seattle, WA, June, 2010. Invited Speaker. “Invariant co-ordinate selection”.
- International Conference on Robust Statistics (ICORS-2009), Parma, Italy. June, 2009. Invited Speaker. “A note on multivariate location and scatter statistics for sparse data.”
- Meeting of the Research Section of the Royal Statistical Society, London, England. December, 2008. Read paper with discussion: “Invariant Coordinate selection,” (with F. Critchley, L. and H. Oja).
- International Conference on Robust Statistics (ICORS-2008), Antalya, Turkey. September, 2008. Keynote Speaker. “Robust multivariate statistics: Beyond ellipticity and affine equivariance.”
- Second International Workshop on Robust Statistics and R, Banff International Research Station, October, 2007. Invited participant and speaker. “The R-package *ICS*”
- Meeting of the Bernoulli Society, Lisbon, Portugal, August, 2007. Invited discussant for session on “Robustness and Data Analysis.”
- Canadian Statistical Society Annual Meeting, St. John’s, Newfoundland, Canada June, 2007. Invited speaker. ”Invariant Coordinate Selection: A method for exploring multivariate data.”
- First joint Statistical Meeting, Deutsche Arbeitsgemeinschaft Statistik, *Statistics under one umbrella*, Bielefeld, Germany, March 2007. Keynote Speaker. ”Invariant Coordinate Selection: A method for exploring multivariate data.”
- Data Analysis and Robust Statistics: a workshop in honor of Frank Hampel, Dortmund, Germany, March, 2007. Invited Speaker. ”Invariant Coordinate Selection: A method for exploring multivariate data.”
- Tenth International Meeting of Escola de Modelos de Regressão, Salvador, Bahia, Brazil, February, 2007. Invited Speaker. ”Invariant Coordinate Selection: A method for exploring multivariate data.”
- Workshop on Robustness and Statistical Inference, in honor of Victor Yohai. Madrid, Spain, October, 2006. Invited Speaker. ”Maximum bias functions for MM and CM estimates.”
- International Conference on Robust Statistics (ICORS-2006), Lisbon, Portugal, July, 2006. Member of scientific committee.
- Workshop on Frontiers of Statistics, Princeton, NJ, May, 2006. Invited speaker: “Invariant coordinate selection (ICS): A robust perspective on independent component analysis (ICA).”
- International Conference on Robust Statistics (ICORS-2005), Jyväskylä, Finland, June, 2005. Member of scientific committee and invited speaker: “In-

variant coordinate selection (ICS): A robust perspective on independent component analysis (ICA).”

- Workshop on nonparametrical statistical methods (NONP2005), Finland, June, 2005. Invited speaker: “Invariant coordinate selection (ICS): A nonparametric view of independent component analysis (ICA).”

- International Conference on Robust Statistics (ICORS-2004), Beijing, China, July, 2004. Invited lecturer for 3-hour short course: “A Short Course on Robust Statistics”.

- Focused Research Group on “Robust Analysis of Large Data Sets”, Banff International Research Station, Banff, Canada, June, 2004. Invited researcher and speaker: “Redescending M-estimates: Concepts and applications.”

- 20th Nordic Conference on Mathematical Statistics (NORDSTAT 2004), Jyväskylä, Finland, June, 2004. Invited speaker: “Breakdown properties of some multivariate M-estimates.”

- Workshop on “Robustness for High-dimensional Data 2004” (RobHD 2004), Vorau, Austria, May, 2004. Invited speaker: “On the breakdown point of redescending M-estimates of location.” Invited discussant: “Open problems in robust statistics.”

- American Mathematical Society, Fall Eastern Sectional Meeting Binghamton, NY, October, 2003, invited speaker. “Max-bias curves for M-estimates of regression with general scale.”

- International Conference on Robust Statistics (ICORS-2003), Antwerp, Belgium, July, 2003, invited speaker. “Max-bias curves for M-estimates of regression with general scale.”

- Annual Meeting of the Canadian Statistical Society, Halifax, June, 2003, invited speaker. “Multivariate M-estimation: Concepts and applications.”

- Eight International Meeting of Escola de Modelos de Regressão, Rio de Janeiro, Brazil, February, 2003, invited speaker. “Robust observational regression.”

- Fourth International Conference on Statistical Data Analysis based on the L1-norm and related methods, Neuchatel, Switzerland, August, 2002, invited speaker. “High breakdown point multivariate M-estimation.”

- International Conference on Robust Statistics (ICORS-2002), Vancouver, Canada, May, 2002, invited speaker. “High breakdown point multivariate M-estimation.”

- Conference in honor of Professor Muni Srivastava, Toronto, Canada July, 2001, invited speaker. “The influence function and bias of Tukey’s median.”

- Canadian Statistical Society Annual Meeting, Vancouver, Canada June, 2001, invited speaker. “The role of redescending M-estimates in computer vision and other areas.”

- Contemporary Data Analysis: Theory and Practice, Buenos Aires, Argentina, March, 2001, invited speaker. “The influence function and bias of Tukey’s median.”

- Analysis of Complex Data Structure, the German Oberwolfach Institute, September, 2000, invited speaker. “On the role of redescending M-estimates in computer vision and other areas.”

- Conference on “The Statistics of Direction, Shapes and Images”, Leeds, England, July 2000. “The role of redescending M-estimates in computer vision.”
- The VIII Time Series Meeting (VVIESTE), Frigurgo, Brazil, July 1999, invited speaker. “The spectral envelope and its applications.”
- Statistics in the Sciences: Environmetrics, Genetics, and Related Topics, Ascona, Switzerland, May 1999, invited speaker. “Robust estimates for concentrations with non-detects.”
- The VII Latin American Congress on Probability and Statistics, Cordoba, Argentina, September, 1998, invited speaker. “On the uniqueness of S-functionals and M-functionals of general scale under non-elliptical distributions.”
- Schloss Dagstuhl Workshop, Wadern, Germany, March 1998, invited paper (joint with Peter Meer and Bogdam Matei). “Evaluation and validation of computer vision algorithms.”
- Annual Joint Statistics Meetings, Anaheim CA, August 1997. Invited discussant on “Edge preserving smoother for image processing” by J.S. Marron.
- Statistics seminar of the 3e cycle romand de statistique et de probablite appliquee, (Annual statistics seminar for French speaking Swiss universities), Villars, Switzerland, March, 1996. Five special invited lectures on multivariate statistical theory and on robust statistics.
- ASA Winter Conference, Raleigh, January, 1995, invited speaker. “Robust statistics and computer visions.”
- NSF/ARPA Workshop: Performance versus Methodology in Computer Vision, Seattle, June 1994, special invited speaker. “M-estimates, S-estimate, and CM-estimates: A review.”
- FestKolloquium and Workshop in honor of Peter Huber’s 60th birthday, Bayreuth, Germany, June, 1994, invited speaker. “Constrained M-estimation.”
- 96th Session of the International Statistical Institute, Florence, Italy, August 1993, invited paper (joint with David Stoffer, Andrew McDougall and Gabriel Schachtel). “Spectral analysis of DNA sequences.”
- IMS Eastern Regional Meetings, Philadelphia, March 1993, invited speaker. “The spectral envelop for continuous-valued time series.”
- 5th International Meeting on Statistical Climatology, Toronto, June 1992, invited speaker. “Spectral analysis of categorical time series.”
- IMA Summer Workshop on Robust Statistics and Diagnostics, University of Minnesota, July 1989, invited speaker and co-organizer for day on robust multivariate analysis. “Some issues in the robust estimation of multivariate location and scatter.”
- Annual Meeting of IMS, Fort Collins, August 1988, invited paper (joint with Morris Eaton). “On Wielandt’s inequality and its application to the asymptotic distribution of the eigenvalues of a random symmetric matrix.”
- Annual Joint Statistical Meetings, Chicago, August 1986, invited speaker. “A distribution-free M-estimate of multivariate scatter.”

SEMINARS (since 1986)

- Princeton University, March, 2011.
- Columbia University, student seminar, March, 2011.
- University of Dortmund, Germany, July, 2010.
- Texas A&M University, January, 2010.
- Rutgers University, Department of Statistics, October, 2009.
- Pfizer-Rutgers Biostatistics Seminar, New York, October, 2008.
- University of Toulouse I, France, June, 2008.
- Portland State University, June, 2008.
- University of Tampere, Finland, October, 2007. Seminar and Short course.
- Columbia University, November, 2006. IGERT Joint Program
in Applied Mathematics and Earth & Environmental Sciences
- The Open University, England, January, 2006.
- University of Jyväskylä, Finland, May/June, 2004. (Short course.)
- University of Tampere, Finland, May, 2004.
- University of Buenos Aires, Argentina, March, 2004.
- Michigan State University, April, 2003.
- New York University, October, 2002.
- University of California, Davis, June 2001.
- Arizona State University, February 2001. (Distinguished lecturer series)
- Wright State University, Ohio, January 2001.
- Johns Hopkins University, April, 2000.
- E.F.L., Lausanne, Switzerland, December, 1999.
- E.T.H., Zurich, Switzerland, October 1999.
- University of Montreal, September, 1999.
- University of Luebeck, Germany, June 1999.
- William Patterson University, Wayne NJ, April 1998.
- University of Buenos Aires, Argentina, June 1996, September 1998.
- Federal Univ. of Rio de Janeiro, Brazil, June 1996, January 1998.
- University of Leeds, England, May 1992, November, 1996.
- Dalhousie University, Canada, August 1996.
- University of La Plata, Argentina, June 1996.
- State University of New York, Buffalo, December 1995.
- New Jersey Institute of Technology, November 1995.
- Temple University, October 1992, November 1995.
- Siemens Research, Princeton NJ, July 1995.
- University of Heidelberg, Germany, June 1994.
- Indiana University, November 1992.
- University of Montreal, Canada, March 1992 (2 lectures).
- University of Pittsburgh, March 1991.
- Columbia University, Biostatistics, April 1990.
- New York University, November 1989.
- Virginia Commonwealth University, October 1989.
- University of Waterloo, Canada, December 1988.
- University of Quebec, Canada, December 1988.
- Pennsylvania State University, July 1988.
- Columbia University, Statistics, November, 1987.
- University of Pennsylvania, October, 1987.
- University of Toronto, Canada, January 1987.
- University of Berne, Switzerland, April 1986, November, 1986.
- Delft Technical University, The Netherlands, November 1986.
- E.T.H., Zurich, Switzerland, April 1986.

LONG TERM VISITS

Tampere School of Public Health, Finland, October 2007, March-June 2011.
ORFE, Princeton University, January-March 2011.
Toulouse School of Economics, France, June 2008, January 2009.
Dept. of Math. and Stat., University of Jyväskylä, Finland, May-June 2004.
Instituto de Cálculo, University of Buenos Aires, March 2004.
Statistics Groups, ETH-Zurich and EPF-Lausanne, Switzerland, Fall 1999.
Dept. of Statistics, University of Leeds, England, April/May 1992 and Fall 1996.
Inst. of Math., Federal Univ. of Rio de Janeiro, Brazil, June 1996, January 1998.
Dept. of Statistics, University of Montreal, Canada, March 1992.
Dept. of Math. and Statist., University of Pittsburgh, Jan-Feb 1992, 1977-1978.
Dept. of Statistics, University of Toronto, Canada, Fall 1988.
Dept. of Statistics, Columbia University, Fall 1987.
Dept. of Statistics, University of Berne, Switzerland, November 1986.

DOCTORAL STUDENTS

- Andrew Magyar, current. “On properties of non-affine equivariant multivariate location and scatter statistics.”
- Jue Wang, “Some properties of robust statistics under asymmetric models”, Ph.D., October, 2008. (Currently: Post Doctoral Research Associate, Departments of Statistics and Atmospheric Sciences, Texas A@M University)
- Howard Bondell, “Robust Logistic Regression via the Case-Control Formulation”, Ph.D., October 2005. (Currently: Assistant Professor, North Carolina State University.)
- Kay Tatsuoka, “M-estimates, S-estimates, CM-estimates: Theory and Computation”, Ph.D., October 1996. (Currently: Research Biostatistician, SmithKline Beecham.)
- Leo Korn, “Robust Estimation for Left Censored Data”, Ph.D., May 1996. (Currently: Statistician, New Jersey Department of Environmental Protection.)
- Beatriz Mendes, “CM-estimation for Linear Regression Models,” Ph.D., January 1995. (Currently: Associate Professor, Federal University of Rio de Janeiro.)

EXTERNAL DOCTORAL COMMITTEES (since 1996)

- Haifeng Chen, Ph.D. 2004. Department of Electrical and Computer Engineering. Advisor: Peter Meer
- Bogdan Matei, Ph.D. 2001. Department of Electrical and Computer Engineering. Advisor: Peter Meer
- Luis Teixeira, Ph.D. 2001. Department of Entomology. Advisor: Sridhar Polavarapu.
- Dorin Comaniciu, Ph.D. 2000. Department of Electrical and Computer Engineering. Advisor: Peter Meer.
- Eileen Steiner, Ph.D. 1999. School of Social Work. Advisor: Elfriede Schlesinger.
- Frank Atuahene, Ph.D. 1998. Department of Civil and Environmental Engineering. Advisor: Yong Chae.

- Yoram Leedan, Ph.D. 1996. Department of Electrical and Computer Engineering. Advisor: Peter Meer.

PROFESSIONAL SERVICE

- Associate Editor, J. Royal Statistical Society B, 2004-2009.
- Associate Editor, Sankhyā, 2004-2007.
- Associate Editor, J. Statist. Plan. Inference, 2001-2006.
- Associate Editor, Annals of Statistics, 1998-2004.
- Member of Steering Committee, “International Conferences on Robust Statistics” 2006-present.
 - Member of Organizing Committee, “International Conference on Robust Statistics” (ICORS-2007), Buenos Aires, Argentina, September, 2007.
 - Member of Organizing Committee, “International Conference on Robust Statistics” (ICORS-2004), Beijing, China, July, 2004.
- Guest Editor (with Luisa Fernholz and Victor Yohai), Journal of Statistical Planning and Inference. Special issue in memory of John W. Tukey. Vol. 122 , no. 1 and 2, 2004.
- Organizer, Invited Session on “Statistics and Image Understanding” , IMS Annual Meeting, San Francisco, August, 2003.
- Member of Organizing Committee, Symposium on “Contemporary Data Analysis: Theory and Practice” , Buenos Aires, Argentina, March 2001.
- Guest Editor (with Peter Meer and Charles Stewart), Computer Vision and Image Understanding. Special Issue: “Robust Statistical Techniques in Image Understanding” , Vol. 78, no. 1, 2000.
- Guest Editor (with Luisa Fernholz and Chris Field), Canadian Journal of Statistics, Vol. 28, no.2, 1998. Special Issue: “Statistics and the Sciences” .
- Guest Editor (with Ray Carroll and Luisa Fernholz). Journal of Statistical Planning and Inference, Vol. 57, no. 1 and 2, 1997. Special Issue: “ Robust Statistical Methods and Data Analysis” .
- Member of Organizing Committee, Symposium on “Statistics and the Sciences.” Halifax, Nova Scotia, August 1996.
- Statistical Consultant for New Jersey Department of Environmental Protection, 1995 - 1997.
- Member of Organizing Committee, Symposium on “Future Directions in Robust Methods and Data Analysis,” Princeton NJ, June 1994.
- Chairman, Program Committee, Northern NJ Chapter ASA, 1987-88.
- Reviewer and referee for various agencies and journals too numerous to itemize.