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Education

1983	B.A. Haverford College (Mathematics)
1987	A.M. Harvard University (Statistics)
1991	PhD Harvard University (Statistics)
2013	A.M. Brown University (ad eundem)

Academic Appointments

1991-1994	Statistician, Center for Health Services Research and Study Design, Tufts-New England Medical Center
1992-2012	Special and Scientific Staff, Department of Medicine, Tufts Medical Center
1992-1993	Senior Instructor, Tufts University School of Medicine
1993-1999	Assistant Professor of Medicine, Tufts University School of Medicine
1994-2006	Senior Statistician, Biostatistics Research Ctr, Div of Clinical Care Research/ ICRHPS, Tufts
1996-1999	Assistant Professor of Family Medicine and Community Health, TUSM
1999-2006	Associate Professor of Medicine, Tufts University School of Medicine Associate Prof. of Clinical Research, Tufts School of Graduate Biomedical Sciences
2006-2012	Professor of Medicine, Tufts University School of Medicine Professor, Tufts School of Graduate Biomedical Sciences
2006-2012	Director, Biostatistics Research Center, ICRHPS, Tufts Medical Center
2007-2012	Adjunct Professor, Friedman School of Nutrition Science and Policy, Tufts University
2012-2020	Adjunct Professor of Medicine, Tufts University
2012-	Professor of Biostatistics, Brown University
2015-	Director, Evidence Synthesis Academy, Brown University
2016-2021	Director, Clinical Research Design, Epidemiology and Biostatistics Core, Advance-RI Clinical and Translational Research
2016-2018	Co-Director, Center for Evidence Synthesis in Health, Brown University
2018-2020	Chair of Biostatistics, Brown University
2021-	Director, Biostatistics, Epidemiology and Research Design (BERD) Core, Advance-RI Clinical and Translational Research

Other Positions

1983-1985 Actuarial Assistant, Prudential Reinsurance Company
1989-1991 Statistical Instructor, Bolt Beranek and Newman Software
2024-2025 Data Scientist, US Department of Veteran Affairs
2025- Research Data Scientist, US Department of Veteran Affairs

Awards and Honors

1988-1991 National Research Service Award, National Institute of Health
2000 Drug Information Association Donald E. Francke Award (best paper of year)
2006 Elected member, Society for Research Synthesis Methodology
2009 Letter of commendation for peer review from Annals of Internal Medicine
2009 Travel award, Statistical Consulting Section of American Statistical Association
2010 Fellow, American Statistical Association
2010 Dean's Outstanding Graduate Biomedical Sciences Faculty Mentor Award, Tufts Medical School
2010 Tufts University School of Medicine Distinguished Faculty Award
2021 Taylor and Francis Best Science and Medical Handbook
2023 Fellow, Society for Research Synthesis Methodology
2023 Shadish Recognition for Extraordinary Service, Society for Research Synthesis Methodology

Professional Service

Brown University

2012-2016 Director, Masters Program in Biostatistics
2012-2016 Chair, Masters Program Admissions Committee
2012-2016 Member, Public Health Graduate Program Steering Committee
2012-2016 Member, Biostatistics Academic Programs Committee
2012-2016 Member, Department of Biostatistics Leadership Committee
2013 Member, Biostatistics Faculty Research Track Search Committee
2013 Member, Committee Public Health Faculty Awards
2013 Reviewer of abstracts, Public Health Research Day
2014 Member, Tenure, Promotions and Appointments Committee
2014-2018 Member, School of Public Health Faculty Appointments Committee
2015 Member, Biostatistics Faculty Tenure Track Search Committee
2015 Member, Biostatistics Faculty Teaching Track Search Committee
2015 Director, PhD Program in Biostatistics
2015 Member, Public Health Faculty Awards Committee
2015-7, 2020 Member, Faculty Seed Awards Committee
2015-2018 Member, Human Resources Advisory Board
2015-2016 Chair, Biostatistics promotion committee for T. Liu
2016 Member, Health Services, Policy and Practice Research Faculty Search Committee
2016- Member, Advance RI CTR Operations Committee
2016-2018 Chair, Biostatistics Diversity and Inclusion Committee
2017 Member, Biostatistics promotion committee for R. Gutman
2017-2018 Member, School of Public Health Diversity and Inclusion Committee
2018-2020 Member, Executive Committee, School of Public Health
2018-2025 Member, Executive Committee, Center for Statistical Sciences, School of Public Health
2018-2019 Member, Biostatistics Research Faculty Search Committee

2018-2020 Chair, Department of Biostatistics Leadership Committee
 2019 Member, Environmental Health and Climate Change working group
 2019-2020 Member, Biostatistics Academic Programs Committee
 2019 Poster judge, Public Health Research Day
 2019-2020 Director, Masters Program in Biostatistics
 2019-2020 Member, Biostatistics Teaching Scholar Search Committees
 2020- Member, Advance-K Steering Committee
 2020 Member, Advance RI CTR Research Awards Committee
 2021 Member, Dean's Award for Excellence in Classroom Teaching Committee
 2022 Director, PhD Program in Biostatistics
 2022 Member, Biostatistics Academic Programs Committee
 2022 Member, Dean's Award for Excellence in Community Engagement Committee
 2022- Member, Biostatistics NextGen Scholars Committee
 2023-2024 Chair, Biostatistics promotion committee for T. Liu
 2023-2024 Member, Biostatistics promotion committee for R. Gutman
 2024- Member, Biostatistics PhD Admissions Committee
 2023-2024 Member, Introductory Statistics Review Committee
 2024-2025 Member, Health Services, Policy and Practice promotions committee for Angelika Veroniki
 2025- Member, Biostatistics Professional Awards Committee
 2025- Member, Executive Committee, Center for Biostatistics and Health Data Science, SPH

Tufts Hospital, Medical School, or University Committee Assignments

1993-1999 Advisory Committee, Fellowship in Clinical Care Research, ICRHPS
 1999-2009 Epi/Bio Concentration Leader, Clinical Research, Tufts School of Graduate Biomedical Sciences
 1999-2012 Advisory Committee, Clinical Research, Tufts
 1999-2012 Admissions Committee, Clinical Research, Tufts
 2000-2006 Member, Scientific Advisory Committee, Tufts-NEMC GCRC
 2001-2004 Member, Clinical Research Review Committee, T-NEMC Research Fund
 2004-2009 Member, Executive Committee Tufts Medical School Summer Research Program
 2004-2006 Member, School of Graduate Biomedical Sciences Education Programs Task Force, Tufts
 2005-2007 Member, Mentorship Committee, ICRHPS, Tufts Medical Center
 2005-2008 Member, School of Graduate Biomedical Sciences Student Awards Committee, Tufts
 2009-2011 Associate Director, Clinical and Translational Science Program, Tufts
 2009-2012 Programs and Faculty Committee, Tufts

Editorial Boards

2006- Statistical Editor, *American Journal of Kidney Diseases*
 2008-2014 Co-Editor-in-Chief, *Research Synthesis Methods*
 2009- Editorial Board, *BMC Medicine*
 2011- Editorial Board, *Systematic Reviews*
 2015-2017 Associate Editor, *Research Synthesis Methods*
 2018- Editorial Board, *Research Synthesis Methods*
 2018-2022 Academic Advisory Board, SAGE Research Methods

Elected Offices

2005 Program Chair-Elect, American Statistical Association (ASA) Section on Health Policy Statistics
 2006 Program Chair, ASA Section on Health Policy Statistics

2008-2010 Health Policy Statistics representative to ASA Council of Sections
 2011-2013 Chair-Elect, Chair, Past Chair, Health Policy Statistics Section, American Statistical Association
 2017-2021 President-Elect/President/Past President, Society for Research Synthesis Methodology

Conference Program Committees

2005 6th International Conference on Health Policy Research (Scientific Planning Committee)
 2007-2008 7th International Conference on Health Policy Statistics (Program Chair)
 2009-2010 8th International Conference on Health Policy Statistics Scientific Planning Committee
 2010 Joint Colloquium of the Cochrane and Campbell Collaborations (Scientific Planning Committee)
 2010-2011 9th International Conference on Health Policy Statistics (Scientific Planning Committee)
 2010-2011 FDA/Industry Statistics Workshop (Steering Committee)
 2012 AcademyHealth Annual Meeting (abstract reviews)
 2012-2013 10th International Conference on Health Policy Statistics (Advisory Committee)
 2013 8th Meeting of Society for Research Synthesis Methodology (Co-Chair, Local Planning Cmte)
 2017-2018 Society for Research Synthesis Methodology, Bristol, UK (Program Chair)
 2024- Society for Research Synthesis Methodology

Grant Review

1994 Biomedical Library Review Committee, Nat. Library of Medicine
 1995 Health Services Research Dissemination Study Section, Agency for Health Care Policy and Research (AHCPR)
 1998-2002 Health Quality and Effectiveness Research Study Section, Agency for Healthcare Quality and Research (AHRQ) (standing member)
 2003 BBBP-1, Biobehavioral and Behavioral Processes IRG
 2011 Education Panel of the National Center for Complementary and Alternative Medicine, National Institutes of Health
 2012 Chair, Pilot Projects Study Section, Patient Centered Outcomes Research Institute
 2014-2018 Health Care Research Training Study Section, AHRQ (standing member)
 2021 Addressing Disparities Study Section, PCORI

Data Safety and Monitoring Boards

2005-2006 Advanced Magnetics and Averion: Phase 3 study of ferumoxytol vs oral iron) in CKD
 2011-2016 Effects of Health-Promoting Programs on CVD Risk: the Jackson Heart Study
 2013-2015 Development and Evaluation of a Clinic-Based Screening and Brief Intervention for Changing Behaviors Related to Cytomegalovirus Transmission in Pregnant Women, Brown University, Women's and Infants Hospital
 2015-2019 FITNESS Trial, McLean Hospital
 2016-2024 Prevention of Urinary Stones with Hydration (PUSH) Study, Urinary Stone Disease Research Network (USDRN)
 2019-2024 RAPIDS Trial, Brown University
 2020-2021 Registry To Evaluate Effectiveness And Safety Of The NanoKnife® System For The Ablation Of Stage 3 Pancreatic Adenocarcinoma; A Randomized, Multicenter, Controlled, Unblinded Study, Angiodynamics
 2020- Emotion regulation as a primary mechanism of action in yoga interventions for chronic low back pain: An RCT testing biological and psychological pathways, University of Connecticut
 2021-2023 Improving Quality of Life for Adults Living with Chronic Pain Study, Temple University.
 2023-2025 CONNECKT CARE: Combined Chiropractic and Tai Chi for Chronic Non-Specific Neck Pain

2024- Chiropractic Care for Episodic Migraine

Advisory Committees

2003-2007 Circulatory System Devices Panel of the Medical Devices Advisory Committee, Center for Devices and Radiological Health, Food and Drug Administration
2004-2017 ECRI Health Technology Assessment Program
2007 Medical Devices Dispute Resolution Panel, US Food and Drug Administration
2007 Orthopaedic and Rehabilitation Devices Panel, US Food and Drug Administration
2013 Meta-Analysis of Randomized Controlled Clinical Trials for Safety Evaluation, FDA
2014-2015 External Advisory Board, K24 grant for Dr. Chenchen Wang, Tufts U
2014-2015 AHRQ Technical Expert Panel: Diabetes Medications for Adults with Type 2 Diabetes
2014-2018 FDA Drug Safety and Risk Management Advisory Committee
2016-2020 Cochrane Collaboration Scientific Advisory Committee
2016-2017 External Experts Panel (EEP) for the NIDDK-supported Urinary Stone Disease Research Network (USDRN)
2017-2018 External Experts Panel (EEP) for the NIDDK-supported Symptoms of Lower Urinary Tract Dysfunction Research Network (LURN)
2020- Folia Health Scientific Advisory Council
2024-2026 Society for Research Synthesis Methodology Strategic Planning Committee

Working Groups

2006-2009 Meta-analysis in Ecology: Lessons, challenges and future, Meta-Analysis in Ecology, National Center for Ecologic Analysis and Synthesis
2009-2010 Centre for Population Biology Workshop
2009-2011 Institute of Medicine Committee on Standards for Systematic Reviews of Clinical Effectiveness Research
2009-2015 CONSORT Extension for N-of-1 Trials (CENT)
2010-2011 Co-Chair, Comparative Effectiveness Research Key Function Committee Methods Workgroup, Clinical and Translational Science Award Consortium
2010-2012 Co-Convener, Multiple Interventions Methods Group, Cochrane Collaboration
2011-2016 Single Case Experimental Designs CONSORT extension
2012-2015 Network Meta-analysis extension of PRISMA statement
2012 Use of individual participant data (IPD) in systematic reviews
2013-2015 Individual Participant Data Meta-analysis extension of PRISMA
2017-2018 Cochrane Working Group on Individual Participant Meta-Analysis
2017-2018 Cochrane Working Group in Cumulative Meta-Analysis
2017-2018 PCORI Individual Participant Data Meta-Analysis (IPD-MA) Standards Committee
2018-2020 North American Biostatistics Department Chairs
2024-2025 PRIMER (Peer Review of Issues in Meta-Analyses in Systematic Reviews) Checklist Working Group
2025- PRISMA-NMA Update Working Group

Awards Committees

2009-2010 ASA Council of Sections nominating committee
2012-2014 ASA Health Policy Statistics Section Fellows Committee
2013 Lester Curtin Award committee, American Statistical Association (Chair)
2018 Health Policy Statistics Section (ASA) Student Paper review committee

Professional Society Memberships

American Statistical Association
Society for Research Synthesis Methodology
Cochrane Collaboration
ENAR

Manuscript peer review

Agency for Healthcare Research and Quality	American Journal of Epidemiology
American Journal of Kidney Diseases	Annals of Applied Statistics
Annals of Internal Medicine	Bayesian Analysis
Biometrics	Biometrika
Biostatistics	BMC Medical Research Methodology
BMC Medicine	BMJ Open
Brain Impairment	British Medical Journal
Circulation	Clinical Trials
Clinical Investigation	Controlled Clinical Trials
Dementia E Neuropsychologia	Diabetes Care
Ecology Reviews	Endocrinology
Evaluation and the Health Professions	Experimental Physiology
Expert Opinion on Orphan Drugs	Food Science and Human Wellness
Genetic Epidemiology	
Harvard Data Science Review	Healthcare
Health Services and Outcomes Research Methodology	Journal of Biopharmaceutical Statistics
Journal of Child Psychology and Psychiatry	Journal of Clinical Epidemiology
Journal of Educational and Behavioral Statistics	Journal of General Internal Medicine
Journal of the American Statistical Association	Journal of the American Medical Association
Journal of the American Medical Informatics Assoc	Journal of Medical Internet Research
Journal of the National Cancer Institute	Journal of the Royal Statistical Society: Series A
Journal of the Royal Statistical Society: Series B	Journal of the Royal Statistical Society: Series C
Journal of the Society for Social Work and Research	Medical Care
Medical Decision Making	National Academy of Medicine
National Research Council	Nature Medicine
Network: Computation in Neural Systems	Neuropsychological Rehabilitation
Obesity	Paediatric and Perinatal Epidemiology
Patient Centered Research Institute	Plos One
Prevention Science	Psychometrika
Research Synthesis Methods	Science
Statistical Methods in Medical Research	Statistics in Medicine
The American Statistician	Therapeutic Advances in Rare Disease
Trials	WIREs Computational Statistics

Industry/Government Consultation

Advanced Magnetism Incorporated
Amersham
Avenue Therapeutics

Blue Cross Blue Shield
Boehringer-Ingelheim
Centers for Disease Control
ECRI
Eli Lilly
Food and Drug Administration
GE Healthcare
Lincoln Technologies
Marine Polymer Technologies
Mead Johnson
Medtronic
MetaWorks
NxStage
Pfizer
Roche
Sanofi-Aventis
SigmaTau
SmithKline Beecham
United Biosource Corporation
United States Army
Wyeth-Aherst

Publications

Books

1. Committee on Standards for Systematic Review of Comparative Effectiveness Research. Finding What Works in Health Care: Standards for Systematic Reviews, eds. J Eden, L Levit, A Berg and S Morton. National Academies Press. [PMID: 24983062]
2. **Schmid CH**, Stijnen T and White IR (eds). Handbook of Meta-Analysis. NY: CRC Press, 2020.

Peer-Reviewed Journal Articles

Student names underlined>

1. **Schmid CH** and Rosner B. A Bayesian Approach to Logistic Regression Models Having Measurement Error Following a Mixture Distribution. *Statistics in Medicine* 12:1141-1153, 1993. [PMID: 8210818]
2. Schmidt-Ullrich RK, Wazer DE, DiPetrillo T, Marchant DJ, Smith TJ, Safaii H, **Schmid C** and Homer MJ. Breast Conservation Therapy for Early Stage Breast Carcinoma with Outstanding 10-year Locoregional Control Rates: A Case for Aggressive Therapy to the Tumor Bearing Quadrant. *Int. J. Radiation Oncology Biol. Phys.* 27:545-552, 1993. [PMID: 8226147]
3. Rhodes J, Udelson JE, Marx GR, **Schmid CH**, Konstam MA, Hijazi ZM, Bova SA and Fulton DR. A New Noninvasive Method for the Estimation of Peak dP/dt. *Circulation* 88: 2693-2699, 1993. [PMID: 8252680]
4. Bry JDL, Belkin M, O'Donnell TF, Mackey WC, Udelson JE, **Schmid CH** and Safran DG. An Assessment of the Positive Predictive Value and Cost-Effectiveness of Dipyridamole Myocardial Scintigraphy in Patients Undergoing Vascular Surgery. *Journal of Vascular Surgery* 19:112-124, 1994. [PMID: 8301724]
5. Steere AC, Levin RE, Molloy PJ, Kalish RA, Abraham JH, Liu NY and **Schmid CH**. Treatment of Lyme Arthritis. *Arthritis and Rheumatology* 37: 878-888, 1994. [PMID: 8003060]
6. Goldenberg DL, Kaplan KH, Nadeau MG, Brodeur C, Smith S and **Schmid CH**. A Controlled Study of a Stress-Reduction, Cognitive-Behavioral Treatment Program in Fibromyalgia. *Journal of Musculoskeletal Pain* 2: 53-66, 1994. doi: 10.1300/J094V02N02_05
7. Graham RA, Homer MJ, Sigler CJ, Safaii H, **Schmid CH**, Marchant DJ and Smith TJ. The Efficacy of Specimen Radiography in Evaluating the Surgical Margins of Impalpable Breast Carcinoma. *American Journal of Roentology* 162: 33-36, 1994. [PMID: 8273685]
8. Kaelin CM, Smith TJ, Homer MJ, Taback B, Azurin D, **Schmid CH** and Weld L. Safety, Accuracy, and Diagnostic Yield of Needle Localization Biopsy of the Breast Performed Using Local Anesthesia. *Journal of the American College of Surgeons*, 179: 267-272, 1994. [PMID: 8069420]
9. Wazer DE, Erban JK, Robert NJ, Smith TJ, Marchant DJ, **Schmid C**, DiPetrillo T and Schmidt-Ullrich R. Breast Conservation in Elderly Women for Clinically Negative Axillary Lymph Nodes without Axillary Dissection. *Cancer* 74: 878-883, 1994. [PMID: 8039115]
10. Fink JC, **Schmid CH** and Selker HP. A Decision Aid for Referring Patients with Systolic Murmurs for Echocardiography. *J. General Internal Medicine* 9: 479-484, 1994. [PMID: 7996289]
11. Pereira BJG, Wright TL, **Schmid CH**, Bryan CF, Cheung RC, Cooper ES, Hsu H, Kelly MK, Light JA, Norman DJ, Van Thiel DH, Werner BG, Wright CE, and Levey AS. Screening and Confirmatory Testing of Cadaver Organ Donors for Hepatitis C Virus Infection: A U.S. National Collaborative Study. *Kidney International* 46: 886-892, 1994. [PMID: 7527878]
12. Selker, HP, Beshansky JR, **Schmid CH**, Griffith JL, Longstreth WT, O'Connor CM, Caplan LR, Massey EW, D'Agostino RB, Laks MM, Lee KL, Maynard C, Wagner GS, Weaver WD and Califf RM. Presenting Pulse Pressure Predicts Thrombolytic Therapy-Related Intracranial Haemorrhage: Thrombolytic Predictive Instrument (TPI) Project Results. *Circulation* 90: 1657-1661, 1994. [PMID: 7923649]

13. **Schmid CH**, Segal M and Rosner B. Incorporating Measurement Error in the Estimation of Autoregressive Models for Longitudinal Data. *Journal of Statistical Planning and Inference* 42:1-18, 1994. doi:10.1016/0378-3758(94)90186-4.
14. Maynard C, Selker HP, Beshansky JR, Griffith JL, **Schmid CH**, Califf RM, D'Agostino RB, Laks MM, Lee KL, Wagner GS and Weaver WD. The Exclusion of Women from Clinical Trials of Thrombolytic Therapy: Implications for Developing the Thrombolytic Predictive Instrument Database. *Medical Decision Making* 15: 38-43, 1995. [PMID: 7898296]
15. Lau J, **Schmid CH** and Chalmers TC. Cumulative Meta-Analysis of Clinical Trials Builds Evidence for Exemplary Medical Care. *Journal of Clinical Epidemiology* 48: 45-57, 1995. [PMID: 7853047]
16. Pereira BJG, Wright TL, **Schmid CH**, and Levey AS for The New England Organ Bank Hepatitis C Study Group. A Controlled Study of Hepatitis C Transmission by Organ Transplantation. *Lancet* 345: 484-487, 1995. [PMID: 7532254]
17. Werner-Wasik M, **Schmid CH**, Bornstein LE and Madoc-Jones H. Increased Risk of Second Malignant Neoplasms Outside Radiation Fields in Patients with Cervical Carcinoma. *Cancer* 75: 2281-2285, 1995. [PMID: 7712437]
18. Werner-Wasik M, **Schmid CH**, Bornstein L, Ball HG, Smith DM, and Madoc-Jones H. Prognostic Factors for Local and Distant Recurrence in Stage I and II Cervical Carcinoma. *Int. J. Radiation Oncology Biol. Phys.* 32: 1309-1317, 1995. [PMID: 7635770]
19. Pereira BJG, Wright TL, **Schmid CH**, and Levey AS. The Impact of Pretransplantation Hepatitis C Infection on the Outcome of Renal Transplantation. *Transplantation* 60:799-805, 1995. [PMID: 7482738]
20. Goldenberg DL, Mossey CJ and **Schmid CH**. A Model to Assess Severity and Impact of Fibromyalgia. *Journal of Rheumatology* 22:2313-2318, 1995. [PMID: 8835568]
21. **Schmid CH**. An EM Algorithm Fitting First-Order Conditional Autoregressive Models to Longitudinal Data. *Journal of the American Statistical Association* 91:1322-1330, 1996. doi:10.1080/01621459.1996.10477001.
22. Pereira BJG, Natov SN, Sundaram S, **Schmid CH**, Trabelsi FR, Strom JA and King AJ. Impact of Single Use Versus Reuse of Cellulose Dialyzers on Clinical Parameters and Indices of Biocompatibility. *Journal of the American Society of Nephrology* 7:861-870, 1996. [PMID: 8793794]
23. Lakshmi N, Bokesch PM, Cowan DE, Lisman SR and **Schmid CH**. Environmental Tobacco Smoke: A Risk Factor for Pediatric Laryngospasm. *Anesthesia Analgesics* 82:724-727, 1996. [PMID: 8615487]
24. Wazer DE, Gage I, Homer MJ, Krosnick SH and **Schmid C**. Age-Related Differences in Patients with Nonpalpable Breast Carcinomas. *Cancer* 78:1432-1437, 1996. [PMID: 8839548]
25. Cappelleri JC, Ioannidis JPA, **Schmid CH**, de Ferranti SD, Aubert M, Chalmers TC and Lau J. Large Trials Vs Meta-Analysis of Smaller Trials: How Do Their Results Compare? *Journal of the American Medical Association* 276:1332-1338, 1996. [PMID: 8861993]
26. Nocton JJ, Bloom BJ, Rutledge BJ, Persing DH, Logigian EL, **Schmid CH** and Steere AC. Detection of *Borrelia burgdorferi* DNA by Polymerase Chain Reaction in Cerebrospinal Fluid in Lyme Neuroborreliosis. *Journal of Infectious Diseases* 174: 623-627, 1996. [PMID: 8769624]
27. Ioannidis JPA, Cappelleri JC, **Schmid CH** and Lau J. Impact of Epidemic and Individual Heterogeneity on the Population Distribution of Disease Progression Rates: An Example from Patient Populations in Trials of Human Immunodeficiency Virus Infection. *American Journal of Epidemiology* 144: 1074-1085, 1996. [PMID: 8942440]
28. Goldenberg D, Mayskiy M, Mossey C, Ruthazer R and **Schmid C**. A Randomized, Double-Blind Crossover Trial of Fluoxetine and Amitriptyline in the Treatment of Fibromyalgia. *Arthritis and Rheumatism* 39:1852-1859, 1996. [PMID: 8912507]

29. Murthy BVR, Muerhoff AS, Desai SM, Lund J, **Schmid CH**, Levey AS, Mushahwar IK and Pereira BJB. GB Hepatitis Agent In Cadaver Organ Donors and Their Recipients. *Transplantation*, 63:346-351, 1997. [PMID: 9039921]
30. Bouthot BA, Murthy BVR, **Schmid CH**, Levey AS and Pereira BJB. Long-Term Follow-up of Hepatitis C Virus Infection Among Organ Transplant Recipients: Implications for Policies on Organ Procurement. *Transplantation* 63:849-853, 1997. [PMID: 9089225]
31. Zucker DR, **Schmid CH**, McIntosh MW, D'Agostino RB, Selker HP and Lau J. Combining Single Patient (N-of-1) Trials to Estimate Population Treatment Effects and to Evaluate Individual Patient Responses to Treatment. *Journal of Clinical Epidemiology* 50:401-410, 1997. [PMID: 9179098]
32. Murthy BVR, Muerhoff AS, Desai SM, Mushahwar IK, **Schmid CH**, Levey AS and Pereira BJB. Impact of Pretransplantation GB Virus C Infection on the Outcome of Renal Transplantation. *Journal of the American Society of Nephrology* 8:1164-1173, 1997. [PMID: 9219167]
33. Stason WB, **Schmid CH**, Niedzwiecki D, Whiting G, Cory D, Luo D, Caubet JF, Sheinhait I, Freedman R, Ross SD and Chalmers TC. Safety of Nifedipine in Patients with Hypertension: A Meta-Analysis. *Hypertension* 30: 7-14,1997. [PMID: 9231814]
34. Wazer DE, Schmidt-Ullrich RK, **Schmid CH**, Ruthazer R, Kramer B, Safaii H and Graham R. The Value of Breast Lumpectomy Margin Assessment as a Predictor of Residual Tumor Burden. *Int. J. Radiation Oncology Biol. Phys.* 38: 291-299, 1997. [PMID: 9226315]
35. Wazer DE, Morr J, Erban J, **Schmid C**, Ruthazer R and Schmidt-Ullrich RK. The Effects of Postradiation Treatment with Tamoxifen on Local Control and Cosmetic Outcome in the Conservatively Treated Breast. *Cancer* 80:732-740, 1997. [PMID: 9264357]
36. Tunis SR, Sheinhait IA, **Schmid CH**, Bishop DJ and Ross SD. Lansoprazole Compared with Histamine₂-Receptor Antagonists in Healing Gastric Ulcers: A Meta-Analysis. *Clinical Therapeutics* 19: 743-757, 1997. [PMID: 9377618]
37. Wazer DE, Kramer B, **Schmid C**, Ruthazer R, Ulin K and Schmidt-Ullrich R. Factors Determining Outcome in Patients Treated with Interstitial Implantation as a Radiation Boost for Breast Conservation Therapy. *Int. J. Radiation Oncology Biol. Phys.* 39: 381-393, 1997. [PMID: 9308942]
38. Selker HP, Griffith JL, Beshansky JR, **Schmid CH**, Califf RM, D'Agostino RB, Laks MM, Lee KL, Maynard C, Selvester RH, Wagner GS, Weaver WD. Patient-Specific Predictions of Outcomes in Myocardial Infarction for Real-Time Emergency Use: A Thrombolytic Predictive Instrument. *Annals of Internal Medicine*, 127: 538-556, 1997. [PMID: 9313022]
39. **Schmid CH**, D'Agostino RB, Griffith JL, Beshansky JR, Selker HP. A Logistic Regression Model When Some Events Precede Treatment: The Effect of Thrombolytic Therapy for Acute Myocardial Infarction on the Risk of Cardiac Arrest. *Journal of Clinical Epidemiology*, 50: 1219-1229, 1997. [PMID: 9393378]
40. Lafayette RA, Pare G, **Schmid CH**, King AJ, Rohrer RJ and Nasraway SA. Pretransplant Renal Dysfunction Predicts Poorer Outcome in Liver Transplantation. *Clinical Nephrology* 48: 159-164, 1997. [PMID: 9342487]
41. Rhodes J, Warner KG, Fulton DR, Romero BA, **Schmid CH** and Marx GR. Fate of Mitral Regurgitation Following Repair of Atrioventricular Septal Defects. *American Journal of Cardiology* 80: 1194-1197, 1997. [PMID: 9359549]
42. Lau J, Ioannidis JPA and **Schmid CH**. Quantitative Synthesis in Systematic Overviews. *Annals of Internal Medicine* 127: 820-826, 1997 and in Systematic Reviews: Synthesis of Best Evidence for Health Care Decisions. Philadelphia: American College of Physicians, 91-101, 1998. [PMID: 9382404]
43. Lau J, Ioannidis JPA and **Schmid CH**. Summing Up Evidence: One Answer Is Not Always Enough. *Lancet* 351: 123-127, 1998. [PMID: 9439507]
44. King AJ, Kehayias JJ, Roubenoff R, **Schmid CH** and Pereira BJB. Cytokine Production and Nutritional Status in Hemodialysis Patients. *International Journal of Artificial Organs* 21:4-11, 1998. [PMID: 9554819]

45. Wazer DE, Schmidt-Ullrich RK, Ruthazer R, **Schmid CH**, Graham R, Safaii H, Rothschild J, McGrath J and Erban JK. Factors Determining Outcome for Breast-Conserving Irradiation with Margin-Directed Dose Escalation to the Tumor Bed. *Int. J. Radiation Oncology Biol. Phys.* 40: 851-858, 1998. [PMID: 9531370]
46. Pereira BJG, Natov SN, Bouthot BA, Murthy BVR, Ruthazer R, **Schmid CH**, Levey AS and the New England Organ Bank Hepatitis C Study Group. Effect of Hepatitis C Infection and Renal Transplantation on Survival in End-Stage Renal Disease. *Kidney International* 53: 1374-1381, 1998. [PMID: 9573555]
47. Murthy BVR, Muerhoff AS, Desai SM, Natov SN, Bouthot BA, Ruthazer R, **Schmid CH**, Levey AS, Mushahwar IK and Pereira BJG. Predictors of GBV-C Infection Among Patients Referred for Renal Transplantation. *Kidney International*, 53: 1769-1774, 1998. [PMID: 9607211]
48. Natov SN, Lau JY, Bouthot BA, Murthy BV, Ruthazer R, **Schmid CH**, Levey AS, Pereira BJ. Serologic and virologic profiles of hepatitis C infection in renal transplant candidates. New England Organ Bank Hepatitis C Study Group. *American Journal of Kidney Diseases*, 31:920-927, 1998. [PMID: 9631834]
49. Steere AC, Sikand VK, Meurice F, Parenti DL, Fikrig E, Schoen RT, Nowakowski J, **Schmid CH**, Laukamp S, Buscarino C, Krause DS and the Lyme Disease Vaccine Study Group. Vaccination Against Lyme Disease With Recombinant *Borrelia burgdorferi* Outer-Surface Lipoprotein A With Adjuvant. *New England Journal of Medicine* 339: 209-215, 1998. [PMID: 9673298]
50. **Schmid CH**, Lau J, McIntosh MW and Cappelleri JC. An Empirical Study of the Effect of the Control Rate as a Predictor of Treatment Efficacy in Meta-Analysis of Clinical Trials. *Statistics in Medicine* 17:1923-1942, 1998. [PMID: 9777687]
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20. Mengersen K, McGree JM and **Schmid CH**. Systematic Review and Meta-analysis Using N-of-1 Trials in *The Essential Guide to N-of-1 Trials in Health*, eds. J Nikles and G Mitchell. NY: Springer, 2015, 211-232.
21. Dahabreh I, Kent D, Trikalinos T and **Schmid CH**. Heterogeneity of Treatment Effects in CER in *Methods in Comparative Effectiveness Research*, ed. SC Morton and C Gatsonis. NY: CRC Press, 2017, 227-271.
22. Lau J, Morton SC, Trikalinos TA and **Schmid CH**. Systematic Reviews with Study-Level and Individual Patient-Level Data in *Methods in Comparative Effectiveness Research*, ed. SC Morton and C Gatsonis. NY: CRC Press, 2017, 301-339.
23. **Schmid CH**, White IR and Stijnen T. Introduction to systematic review and meta-analysis. In *Handbook of Meta-Analysis*, eds. **CH Schmid**, T Stijnen and White IR. NY: CRC Press, 2020, 1-17.
24. **Schmid CH**, Stijnen T and White IR. General themes in meta-analysis. In *Handbook of Meta-Analysis*, eds. **CH Schmid**, T Stijnen and White IR. NY: CRC Press, 2020, 19-26.
25. White IR, **Schmid CH** and Stijnen T. Choice of effect measure and issues in extracting outcome data. In *Handbook of Meta-Analysis*, eds. **CH Schmid**, T Stijnen and White IR. NY: CRC Press, 2020, 27-39.
26. Stijnen T, White IR and **Schmid CH**. Analysis of univariate study-level summary data using normal models. In *Handbook of Meta-Analysis*, eds. **CH Schmid**, T Stijnen and White IR. NY: CRC Press, 2020, 41-64.
27. Stijnen T, **Schmid CH**, Law M, Jackson D and White IR. Exact likelihood methods for group-based summaries. In *Handbook of Meta-Analysis*, eds. **CH Schmid**, T Stijnen and White IR. NY: CRC Press, 2020, 65-89.
28. **Schmid CH**, Carlin BP and Welton NJ. Bayesian methods for meta-analysis. In *Handbook of Meta-Analysis*, eds. **CH Schmid**, T Stijnen and White IR. NY: CRC Press, 2020, 91-127.
29. Marks-Anglin A, Duan R, Chen Y, Panagiotou O and Schmid CH. Publication and outcome reporting bias. In *Handbook of Meta-Analysis*, eds. **CH Schmid**, T Stijnen and White IR. NY: CRC Press, 2020, 283-312.
30. Guolo A, **Schmid CH** and Stijnen T. Control risk regression. In *Handbook of Meta-Analysis*, eds. **CH Schmid**, T Stijnen and White IR. NY: CRC Press, 2020, 313-328.
31. Saldanha IJ, Adam GP, **Schmid CH**, Trikalinos TA and Konnyu KJ. Modernizing Evidence Synthesis for Evidence-Based Medicine in *Clinical Decision Support and Beyond: Progress and Opportunities in Knowledge-Enhanced Health and Healthcare*, 3rd edition, ed. RA Greenes and G Del Fiol. NY: Academic Press, 257-278, 2023. 10.1016/B978-0-323-91200-6.00006-1.

Book Reviews

1. **Schmid CH**. Review of *Introduction to Scientific Programming and Simulation Using R (2nd ed)* by O. Jones, R. Maillardet and A. Robinson. *Journal of the American Statistical Association* 111: 443-444, 2016.

Non-Refereed Articles

1. **Schmid CH**. A State-Space Model for Longitudinal Regression. *Proceedings of the 26th Symposium on the Interface*. Interface Foundation of North America, 125-129, 1994.
2. **Schmid CH**, Cappelleri JC and Lau J. Bayesian Methods to Improve Sample Size Approximations. *Proceedings of the Section on Bayesian Statistics*, American Statistical Association, 89-94, 1995.
3. **Schmid CH** and Brown EN. A Hierarchical Bayes Model for Human Growth. *Proceedings of the Section on Bayesian Statistics*, American Statistical Association, 146-151, 1996.
4. Stason W, **Schmid CH**, Caubet JF, Kupelnick B, Cory D, Whiting G, Chalmers TC and Ross SD. Searching for Signals: Mortality and Cardiovascular Events in Published Randomized Control Trials of Nifedipine in

- Ischemic Heart Disease and Hypertension. *Journal of Hypertension* 14 (suppl 2): S5-S7, 1996. [PMID: 8934371]
5. **Schmid CH**, Griffith JL, Terrin N and D'Agostino RB Sr. Synthesizing the Treatment of Missing Data in Logistic Regression, Classification Trees and Neural Networks. *Proceedings of the Biometrics Section, American Statistical Association*, 265-269, 1997.
 6. Terrin N, Griffith JL, **Schmid CH** and D'Agostino RB Sr. The Impact of Outliers and Distortions on the Predictive Performance of Logistic Regression, Classification Trees and Neural Networks. *Proceedings of the Biometrics Section, American Statistical Association*, 270-275, 1997.
 7. Griffith JL, **Schmid CH**, Terrin N and D'Agostino RB Sr. Impact of Sample Size and Outcome Prevalence on the Predictive Performance of Logistic Regression, Classification Trees and Neural Networks. *Proceedings of the Biometrics Section, American Statistical Association*, 259-264, 1997.
 8. D'Agostino RB Sr., Griffith JL, **Schmid CH** and Terrin N. Measures for Evaluating Model Performance. *Proceedings of the Biometrics Section, American Statistical Association*, 253-258, 1997.
 9. **Schmid CH**. Regression Models for Longitudinal Data with Missing Covariate Values. *Proceedings of the Section on Statistics in Epidemiology, American Statistical Association*, 25-34, 1999.
 10. **Schmid CH**, Brown EN and Ogren JM. Modeling Daily Growth in children. *ASA Proceedings of the Joint Statistical Meetings*, 3698-3705, 2003.
 11. Stark PC, Levey AS and **Schmid CH**. Predictors of Change in Glomerular Filtration Rate Among Nondiabetic Patients with Chronic Kidney Disease. *ASA Proceedings of the Joint Statistical Meetings*, 4047-4049, 2003.
 12. Nguyen DP, **Schmid CH**, Klerman EB, Adler G and Brown EN. Stochastic Deconvolution of Neuroendocrine Hormone Rhythms. *ASA Proceedings of the Joint Statistical Meetings*, 3025-3032, 2003.
 13. **Schmid CH**. An Interview with Constantine Gatsonis. *Health Services and Outcomes Research Methodology* 16:187-212, 2016. doi:10.1007/s10742-016-0164-6.

Working Papers

1. Shen Y-C, Eggleston K, Lau J and **Schmid C**. Hospital Ownership and Financial Performance: A Quantitative Research Review. National Bureau of Economic Research Working Paper Series 11662, <http://www.nber.org/papers/w11662>, 2005.
2. Eggleston K, Shen Y-C, Lau J, **Schmid CH** and Chan J. Hospital Ownership and Quality of Care: What Explains the Different Results? National Bureau of Economic Research Working Paper 12241, <http://www.nber.org/papers/w12241>, 2006.

Dissertation

Schmid CH. Measurement Error Models for Logistic and Longitudinal Regression. PhD Dissertation. Harvard University, Dept of Statistics. Ann Arbor: University Microfilms, 1991.

Manuals and Online Learning Materials

1. **Schmid CH**. Selected Solutions for an Introduction to Statistical Methods and Data Analysis. Boston: PWS-Kent, 1988.
2. **Schmid CH**. Introduction to Design of Experiments. Cambridge, MA: BBN Software Products, 1991.
3. **Schmid CH**. Design of Experiments Using RS/Discover. Cambridge, MA: BBN Software Products, 1991.
4. **Schmid CH**. Advanced Topics in Experimental Design. Cambridge, MA: BBN Software Products, 1991.
5. **Schmid CH**. Regression Analysis Using RS/Explore. Cambridge, MA: BBN Software Products, 1991.
6. Hall M, Saldhana I, Sullivan AJ, Rofeberg V, Springs S, Wallack A, Trikalinos T, Balk E, Lau J and **Schmid CH**.

- a. Introduction to Evidence Synthesis
- b. Prepare Your Systematic Review Topic
- c. Develop Your Research Question
- d. Search and Screen Your Studies
- e. Extract Data
- f. Assess for Risk of Bias
- g. Analyze and Synthesize Data
- h. Report Your Findings
- i. N of 1 Studies

EvSynth Academy, 2018-2020. <https://evsynthacademy.org>.

Letters to the Editor

1. Cappelleri JC, Ioannidis JPA, **Schmid CH** and Lau J. Reply to letters about “Large Trials vs Meta-analysis of Smaller Trials.” *Journal of the American Medical Association* 277:376-378, 1997.
2. Lau J, Ioannidis JPA, **Schmid CH**. Meta-analyses, multivariate analyses, and coping with the play of chance. *Lancet* 351: 1062-1063, 1998.
3. Selker HP, **Schmid CH** and Griffith JL. Thrombolytic predictive instrument. *Annals of Internal Medicine* 131: 791-792, 1999. [PMID:10577309]
4. Klempner MS, Johnson GM, **Schmid CH**. Intralaboratory Reliability of Serologic and Urine Testing for Lyme Disease Reply. *The American Journal of Medicine* 111:503, 2001.
5. Jafar TH, **Schmid CH**, Levey AS. Effect of angiotensin-converting enzyme inhibitors on progression of nondiabetic renal disease. *Annals of Internal Medicine* 137: 298-9, 2002. [PMID: 12186531]
6. Gill CJ, Sabin L and Schmid CH. Why clinicians are natural Bayesians: Authors’ reply. *BMJ* 330:1390, 2005 [PMID:15947413]
7. Kourtis AP, Jamieson DJ, **Schmid CH**, Lau J. Author’s reply to letter about “Use of antiretroviral therapy in pregnant HIV-infected women and the risk of premature delivery: A meta-analysis.” *AIDS*. 21:1657-8, 2007.
8. Marques A, Shaw P, **Schmid CH**, Steere A, Kaplan RF, Hassett A, Shapiro G, Wormser GP, F. Comment to A randomized, placebo-controlled trial of repeated IV antibiotic therapy for Lyme encephalopathy prolonged Lyme disease treatment: enough is enough. *Neurology* 72:383-386, 2009. PMID:19171842.
9. Uhlig K, Earley A, **Schmid CH**. In reply to “Misuse and reporting of renal endpoints in randomized clinical trials.” *American Journal of Kidney Diseases* 59: 160-162, 2012.
10. **Schmid CH**. “Increased mortality for white middle-aged Americans not fully explained by causes suggested.” *Proc Natl Acad Sci USA* 113(7):E814, 2016. PMID:26858422. doi/10.1073/pnas.1522239113.
11. Shrier I and **Schmid C**. Plan S: Overlooked hybrid journal model. *Science*. 363:461-462, 2019. doi: 10.1126/science.aav7335. [PMID: 30705176]
12. Kravitz RL, **Schmid CH** and Sim I. Finding Benefit in n-of-1 Trials—Reply. *JAMA Internal Medicine*. 179:455, 2019. PMID: 30830190. doi:10.1001/jamainternmed.2018.8330.
13. Duan R, Tong J, Sutton AJ, Asch D, Chu H, **Schmid CH** and Chen Y. Does the origami plot really improve the radar plot? Authors’ response to Boers." *Journal of Clinical Epidemiology* 169: 111170, 2024. doi:10.1016/j.jclinepi.2023.09.003.
14. Duan R, Tong J, Sutton AJ, Asch DA, Chu H, **Schmid CH**, Chen Y. Does the origami plot really improve the radar plot? Authors’ further response to Boers. *Journal of Clinical Epidemiology*. 2024 May 1;169.:111304, 2024. doi:10.1016/j.jclinepi.2024.111304

Software

1. R-package: **bnma** (Bayesian Network Meta-Analysis using JAGS), 2017-2025. Current version 1.6.1. Available at: <https://cran.r-project.org/web/packages/bnma/>. Authors: Michael Seo and Christopher Schmid

Courses/Workshops/Webinars

National

1. "Making Predictive Instruments." Society for General Internal Medicine, Washington, DC, May 1996.
2. "Making Predictive Instruments." Society for General Internal Medicine, Washington, DC, May 1997.
3. "Meta-Analysis" Medical Decision Making, Cambridge, MA, October 1998.
4. "Statistical Basis of Meta-Analysis." National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Atlanta, GA, May 2005.
5. "Modern Metaanalysis." 6th International Conference on Health Policy Research, Boston, MA, October 2005.
6. "Basic Statistical Concepts for the Medical Researcher." American College of Rheumatology Annual Meeting, Boston MA, November 2007.
7. "Issues When Trying to Adjust for Confounders in Meta-Analyses of Observational Data." Drug Information Association, May 2009.
8. "Comparative Effectiveness Research: Meta-Analysis." Tufts University, Boston MA, 2011.
9. "Bayesian Methods for Multivariate Meta-Analysis." Eli Lilly and Company, Indianapolis, IN, June 2011.
10. "Meta-Analysis: Combining the Results of Multiple Studies." Joint Statistical Meetings, Miami FL, August 2011.
11. "Network Meta-Analysis." Workshop given at 9th International Conference on Health Policy Statistics, Cleveland, OH, October 2011.
12. "Institute of Medicine Standards on Systematic Reviews." Webinar for Guidelines International North America, February, 2012.
13. "OpenMetaAnalyst software for diagnostic test accuracy studies." Learning Network, Evidence-Based Practice Center program, Agency for Healthcare Research and Quality, May 2012.
14. "Meta-analysis combining individual participant level data (IPD) and aggregated data (AD)." International Society of Pharmacoeconomics and Outcomes Research (ISPOR) 17th Annual International Meeting, Washington DC, June 2012.
15. "Meta-Analysis: Combining the Results of Multiple Studies." Joint Statistical Meetings, San Diego, CA, July 2012.
16. "Meta Analysis with Multivariate Data." ASA Biopharmaceutical Section FDA-Industry Statistics Workshop, Washington DC, September 2012.
17. "Introduction to Meta-Analysis." Global Clinical Scholars Research Training Program, Harvard Medical School, Boston MA, June 2014.
18. "Meta-Analysis: Combining the Results of Multiple Studies." Joint Statistical Meetings, Boston, MA, Aug 2014.
19. "N-of-1 Trials." Webinar for Health Policy Statistics Section of American Statistical Association, Sept 2014.
20. "Network Meta-Analysis for Comparative Effectiveness in Safety Studies." Eli Lilly, April 2015.
21. "Meta-Analysis: Combining the Results of Multiple Studies." Joint Statistical Meetings, Seattle, WA, Aug 2015.
22. "Meta-Analysis: Combining the Results of Multiple Studies." Centers for Disease Control, Atlanta, GA, Aug 2015.
23. "Meta-Analysis: Combining the Results of Multiple Studies." Medtronic, Minneapolis, MN, Oct 2015.
24. "Network Meta-Analysis." American Statistical Association Connecticut Chapter, West Haven CT, March, 2016.

25. "Meta-Analysis: Combining the Results of Multiple Studies." Joint Statistical Meetings, Chicago, IL, Aug 2016.
26. "How to Be an Informed Consumer of Systematic Reviews." Centers for Disease Control, Atlanta, GA, Feb 2017.
27. "Meta-Analysis and Network Meta-Analysis: Combining the Results of Multiple Studies." Centers for Disease Control, Atlanta, GA, Mar 2017.
28. "Network Meta-Analysis." Joint Statistical Meetings, Baltimore, MD, July 2017.
29. "Hierarchical Models for Combining N-of-1 Trials." Webinar given to Washington University students attending course Intermediate Methods in Clinical Research, March 2018.
30. "Network Meta-Analysis for Various Study Designs: Stepping Outside the Randomized Controlled Trials Comfort Zone Into the Real World." ISPOR, Baltimore, MD, May 2018.
31. "Meta-Analysis and Combining the Results of Multiple Studies." Centers for Disease Control, Atlanta, GA, Oct 2018.
32. "Network Meta-Analysis." Centers for Disease Control, Atlanta, GA, Oct 2018.
33. "Network Meta-Analysis." North Texas Chapter of the American Statistical Association, Dallas, TX, Nov 2018.
34. "Meta-Analysis: Combining Results of Multiple Studies." San Antonio Chapter of the American Statistical Association, San Antonio, TX, Nov 2018.
35. "Systematic Review Workshop." Advance-RI CTR, Providence RI, March 2019.
36. "Introduction to Evidence Synthesis." Hawaii Chapter of the American Statistical Association, Honolulu, HI, June 2019.
37. "Meta-Analysis: Combining Results of Multiple Studies." Hawaii Chapter of the American Statistical Association, Honolulu, HI, June 2019.
38. "Meta-Analysis and Combining the Results of Multiple Studies." Centers for Disease Control, Atlanta, GA, Oct 2019.
39. "Network Meta-Analysis." Centers for Disease Control, Atlanta, GA, Oct 2019.
40. "Combining Information from Different Studies with Meta-Analysis and Network Meta-Analysis." Deming Conference, Atlantic City NJ, Dec 2019.
41. "Combining Results of Studies Using Meta-Analysis." Medtronic, October 2022.
42. "Combining Information from Different Studies with Meta-Analysis and Network Meta-Analysis." Deming Conference, Philadelphia, PA, Dec 2022.
43. "N-of-1 Trials for Personalized Healthcare." Deming Conference, Philadelphia, PA, Dec 2022.
44. "Use of Meta-Analyses in Nutrition Research and Policy: Planning of Meta-Analysis. Webinar sponsored by National Academies of Sciences, Engineering and Medicine, Sept 2023.
45. "N-of-1 Trials for Personalized Healthcare." Graybill Conference, Ft. Collins, CO, June 2024.
46. "N-of-1 Trials for Personalized Healthcare." Harvard Catalyst, Boston, MA, October 2024.
47. "Using N-of-1 Trials to Personalize Diet Interventions", Webinar sponsored by NIH Office of Dietary Supplements, March 2025.
48. "Leadership in Esametry: Within-Individual Statistics of N-of-1 Trials and Single-Case Designs." Webinar sponsored by COPSS-NISS Leadership, April 2026.

International

1. "Introductory Biostatistics." Portuguese Society of Nephrology, Porto, Portugal, July 2001.
2. "Introductory Biostatistics." Portuguese Society of Nephrology, Porto, Portugal, March 1997.
3. "The Design of Studies for Medical Research: Common Errors in Statistics and How to Avoid Them." Pre-Congress Satellite XXI Portuguese Congress of Nephrology, Vilamoura, Portugal, May 2007.
4. "Introductory Biostatistics." Consultation of Investment in Health Promotion, Hanoi, Vietnam, June 2008.

5. "Heterogeneity, Meta-Regression and Statistical Models." Italian Cochrane Center. Milan, Italy, March 2011.
6. "Comparing multiple treatments 1: Overview or intervention review." 20th Cochrane Collaboration Colloquium, Auckland, New Zealand, October 2012.
7. "Meta-Analysis: Combining the Results of Multiple Studies." Joint Statistical Meetings, Montreal, Canada, Aug 2013.
8. "Network Meta-Analysis." Southern Ontario Regional Association of the Statistical Society of Canada and the Southern Ontario Chapter of the American Statistical Association, Toronto, Canada, June 2018.

Invited Presentations

National

1. "A Probability Model for Saltatory Growth." Colloquium given to the Department of Mathematical Sciences, Worcester Polytechnic Institute, Worcester, MA, September 1997.
2. "An Empirical Study of the Effect of the Control Rate as a Predictor of Treatment Efficacy in Meta-Analysis of Clinical Trials." 1997 International Conference on Health Policy Research, Crystal City, VA, December 1997.
3. "Exploring Heterogeneity in Randomized Trials via Meta-Analysis." 1998 Drug Information Association Conference on Global Statistical Challenges and Strategies in the Pharmaceutical Industry, Hilton Head, SC, March 1998.
4. "Regression Models for Longitudinal Data with Missing Covariate Values." American Statistical Association, Baltimore, August 1999.
5. "Marginal and Dynamic Regression Models for Longitudinal Data." Epidemiology Methods Working Group, Harvard School of Public Health, January 2000.
6. "Introduction to Meta-Analysis." Eunice Kennedy Shriver Center, Waltham MA, May 2000.
7. "Exploring Heterogeneity in Randomized Trials With Meta-Analysis". Rand, Santa Monica, November 2000.
8. "Exploring Heterogeneity in Randomized Trials with Meta-Analysis" Merck Institute on Aging, Washington DC, June 2001.
9. "Using Bayesian Models to Perform Meta-Analysis" Bartlett International workshop on Statistical Design and Analysis, Philadelphia, November 2001.
10. "Using the Control Rate to Explore Heterogeneity of Treatment Effects in Clinical Trials" American Statistical Association, New York, August 2002.
11. "Modeling Daily Growth in Children." Yale University Biostatistics Colloquium, New Haven, October 2002.
12. "Using Meta-Analysis to Explore Differences in Study Effects." Ninth Annual Biopharmaceutical Applied Statistics Symposium, Savannah, December 2002.
13. "Combining N-of-1 Studies to Improve Treatment for Individual Patients." Center for Health Quality, Outcomes & Economics Research, Bedford, MA, December 2003.
14. "Using Meta-Regression to Explore Treatment Heterogeneity." US Cochrane Center, Brown University, Providence RI, April 2004.
15. "Using Bayesian Models to Perform Meta-Analysis." Harvard University, Boston, MA, April 2004.
16. "The State of the Art in Diagnostic Test Meta-Analysis." American Statistical Association, Toronto, August 2004.
17. "Basics of Combining Data in a Meta-Analysis." Division of Diabetes Translation, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Atlanta, GA, October 2004.
18. "Exploring Heterogeneity in Study Results Through Meta-Analysis." Statistics group, Roche Labs, Nutley, NJ, November 2004.

19. "Systematic Review/Meta-analysis Workshop" Sanofi-Aventis pharmaceuticals, Bridgewater, NJ, September 2005.
20. "Statistical Methods for Diagnostic Tests." International Chinese Statistical Association, Storrs, CT, June 2006.
21. "The State of the Art in Diagnostic Test Meta-Analysis." Center for Medicare and Medicaid Services, Baltimore MD, October 2006.
22. "Testing the Accuracy of Diagnostic Tests Through Meta-Analysis." Epidemiology Methods Working Group, Harvard School of Public Health, Cambridge MA, March, 2007.
23. "Putting Together a Strong Clinical Study." Fourth International Meeting Ten Years of the US-Russian Program in Prosthetics and Rehabilitation, Stoughton MA, June 2007.
24. "What If I'd Known Then What I Know Now? Re-evaluating Diagnostic Test Meta-Analyses With New Statistical Models." 7th International Conference on Health Policy Statistics, Philadelphia PA, January 2008.
25. "Random-Effects Meta-Analyses For Outcomes With Three or More Mutually Exclusive Categorical Responses." Midwest Biopharmaceutical Statistics Workshop, Muncie IN, May 2008.
26. "Bayesian Meta-analysis." Pfizer Research and Development, New London CT, June 2008.
27. "State of the art and science' associated with the use of statistical models used in the meta-analysis of clinical data". Massachusetts Biotechnology Council, Cambridge MA, June 2008.
28. "Empirical Study of Bayesian Methods for Meta-Analyses of Diagnostic Test Data Using a Large Database of Studies in the Medical Literature." American Statistical Association, Denver, August 2008.
29. Issues When Trying to Adjust for Confounders in Meta-Analyses of Observational Data." Drug Information Association/FDAPHRMA Drug Safety Conference, Arlington, VA October 2008.
30. "Multiple-treatments meta-analysis for categorical outcomes." 8th International Conference on Health Policy Statistics, Washington DC, January 2010.
31. "Multiple-treatments meta-analysis for categorical outcomes." Massachusetts General Hospital Biostatistics Center, Boston MA, February 2010.
32. "Multiple-treatments meta-analysis." Johns Hopkins University Center for Clinical Trials, Baltimore, MD, March 2010.
33. "Bayesian Meta-Analysis" Pfizer, New York, NY, April 2010.
34. "Multiple Treatments Meta-Analysis for Comparative Effectiveness." ACRT/SCTS Joint Annual Meeting, Clinical and Translational Research and Education Meeting , Washington DC, April, 2010.
35. "Bayesian Analysis Using BUGS." Network Meta-analysis Methods Meeting and Workshop. Baltimore, MD, May 2010.
36. "Multiple-treatments, Multiple Outcomes and Multiple Followup Times." Network Meta-analysis Methods Meeting and Workshop. Baltimore, MD, May 2010.
37. "Interpreting Multiple Results to the Same Query." Expert Workshop: Statistical and Epidemiological Issues in Active Medical Product Surveillance. Brookings Institution, Washington DC, February 2011.
38. "Multiple-treatments meta-analysis for categorical outcomes." Eastern North American Region of the International Biometric Society (ENAR). Miami, Florida, March 2011.
39. "Modernizing knowledge synthesis and integration for comparative effectiveness." ACRT/SCTS Joint Annual Meeting, Clinical and Translational Research and Education Meeting , Washington DC, April 2011.
40. "Proposed National Standards for Reviews of Health Care Evidence." Joint Statistical Meetings, Miami FL, July 2011.
41. "Introductory Overview Lecture: Evidence-Based Medicine and Statistics." Joint Statistical Meetings, Miami FL, August 2011.
42. "Network Meta-Analysis for Comparative Effectiveness." Starr Lecture at Brown University, Providence RI, October 2011.

43. "IOM Standards on Systematic Reviews." International Life Sciences Institute meeting, Phoenix, AZ, January 2012.
44. "Exploring a Network of Treatments with Direct and Indirect Comparisons." Fourth DEClDE Symposium on Comparative Effectiveness Research Methods, Rockville MD, June 2012.
45. "Bayesian Methods for Multivariate Meta-Analysis of Treatment Networks with Incomplete Data." Joint Statistical Meetings, San Diego, CA, July 2012.
46. "Bayesian Network Meta-Analysis for Unordered Categorical Outcomes With Incomplete Data." DIMACS Workshop on Analysis of Information from Diverse Sources, Rutgers University, New Brunswick NJ, May 2013.
47. "N-of-1 Trials: A Tool for Making Patient-Centered Treatment Decisions." International Chinese Statistics Association, Bethesda, MD, June, 2013.
48. "Multivariate Techniques for Combining Information." 10th International Conference on Health Policy Statistics, Chicago, IL, October 2013.
49. "N of 1 Studies." University of Massachusetts Medical Center Dept. of Quantitative Health Sciences, Worcester, MA, February 2014.
50. "Bayesian Network Meta-Analysis for Categorical Outcomes." Eastern North American Region of the International Biometric Society (ENAR). Baltimore, MD, March 2014.
51. "Meta-Analysis of Diagnostic Test Accuracy Comparisons: Network Methods." Eastern North American Region of the International Biometric Society (ENAR). Baltimore, MD, March 2014.
52. "N-of-1 Trials." American Statistical Association Connecticut Chapter, Danbury CT, March, 2014.
53. "Network Meta-Analysis for Comparative Effectiveness in Safety Studies." DIA/FDA Statistics Forum, Bethesda MD, April 2014.
54. "Network Meta-Analysis." Department of Industrial and Systems Engineering, Georgia Institute of Technology Atlanta GA, December 2014.
55. "Large-Scale Comparison of Univariate and Multivariate Meta-Analysis for Categorical Outcomes." 11th International Conference on Health Policy Statistics, Providence, RI, October 2015.
56. "N of 1 Trials for Personalized Decision Making." Department of Computer Science and Statistics, University of Rhode Island, Kingston RI, April 2016.
57. "N-of-1 Trials." TMJ Association, Bethesda, MD, Sept 2016.
58. "N of 1 Trials for Personalized Decision Making." Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania, Philadelphia, PA, November 2016.
59. "N of 1 Trials for Personalized Decision Making." Center for Clinical Trials and Evidence Seminar Series, Johns Hopkins University, Baltimore, MD, December 2016.
60. "Hierarchical Models for Combining N-of-1 Trials." Eastern North American Region of the International Biometric Society (ENAR), Washington DC, March 2017.
61. "N-of-1 Trials." NIH Individualizing Treatment – Broadening the Framework for Urinary Incontinence Research meeting, Bethesda MD, March 2017.
62. "Hierarchical Models for Combining N-of-1 Trials." U Penn Department of Biostatistics, Epidemiology and Informatics, Philadelphia, PA, June 2017.
63. "Hierarchical Models for Combining N-of-1 Trials." International Chinese Statistics Association, Chicago, IL, June 2017.
64. Discussant for "Meta-Analysis Has Moved Beyond Its Original Niche as a Method to Provide a Summary of the Average Effect of an Intervention on an Outcome". Joint Statistical Meetings, Baltimore, MD, Aug 2017.
65. "N-of-1 Trials for Making Personalized Treatment Decisions with Personalized Designs Using Self-Collected Data." U Rochester Department of Biostatistics and Computational Biology Colloquium, October 2017.

66. "N-of-1 Trials for Making Personalized Treatment Decisions with Personalized Designs Using Self-Collected Data." NYU Workshop on Single Case Designs and Beyond, New York, NY, November 2017.
67. "Hierarchical Models for Combining N-of-1 Trials." 12th International Conference on Health Policy Statistics, Charleston, SC, January 2018.
68. "N-of-1 Trials for Making Personalized Treatment Decisions." Eastern North American Region of the International Biometric Society (ENAR), Atlanta, GA, March 2018.
69. "Network Meta-Analysis." Dartmouth Interdisciplinary Network Research Group, Hanover, NH, December 2018.
70. "Design and Analytic Tools for Personalizing Healthcare Experiments." Eastern North American Region of the International Biometric Society (ENAR), Philadelphia, PA, March 2019.
71. "N-of-1 Trials: Estimating Individual Treatment Effects." Washington University Department of Biostatistics. Saint Louis, MO, April 2019.
72. "N-of-1 Trials: Estimating Individual Treatment Effects." Washington University Department of Anesthesiology. Saint Louis, MO, April 2019.
73. "The Evidence Synthesis Academy: Educating the Public about Evidence Synthesis." Presidential Address to the Society for Research Synthesis Methodology. Chicago, IL, July 2019.
74. "Incorporating Information from a Network of Personalized Trials to Facilitate Individualized Treatment Choice." Joint Statistical Meetings, Denver, CO, Aug 2019.
75. "Design and Analytic Tools for Personalizing Healthcare Experiments." Population Science Group Meeting, Joint Program in Cancer Biology, Brown Medical School, Aug 2019.
76. "Design and Analytic Tools for Personalizing Healthcare Experiments Using N-of-1 Designs." Keynote Address to Pfizer Global Statistics Conference. October 2020.
77. "Design and Analytic Tools for Personalizing Healthcare Experiments Using N-of-1 Designs." Grand rounds given to Division of Nephrology, Rhode Island Hospital, December 2020.
78. "Statistical Considerations in the Choice of Fixed or Random Intercepts for Meta-Analytic Models." Eastern North American Region of the International Biometric Society (ENAR), Virtual, March 2021.
79. "Personalized, patient-driven research: A multicenter N-of-1 trial of dietary management of Crohn's Disease", Learning Health Networks Research Conference: Accelerating Patient-Centered Outcomes Research, Virtual, June 2021.
80. "Personalizing Healthcare Experiments Using N-of-1 Designs", Advance-CTR Translational Research Seminar Series, Virtual, September 2021.
81. "Personalizing Healthcare Experiments Using N-of-1 Designs", New England Statistics Symposium, Providence, RI, October 2021.
82. "Bayesian Methods for Meta-Analysis of N-of-1 Trials", International Conference on Advances in Interdisciplinary Statistics and Combinatorics, Virtual, October 2021.
83. "The Statistician is the Clinical Investigator's Best Friend." Talk given to West Virginia CTSI Principal Investigator Academy, Virtual, September 2022.
84. "Bayesian Models for Combining N-of-1 Trials." Talk given to International Conference on Health Policy Statistics, Scottsdale AZ, Jan 2023.
85. "Validating a Predictive Model", Advance-CTR Translational Research Seminar Series, February 2023.
86. "N-of-1 Trials for Personalized Healthcare", Thomas R Ten Have Symposium on Statistics in Mental Health, Boston MA, June 2023.
87. "The Statistician is the Clinical Investigator's Best Friend." North East Regional IDeA Conference, Wilmington, DE, August 2023.
88. "N-of-1 Trials for Personalized Healthcare." Vincent Armenio Memorial Lecture, Roger Williams Medical Center, Providence RI May 2025.

89. "N-of-1 Trials for Personalized Healthcare." Virtual Talk to UMass Chan Department of Population and Quantitative Health Sciences Research Methods Meeting, Worcester, MA, March 2026.
90. "AI and Data Driven Approaches to Modern Challenges in Evidence Synthesis." Discussion at Eastern North American Region of the International Biometric Society (ENAR), Indianapolis, IN, March 2026.
91. "Designing Personalized Trials to Estimate Individual Treatment Effects." Eastern North American Region of the International Biometric Society (ENAR), Indianapolis, IN, March 2026.

International

1. "Exploring Heterogeneity in Clinical Trials With Meta-Analysis." Bayer International Clinical Datapool Meeting, Wuppertal, Germany, June 1998.
2. "Estimating Treatment-Covariate Interactions Using Meta-Regression and Individual Patient Data." 16th Cochrane Collaboration Colloquium, Freiburg, Germany, October 2008.
3. "Meta-Analysis of Clinical Trials: Strengths and Weaknesses." 11th Cardiology Conference of Central Greece. Larissa, Greece, October 2008.
4. "Meta-analysis of Clinical Trials: Strengths and Weaknesses." Halkidiki, Greece, July 2009.
5. "Semi-automated abstract screening for systematic reviews using support vector machines." University of York, Centre for Reviews and Dissemination, York, United Kingdom, March 2010.
6. "Institute of Medicine Perspective on Systematic Reviews." Registering Systematic Review Portocols: An International Initiative. Vancouver, Canada, February 2011.
7. "Multinomial Network Meta-Analysis". University of Ioannina, Greece, September 2011.
8. "A Conversation on Standards for Systematic Reviews." 19th Cochrane Collaboration Colloquium, Madrid, Spain, October 2011.
9. "Hierarchical Models for Combining N-of-1 Trials." University of Bristol Dept of Community Health, Bristol, UK, April 2017.
10. "Hierarchical Models for Combining N-of-1 Trials." Statistical Society of Canada, Winnipeg, Canada, June 2017.
11. "Hierarchical Models for Combining N-of-1 Trials." Joint Conference on Biometrics & Biopharmaceutical Statistics (CEN-ISBS Vienna 2017) Vienna, Austria, August 2017.
12. "Hierarchical Models for Combining N-of-1 Trials." Tenth International Conference of the European Research Consortium for Informatics and Mathematics Working Group on Computational and Methodological Statistics, London, UK, December 2017.
13. "N-of-1 Trials for Making Personalized Treatment Decisions." Karolinska Institute, Stockholm, Sweden, April 2018.
14. "N-of-1 Trials for Making Personalised Treatment Decisions with Personalised Designs Using Self-Collected Data." Royal Statistical Society South West Local Group Meeting, Plymouth, UK, July 2018.
15. "Statistical Models for Combining N-of-1 Trials with Application to the PREEMPT Study" part of panel on Small Data and N-Of-1 Trials. Joint Statistical Meetings, Vancouver, CA, Aug 2018.
16. "Design and Analytic Tools for Personalizing Healthcare Experiments." Keynote address to Deutsch Gesellschaft fur Medizinische Informatik, Biometrie und Epidemiologie, Dortmund, Germany, Sept 2019
17. "N-of-1 Trials for Personalized Healthcare", Talk given to Centre for Physical Activity Research, Copenhagen University Hospital (Rigshospitalet), Copenhagen, Denmark, June 2023.
18. "Using Bayesian methods to analyze data from N-of-1 trials", Recent Methods in Meta-Analysis Symposium, Goettingen, Germany, August 2024.

Other Presentations

National

1. "Incorporating Measurement Error in the Estimation of Autoregressive Models for Longitudinal Data." Joint Statistical Meetings, Anaheim, CA, August 1990.
2. "A Bayesian Approach to Logistic Regression Models Having Measurement Error Following a Mixture Distribution." Joint Statistical Meetings, Boston, MA, August 1992.
3. "A Logistic Regression Model for the Effect of Thrombolytic Therapy on the Risk of Cardiac Arrest When Some Outcomes Precede Treatment." American Federation for Clinical Research, Washington DC, May 1993.
4. "Applying Bayesian Meta-Regression to the Study of Thrombolytic Therapy." American Federation for Clinical Research, Baltimore, MD, May 1994.
5. "A State-Space Model for Longitudinal Regression." Twenty-Sixth Symposium on the Interface, Research Triangle Park, NC, June 1994.
6. "Measuring the Impact of the Control Rate in Meta-Analysis of Clinical Trials." Sixteenth Annual Meeting of the Society for Clinical Trials, Seattle, Washington, April-May 1995.
7. "Bayesian Methods to Improve Sample Size Approximations." Joint Statistical Meetings, Orlando, FL, August 1995.
8. "A Hierarchical Model for Human Growth." Joint Statistical Meetings, Chicago, IL, August 1996.
9. "Synthesizing the Treatment of Missing Data in Logistic Regression, Classification Trees and Neural Networks." Joint Statistical Meetings, Anaheim, CA, August 1997.
10. "Modeling Growth in Kids" Presentation to Summer Seminar Lecture Series in Clinical Care Research, New England Medical Center, July 2000.
11. "Exploring Heterogeneity in Randomized Trials With Meta-Analysis." American Statistical Association, Indianapolis, August 2000.
12. "Saltatory Growth in Children." Summer Seminar Lecture Series in Clinical Care Research, New England Medical Center, Boston, July 2001.
13. "Modeling Daily Growth in Children." Summer Seminar Lecture Series in Clinical Care Research, New England Medical Center, Boston, July 2002.
14. "Modeling Daily Growth in Children." Joint Statistical Meetings, San Francisco, August 2003.
15. "Predictors of Change in Glomerular Filtration Rate Among Nondiabetic Patients with Chronic Kidney Disease." Joint Statistical Meetings, San Francisco, August 2003.
16. "The State of the Art in Metaanalyses of Diagnostic Tests." 6th International Conference on Health Policy Research, Boston, MA, October 2005.
17. "Random-Effects Meta-Analyses For Outcomes With Three or More Mutually Exclusive Categorical Responses." Society for Research Synthesis Methodology Annual Meeting, Chicago, IL, July 2007.
18. "Meta-Analyst Software" Society for Research Synthesis Methodology, Seattle, WA, July 2009.
19. "The Statistician as an Expert Witness". American Statistical Association, Washington DC, August 2009.
20. "Bayesian Network Meta-Analysis for Unordered Categorical Outcomes With Incomplete Data." Society for Research Synthesis Methodology, Providence, RI, June 2013.
21. "How question formulation motivates different approaches to research synthesis." Society for Research Synthesis Methodology, Nashville, TN, July 2015.
22. "An Empirical Comparison of Univariate and Multivariate Meta-Analyses for Categorical Outcomes." Joint Statistical Meetings, Seattle, WA, Aug 2015.
23. "Application of Bayesian meta-analytic models to analysis of a series of N-of-1 trials for comparing two new diets to usual diet in treatment of children with inflammatory bowel disease." Society for Research Synthesis Methodology, Portland, OR (virtual), July 2022.
24. "Experiences with Large Series of Individual Trials for Personalized Health." Joint Statistical Meetings, Washington DC, Aug 2022.

25. "N of 1 Trials for Personalized Healthcare." Talk given to Internal Resident Research Track, Brown Alpert Medical School, Nov 2023.

International

1. "Survey of Diagnostic Test Meta-Analyses." 12th Cochrane Collaboration Colloquium, Ottawa, Canada, October 2004.
2. "Evaluating Heterogeneity in Studies of Diagnostic Test Accuracy." 14th Cochrane Collaboration Colloquium, Dublin, Ireland, October 2006.
3. "Empirical Study of Bayesian Methods for Meta-Analyses of Diagnostic Test Data Using a Large Database of Studies in the Medical Literature." Society for Research Synthesis Methodology, Corfu, Greece, July 2008.
4. "Multiple-treatments meta-analysis for categorical outcomes." Society for Research Synthesis Methodology, Cartagena, Spain, July 2010.
5. "Multiple-treatments meta-analysis for categorical outcomes." 18th Cochrane Collaboration Colloquium, Keystone, Colorado, October 2010.
6. "Finding What Works in Health Care: Standards for Systematic Reviews." Society for Research Synthesis Methodology, Ottawa, Canada, July 2011.
7. "Methods and reporting of meta-analyses of test accuracy." Society for Research Synthesis Methodology, Aix-en-Provence, France, June 2012.
8. "Empirical assessment of methods for the meta-analysis of test accuracy studies." Society for Research Synthesis Methodology, Aix-en-Provence, France, June 2012.
9. "Methods for the joint meta-analysis of several medical tests." Society for Research Synthesis Methodology, Aix-en-Provence, France, June 2012.
10. "Towards Modernizing the Systematic Review Pipeline: Efficient Updating via Data Mining." 20th Cochrane Collaboration Colloquium, Auckland, New Zealand, October 2012.
11. "Methods for the Joint Meta-Analysis of Multiple Tests." 20th Cochrane Collaboration Colloquium, Auckland, New Zealand, October 2012.
12. "An Empirical Assessment of Bivariate Methods for Meta-Analysis of Test Performance." 20th Cochrane Collaboration Colloquium, Auckland, New Zealand, October 2012.
13. "Network Meta-Analysis of Categorical Outcomes With Incomplete Data." Joint Statistical Meetings, Montreal, Canada, Aug 2013.
14. "Opportunities and Challenges in conducting a series of N-of-1 studies". Society for Research Synthesis Methodology, York UK, July 2014.
15. "Top Ten Things I Hate to See When Reviewing Applied Meta-Analyses: We need to do a better job of teaching our field." Society for Research Synthesis Methodology, Florence, IT, July 2016.
16. "Hierarchical Models for Combining N-of-1 Trials." Society for Research Synthesis Methodology, Montreal, CA, July 2017.
17. "Free and open-access online systematic review curriculum for broad audiences." Cochrane Colloquium, Edinburgh, UK, Sept 2018.
18. "Using Experimental Design Principles to Design Simulations." Society for Research Synthesis Methodology, Paris, France, July 2023.
19. "Considerations for accurately estimating variance components in Bayesian multilevel models for meta-analysis of N-of-1 trials." Joint Statistical Meetings, Toronto, CA, Aug 2023.
20. "Considerations in Bayesian Estimations for meta-analysis of RCTs." Society for Research Synthesis Methodology, Amsterdam, The Netherlands, July 2024.
21. "Designing personalized trials to estimate individual treatment effects." Western North American Region of the International Biometric Society (WNAR), Whistler, CA, June 2025.

Patents

2012 US Patent #8,126,826 B2 Method and System for Active Learning Screening Process With Dynamic Information Modeling

Research Grants

Current

Title: *Translational Approaches for Pathogens of Human Significance*

Funding Source: NIH/NIGMS P20 GM156688

Total Costs: \$12,500,000

Funding Period: 2025-2030

Role: Senior Statistician/Investigator (PI: Jennifer Friedman and Jonathan Kurtis)

Title: *External Validation and Implementation of a Novel Mobile Health Application for Acute Diarrhea Management across the Lifespan*

Funding Source: NIH/NIDDK 2R01 DK116163-06A1

Total Costs: \$2,600,000

Funding Period: 2024-2028

Role: Senior Statistician/Investigator (PI: Adam Levine)

Title: *Migration and outcomes among older adults with and without ADRD from Puerto Rico*

Funding Source: NIH/ NIA RF1 AG078262

Total Costs: \$ 1,788,638

Funding Period: 2023-2026

Role: Senior Statistician/Investigator (PI: Maricruz Rivera-Hernandez)

Title: *Impact of Randomized Payment Incentives on Disparities in Home Dialysis and Kidney Transplantation*

Funding Source: NIH/ NIMHD R01 MD017080

Total Costs: \$ 3,500,000 (sub \$201,000)

Funding Period: 2021-2026

Role: Senior Statistician/Investigator (PI: Amal Trivedi and Rachel Patzer)

Title: *RI-Center for Clinical and Translational Science*

Funding Source: NIH/NIGMS 2U54GM115677

Total Costs: \$20,000,000 (sub \$810,000)

Funding Period: 2021-2026

Role: Subcontract PI and Director of Biostatistics, Epidemiology, and Research Design Core (PI: Sharon Rounds)

Title: *Effect of PDE5 Inhibitor on Respiratory Symptoms in COPD Complicated by Pulmonary Hypertension*

Funding Source: VA Office of Research and Development Clinical Science I01CX002543-01

Total Costs: \$2,000,000

Funding Period: 2024-2029

Role: Senior Statistician/Investigator (PI: Sharon Rounds)

Title: *An intervention to improve HIV pre-exposure prophylaxis initiation, adherence and linkage to care for recently incarcerated men who inject drugs*

Funding Source: NIH K23 DA054003

Total Costs: \$1,000,000

Funding Period: 2022-2027

Role: Faculty Mentor (PI: Matthew Murphy)

Title: *Developing Computational Nosologies of Posttraumatic Stress Disorder (PTSD)*

Funding Source: VA IK2 CX002115

Total Costs: \$1,383,436

Funding Period: 2021-2026

Role: Faculty Mentor (PI: Amin Zand Vakili)

Title: *Moi-Brown Partnership for HIV Biostatistics Training*

Funding Source: NIH Fogarty International Center 2D43TW010050

Total Costs: \$1,500,894

Funding Period: 2021-2026

Role: Faculty Mentor (PI: Joseph Hogan)

Title: *A Novel N-of-1 Randomized, Controlled, Clinical Trial to Assess the Effect of Blenderized Tube Feeds on Esophagogastric Physiology*

Funding Source: NIH K23 DK133679

Total Costs: \$1,000,000

Funding Period: 2022-2027

Role: Consultant (PI: Bridget Hron)

Title: *Optimizing Dialysis Care in Skilled Nursing Facilities: Implementation and Outcomes of On-Site Dialysis*

Funding Source: Advance RI-CTR Mentored Research Award

Total Costs: \$285,000

Funding Period: 2024-2026

Role: Mentor (PI: Ankur Shah)

Completed

Title: *An MI Thrombolytic Therapy Outcome Predictive Instrument*

Funding Source: Agency for Health Care Policy and Research R01 HS06208

Direct Costs: \$1,227,401

Funding Period: 1989-1993

Role: Investigator/Statistician (PI: Harry Selker)

Title: *Comparative Outcomes of Ambulatory Pharmaceutical Agents*

Funding Source: Agency for Health Care Policy and Research R01 HS07782

Direct Costs: \$1,200,000

Funding Period: 1993-1996

Role: Investigator (PI: Joseph Lau)

Title: *Evaluation of the Protective Efficacy, Safety and Immunogenicity of a Recombinant DNA Expressed Protein Vaccine for Lyme Disease in Healthy Subjects*

Funding Source: SmithKline Beecham Pharmaceuticals

Direct Costs: \$250,000

Funding Period: 1995-1997

Role: Statistician (PI: Allen Steere)

Title: *Assessing New Mathematical Models for Medical Events*

Funding Source: National Library of Medicine

Direct Costs: \$812,163

Funding Period: 1995-1999

Role: Investigator (PI: Harry Selker)

Title: *Combining Different Data Sources to Assess Treatments*

Funding Agency: Agency for Healthcare Research and Quality R01 HS08532

Direct Costs: \$260,529

Funding Period: 1995-1998

Role: Principal Investigator

Title: *Assessing New Mathematical Models for Medical Events*

Funding Source: National Library of Medicine R01 LM05607

Direct Costs: \$825,413

Funding Period: 1999-2002

Role: Investigator (PI: John Griffith)

Title: *An Integrated Heuristics-Guided Meta-Analysis System*

Funding Source: NCCR/Small Business Technology Transfer Program R41 RR12418

Direct Costs: \$100,000

Funding Period: 1997-1998

Role: Statistician (PI: Joseph Lau)

Title: *Epidemiology, Clinical Trials, and Outcomes Research*

Funding Source: Nat. Institute of Diabetes and Digestive and Kidney Diseases 2T32DK007777

Direct Costs: \$347,901

Funding Period: 1998-2003

Role: Faculty Member (PI: Andrew Levey)

Title: *Training Evidence-Based Practitioners*

Funding Source: Agency for Healthcare Research and Quality R25 HS09796

Direct Costs: \$298,521

Funding Period: 1998-2001

Role: Investigator (PI: Joseph Lau)

Title: *Individual Patient Meta-Analysis in Chronic Renal Disease*

Funding Source: National Institute of Diabetes and Digestive and Kidney Diseases R01 DK53869

Direct Costs: \$605,980

Funding Period: 1999-2002

Role: Statistician (PI: Andrew Levey)

Title: *Analysis of Longitudinal Cardiopulmonary Data*

Funding Source: National Institute of Heart, Lung and Blood 2R01 HL40619

Direct Costs: \$164,766

Funding Period: 1991-2002

Role: Principal Investigator on NEMC subcontract (PI: Bernard Rosner)

Title: *Combining Different Data Sources to Assess Treatments*

Funding Agency: Agency for Healthcare Research and Quality 5 R01 HS10064

Direct Costs: \$453,009

Funding Period: 1998-2002

Role: Principal Investigator

Title: *Statistical Analysis of Human Circadian Rhythms*

Funding Source: National Institute of General Medicine R01 GM53559

Direct Costs: \$53,160

Funding Period: 2000-2003

Role: Principal Investigator on NEMC Subcontract (Overall PI: Emery Brown, MD, PhD)

Title: *Combining N-of-1 Trials to Assess Fibromyalgia Therapies*

Funding Source: National Institute of Arthritis and Musculoskeletal and Skin Diseases R01 AR45416

Direct Costs: \$896,526

Funding Period: 1999-2003

Role: Statistician (PI: Deborah Zucker)

Title: *Specialized Center of Research in Ischemia: Core C Statistical Core*
Funding Source: National Institute of Heart, Lung and Blood P50 HL63494
Direct Costs: \$90,470
Funding Period: 2000-2005
Role: Statistician (PI: Michael Mendelsohn)

Title: *Hypertension and Renal Disease in the Pakistani Population*
Funding Source: Fogarty International 5R03TW005657
Direct Costs: \$32,000
Funding Period: 2002-2005
Role: Statistician (PI: Andrew Levey)

Title: *Clinical Studies in Patients with Lyme Disease*
Funding Source: National Institute of Arthritis and Infectious Disease N01 AI65308
Direct Costs: \$ 6,720,169
Funding Period: 1996-2005
Role: Senior Statistician/ Principal Investigator (PI 1996-2001 Mark Klempner)

Title: *Dealing with Publication Bias in Meta-Analysis*
Funding Source: Agency for Healthcare Research and Quality R01 HS10254
Direct Costs: \$388,565
Funding Period: 1999-2006
Role: Investigator (PI: Norma Terrin)

Title: *Social and Affective Processes in Autism*
Funding Source: NIMH/NICHHD U54 MH/HD 66398
Direct Costs: \$8,104,839
Funding Period: 2003-2009
Role: Statistician (PI: Helen Tager-Flusberg)

Title: *Tufts-NEMC-Sackler Clinical Research Curriculum*
Funding Source: National Heart Lung and Blood Institute K30 HL04116
Direct Costs: \$1,000,000
Funding Period: 1999-2008
Role: Faculty Member (PI: Harry Selker)

Title: *Language in Autism: Clinical and Basic Studies*
Funding Source: National Institute of Mental Health 1PO1 HD34578
Direct Costs: \$4,123,176
Funding Period: 1997-2007
Role: Statistician (PI: Helen Tager-Flusberg)

Title: *Improving Meta-Analysis of Diagnostic Test Studies*
Funding Agency: Agency for Healthcare Research and Quality 1 R01 HS13328
Direct Costs: \$404,351
Funding Period: 2002-2007
Role: Principal Investigator

Title: *A System for Comprehensive Meta-Analysis*
Funding Agency: National Center for Research Resources 1 R33 RR17109
Direct Costs: \$750,000
Funding Period: 2002-2007
Role: Principal Investigator

Title: *Meta-analysis of Studies with Multiple Outcomes and Correlated Covariates*
Funding Source: Pfizer Inc
Direct Costs: \$100000
Funding Period: 2006-2008
Role: Statistician (PI: Joseph Lau)

Title: *Chronic Renal Disease-Individual Patient Meta Analysis*
Funding Source: National Institute of Diabetes and Digestive and Kidney Diseases 5 R01 DK053869
Direct Costs: \$1,751,793
Funding Period: 1999-2007
Role: Statistician (PI: Andrew Levey)

Title: *GPCR Variants as Genetic Determinants of Obesity*
Funding Source: NIDDK/NIA/NCCAM 1R01DK072497
Direct Costs: \$5,193,236
Funding Period: 2005-2009
Role: Statistician (PI: Alan Kopin)

Title: *Mechanisms of Varicose Vein Formation*
Funding Source: NIH/NHLBI 5R01HL081730
Direct Costs:
Funding Period: 2006-2009
Role: Statistician (PI: Mark lafrati)

Title: *Computer Program for Meta-analysis*
Funding Source: AHRQ Contract #290-02-0022
Direct Costs: \$94,388
Funding Period: 2008-2009
Role: Co-Investigator (PI: Joseph Lau)

Title: *Relationship of Vitamin D and Calcium Intake to Nutrient Status Indicators and Health Outcomes*
Funding Source: AHRQ Contract
Direct Costs: \$348,879
Funding Period: 2008-2009
Role: Co-Investigator (PI: Joseph Lau)

Title: *Molecular Mechanisms of Vascular Relaxation*
Funding Source: National Heart, Lung and Blood Institute 1P01HL077378
Direct Costs: \$11,300,000
Funding Period: 2004-2009
Role: Statistician (PI: Michael Mendelsohn)

Title: *Computer Assisted Abstract Screening*
Funding Source: Tufts Medical Center Research Award
Direct Costs: \$50,000
Funding Period: 2009-2010
Role: Principal Investigator

Title: *Clinical Research Training in Infectious Diseases*
Funding Source: Nat. Institute of Allergy and Infectious Disease 1T32AI055412
Direct Costs: \$1,451,608
Funding Period: 2004-2009
Role: Statistician (PI: David Snyderman)

Title: *Chronic Renal Disease-Individual Patient Meta Analysis*
Funding Source: National Institute of Diabetes and Digestive and Kidney Diseases U01 RDK 053869A
Direct Costs: \$1,751,793
Funding Period: 2003-2010
Role: Statistician (PI: Andrew Levey)

Title: *Tai Chi for Fibromyalgia*
Funding Source: NIH/NCCAM R21 AT 003621
Direct Costs: \$100,000
Funding Period: 2007-2010
Role: Statistician (PI: Chenchen Wang)

Title: *Evaluation of GFR Estimating Equations in HIV Positive Patients*
Funding Source: Gilead Sciences, Inc
Direct Costs: \$588,108
Funding Period: 2008-2011
Role: Statistician (PI: Lesley Stevens)

Title: *Statistical Support for United States Army Research Institute of Environmental Medicine*
Funding Source: US Army W911QY-06-P-0270
Direct Costs: \$12,000/yr
Funding Period: 2007-2012
Role: Principal Investigator

Title: *Tufts Clinical and Translational Science Institute*
Funding Source: NIH/NCRR UL1 RR025752
Direct Costs: \$20,000,000
Funding Period: 2008-2013
Role: Statistician (PI: Harry Selker)

Title: *Postdoctoral Fellowships in Health Services Research*
Funding Source: Agency for Healthcare Research and Quality T32 HS00060
Direct Costs:
Funding Period: 1993-2012
Role: Faculty Member (PI: Harry Selker)

Title: ARRA: *EPC Methods Research and Resource Activities for Evidence Synthesis – Statistical Issues*
Funding Source: AHRQ Contract HHSA 290-2007-10055-I Task Order No. 6
Direct Costs: \$950,000
Funding Period: 2009-2012
Role: Co-Investigator (PI: Joseph Lau)

Title: *Empirical Evaluation of Multivariate Meta-analysis for Binary Outcomes*
Funding Source: Agency for Healthcare Research and Quality
Direct Costs: \$27255
Funding Period: 2011-2013
Role: Statistical advisor (PI: Thomas Trikalinos)

Title: *Empirical Evaluation of Meta-analysis of Proportions and Rates*
Funding Source: Agency for Healthcare Research and Quality
Direct Costs: \$15000
Funding Period: 2011-2013
Role: Statistical advisor (PI: Thomas Trikalinos)

Title: *Evaluating Practices & Developing Tools for Comparative Effectiveness Reviews of Diagnostic Test Accuracy*
Funding Source: Agency for Healthcare Research and Quality
Direct Costs: \$73000
Funding Period: 2011-2013
Role: Statistical advisor (PI: Thomas Trikalinos)

Title: *Developing a Framework for Grading the Strength of Methodological Recommendations for Systematic Review and Meta-Analysis*
Funding Source: Agency for Healthcare Research and Quality
Direct Costs: \$73000
Funding Period: 2011-2013
Role: Statistical advisor (PI: Thomas Trikalinos)

Title: *Kidney Function, Aortic Stiffness and Aging*
Funding Source: National Institute of Diabetes and Digestive and Kidney Diseases R01 DK 082447
Direct Costs:
Funding Period: 2010-2013
Role: PI on subcontract (PI: Andrew Levey)

Title: *Modernizing Meta-Analysis to Facilitate Comparative Effectiveness Reviews*
Funding Source: Agency for Healthcare Research and Quality R01 HS 018574
Direct Costs: \$778,325
Funding Period: 2009-2013
Role: Principal Investigator

Title: *Semi-Automated Abstract Screening for Comparative Effectiveness Reviews*
Funding Source: Agency for Healthcare Research and Quality R01 HS 018494
Direct Costs: \$727,722
Funding Period: 2009-2013
Role: Co-Investigator (PI: Thomas Trikalinos)

Title: *Standards in the Design, Conduct and Evaluation of Diagnostic Testing For Use in Patient Centered Outcomes Research*
Funding Source: Patient Centered Outcomes Research Institute PCORI-SOL-RMWG-001
Direct Costs:
Funding Period: 2012
Role: Member (PI: Constantine Gatsonis)

Title: *Tai Chi and Knee Osteoarthritis*
Funding Source: National Center for Complementary and Alternative Medicine
Direct Costs: \$381,917
Funding Period: 2010-2015
Role: Senior Statistician (PI: Chenchen Wang)

Title: *Integrating Causal Inference, Evidence Synthesis, and Research Prioritization Methods*
Funding Source: Patient Centered Outcomes Research Institute
Direct Costs: \$700,000
Funding Period: 2013-2016
Role: Co-Investigator (PI: John Wong)

Title: *Making Advanced and Accessible Statistical Tools for Quantitative Research Synthesis in Ecology and Evolutionary Biology*
Funding Source: National Science Foundation
Direct Costs: \$309,382
Funding Period: 2013-2016
Role: Co-Investigator (PI: Byron Wallace and Jessica Gurevitch)

Title: *Tai Chi and Fibromyalgia*
Funding Source: National Center for Complementary and Alternative Medicine
Direct Costs: \$451,591
Funding Period: 2011-2016
Role: Senior Statistician (PI: Chenchen Wang)

Title: *Evidence Based Practice Center IV*
Funding Source: Agency for Healthcare Research and Quality
Direct Costs: \$70000
Funding Period: 2012-2015
Role: Statistical advisor (PI: Thomas Trikalinos)

Title: *Evaluating Observational Data Analyses: Confounding Control and Treatment Effect Heterogeneity*
Funding Source: Patient Centered Outcomes Research Institute
Direct Costs: \$700,000
Funding Period: 2014-2016
Role: Co-Investigator (PI: Issa Dahabreh)

Title: *Making better use of randomized trials: assessing applicability & transporting causal effects*
Funding Source: ME-1502-27794, Patient Centered Outcomes Research Institute
Direct Costs: \$750,000
Funding Period: 2015-2016
Role: Co-Investigator (PI: Issa Dahabreh)

Title: *Methods and Dissemination: Collaboration to improve validity, consistency, and utility of systematic reviews*
Funding Source: Agency for Healthcare Research and Quality
Direct Costs: \$47,385
Funding Period: 2013-2017
Role: Co-Investigator (PI: Thomas Trikalinos)

Title: *N-of-1 Trials Using mHealth in Chronic Pain*
Funding Source: R01 NR13938 National Institute of Nursing Research
Direct Costs: \$290,273 (subcontract)
Funding Period: 2012-2018
Role: PI on subcontract (Overall PI: Richard Kravitz)

Title: *Develop, Test and Disseminate a New Technology to Modernize Data Abstraction in PCOR Systematic Reviews*
Funding Source: ME-1310-07009 PCORI
Direct Costs: \$184,899 (subcontract)
Funding Period: 2014-2018
Role: PI on subcontract (Overall PI: Tianjing Li)

Title: *Develop Patient Centered Outcomes Scholars for Comparative Effectiveness Research*
Funding Source: AHRQ 1K12 HS022998
Total Costs: \$1,200,000
Funding Period: 2014-2019
Role: Co-Investigator (PI: Thomas Trikalinos)

Title: *A Mobile App for Designing and Analyzing Data from Personalized Experiments.*

Funding Source: Brown Catalyst Grant Program GR300170

Total Costs: \$20,000

Funding Period: 2019-2020

Role: Principal Investigator

Title: *Innovative Training to Improve CER PCOR Systematic Review Production and Uptake*

Funding Source: Agency for Health Care Research and Quality R25 HS23299

Total Costs: \$2,500,000

Funding Period: 2014-2020

Role: Principal Investigator

Title: *Using Single Subject (N-of-1) Designs to Answer Patient-Identified Research Questions*

Funding Source: PCORI PPRND-1507-31321

Total Costs: \$210,334 (subcontract)

Funding Period: 2017-2021

Role: PI on subcontract (Overall PI: Heather Kaplan)

Title: *A General Framework to Account for Outcome Reporting Bias in Systematic Reviews Statistical Methods and Software for Multivariate Meta-Analysis*

Funding Source: NIH R01 LM012607

Total Costs: \$1,346,580

Funding Period: 2017-2021

Role: Consultant (PI: Yong Chen)

Title: *RI-Center for Clinical and Translational Science*

Funding Source: NIH/NIGMS 1U54GM115677

Total Costs: \$19,000,000 (sub \$4,000,000)

Funding Period: 2016-2021

Role: Subcontract PI and Director of Biostatistics, Epidemiology, and Research Design Core (PI: James Padbury)

Title: *RI-Center for Clinical and Translational Science Supplement National COVID Cohort Collaborative (N3C)*

Funding Source: NIH/NIGMS 2U54GM115677

Total Costs: (sub): \$43,400

Funding Period: 2021-2023

Role: Subcontract PI (PI: Sharon Rounds)

Title: *Development of a novel mobile health tool for age-specific dehydration assessment and management in patients with diarrheal disease*

Funding Source: NIH/NIDDK R01 DK116163

Total Costs: \$3,300,000 (sub \$492,805)

Funding Period: 2018-2023

Role: Subcontract PI (PI: Adam Levine)

Title: *Statistical Methods and Software for Multivariate Meta-Analysis*
Funding Source: NIH R01 LM012982
Total Costs: \$1,320,000
Funding Period: 2019-2023
Role: Consultant (PI: Haitao Chu)

Title: *Center for Addiction and Disease Risk Exacerbation*
Funding Source: NIH/NIGMS P20 GM130414
Total Costs: \$11,738,566 (sub \$160,400)
Funding Period: 2019-2024
Role: Senior Statistician (PI: Peter Monti)

Mentoring Grants

Title: *A Network Meta-Analysis of Pharmacological Interventions for Knee Osteoarthritis*
Funding Source: Agency for Healthcare Research and Quality F32 HS 021396
Direct Costs: \$100,000
Funding Period: 2012-2013
Role: Faculty Mentor (PI: Ravi Bannuru)

Title: *Emulators for facilitating the development, analysis, and use of complex decision models with an application in prostate cancer*
Funding Source: R36 HS2465301, Agency for Healthcare Research and Quality
Direct Costs: \$40,000
Funding Period: 2016-2017
Role: Mentor (PI: Alexandra Ellis)

Title: *Postdoctoral Fellowships in Health Services Research*
Funding Source: T32 Agency for Healthcare Research and Quality
Direct Costs:
Funding Period: 2013-2017
Role: Faculty Mentor (PI: Vince Mor)

Title: *Center of Excellence in Physical Therapy*
Funding Source: Foundation for Physical Therapy
Direct Costs: \$2,286,921
Funding Period: 2013-2017
Role: Faculty Mentor (PI: Linda Resnik)

Title: *Patient-specific Treatment Effects through Meta-analysis of N-of-1 Trials*
Funding Source: R36 HS025675 Agency for Healthcare Research and Quality
Direct Costs: \$32,410 (subcontract)
Funding Period: 2018-2019
Role: Faculty Mentor on Dissertation Grant (Overall PI: Youdan Wang)

Title: *Tai Chi intervention to improve chronic pain management for adults with HIV*

Funding Source: NIH K23 AT010099

Total Costs: \$500,000

Funding Period: 2019-2024

Role: Faculty Mentor (PI: Eugene Dunne)

Title: *Promoting Research Training During Psychiatry Residency*

Funding Source: NIH NIMH 2R25MH101076

Total Costs: \$250,000

Funding Period: 2020-2025

Role: Faculty Mentor (PI: Audrey Tyrka)

Title: *Optimizing Brief Alcohol Interventions for Young Adults via Computational Methods*

Funding Source: NIH NIAAA K02 AA028630

Total Costs: \$669,000

Funding Period: 2021-2026

Role: Faculty Mentor (PI: Eun-young Mun)

Title: *Brown Respiratory Research Training Program*

Funding Source: NIH NHLBI 5T32HL134625

Total Costs: \$4,718,080

Funding Period: 2021-2026

Role: Faculty Mentor (PI: Elizabeth Harrington, Richard Bennett, Mitchell Levy and Sharon Rounds)

Teaching (at Harvard and Tufts)

1985-1986	Introduction to Statistics, Teaching Fellow, Department of Statistics, Harvard University
1987-1988	Introduction to Biostatistics, Teaching Fellow, Department of Statistics, Harvard
1989-1991	Statistical Instructor/Consultant, BBN Software Products
1991-1996	Statistical seminars and short courses at NEMC and Newton-Wellesley Hospital
1993-2012	Faculty of Health Services Research fellowship program, Tufts Medical Center
1993-1996	Statistical advisor to Think Tank seminar series, Newton-Wellesley Hospital
1996-1999	Clinical Epidemiology/Introduction to Clinical Care Research, Tufts School of Medicine
1996-2012	Study Design Seminar, Tufts School of Graduate Biomedical Sciences
1997, 1999	Predictive Models for Health Outcomes, Tufts School of Medicine
1997-2002	Intermediate Biostatistics: Regression, Tufts School of Graduate Biomedical Sciences
1998-2002	Scientific Manuscript and Grant Writing, Tufts School of Graduate Biomedical Sciences
2000	Introduction to Biostatistics, Tufts School of Graduate Biomedical Sciences
1998-2005	Introduction to Evidence-Based Medicine, Tufts School of Graduate Biomedical Sciences
2001	Advanced Biostatistics: Longitudinal Data Analysis, Tufts School of Medicine
2003, 2005	Genetic Epidemiology, Tufts School of Graduate Biomedical Sciences
2006-2007	Intermediate Biostatistics: Regression, Tufts School of Graduate Biomedical Sciences
2007	Advanced Topics in Biostatistics, Tufts School of Graduate Biomedical Sciences
2008	Topics in Statistics, Tufts School of Graduate Biomedical Sciences
2008-2010	Introduction to Biostatistics, Tufts School of Graduate Biomedical Sciences
2010	Intermediate Biostatistics: Regression, Tufts School of Graduate Biomedical Sciences
2010-2011	Advanced Biostatistics, Tufts School of Graduate Biomedical Sciences
2011	Machine Learning in Predictive Medicine, Tufts School of Graduate Biomedical Sciences

Teaching (at Brown)

2013 (spring)	PHP 2690A	Statistics in Interdisciplinary Research [8 students]
2013 (fall)	PHP 2690D	Practical Data Analysis [15 students]
2014 (spring)	PHP 2690F	Statistical Computing [11 students]
2014 (fall)	PHP 2550	Practical Data Analysis [21 students]
2014 (fall)	PHP 0100	First Year Seminar: Statistics is Everywhere (co-instructor) [7 students]
2015 (spring)	PHP 2511	Applied Regression Analysis [36 students]
2015 (spring)	PHP 2980	Seminar in Meta-Analysis [2 students]
2015 (fall)	PHP 0100	First Year Seminar: Statistics is Everywhere (co-instructor) [20 students]
2015 (fall)	PHP 2550	Practical Data Analysis [22 students]
2016(spring)	PHP 2530	Bayesian Statistical Methods [14 students]
2016 (fall)	PHP 0100	First Year Seminar: Statistics is Everywhere (co-instructor) [17 students]
2016(fall)	PHP 2550	Practical Data Analysis [20 students]
2017(fall)	GISP 0004	Sports Analytics [15 students]
2017(fall)	PHP 2550	Practical Data Analysis [22 students]
2018(spring)	PHP 2514	Applied Generalized Linear Models [25 students]
2018(spring)	DATA2020	Probability, Statistics, and Machine Learning: Advanced Methods [27 students]
2018(fall)	PHP 2550	Practical Data Analysis [21 students]
2018(fall)	PHP 0100	First Year Seminar: Statistics is Everywhere (co-instructor) [22 students]
2019(fall)	PHP 2550	Practical Data Analysis [32 students]
2020(fall)	PHP 2550	Practical Data Analysis [29 students]
2021(spring)	PHP 1970	Independent Study in Bayesian Meta-Analysis [Hao Liu]
2022(spring)	PHP2690H	Design of Experiments [10 students]

2022(fall)	PHP 1510	Principles of Biostatistics and Data Analysis (34 students)
2023(spring)	PHP 2590	Design of Experiments (9 students)
2023(fall)	PHP 1510	Principles of Biostatistics and Data Analysis (33 students)
2024(fall)	PHP 1510	Principles of Biostatistics and Data Analysis (32 students)
2025(spring)	PHP 2590	Design of Experiments (13 students)
2025(fall)	PHP 2550	Practical Data Analysis (36 students)
2026(spring)	PHP 2690J	Meta-Analysis: Synthesizing Evidence From Different Data Sources

Training of Graduate Students/Fellows

Post-Doctoral (Tufts)

Deborah Zucker (1994-1996)
 Boris Coronado (1994-1996)
 Peter Bonis (1995-1997)
 Eric Engels (1996-1998)
 Ioannis Giatras (1996-1997)
 Ethan Balk (1997-1999)
 Tazeen Jafar (1997-1999)
 Inga Peter (2003-2004)

K-Award Mentor (Brown)

Eugene Dunne, Temple University (2019-2024)
 Eun-young Mun, University of North Texas Health Science Center (2021-)
 Amin Zand Vakili, Brown/Providence VA Medical Center (2021-)
 Bridget Hron, Harvard/Boston Children's Hop (2022-)
 Matthew Murphy Brown/RI Public Health Institute (2022-)
 May-tal Sauerbrun Cutler/Women and Infants Hospital (2023-)
 Ankur Shah/RI Hospital (2024-)

Research Associate Supervision (Brown)

Joseph Servadio (2013-2015)
 Michael Seo (2016-2017)
 Youdan Wang (2015-2019)
 Jiabei Yang (2018-2021)
 Kexin Qu (2019-2023)
 Joanna Walsh (2023)
 Yiwen Liang (2023)
 Jing Fu (2023-)
 Monica Colon Vargas (2024-)

Doctoral Academic Advisor (Brown)

1. Yizhen Xu (2014-5)
2. Joanna Walsh (2022-3)
3. Monica Colon Vargas (2023-)
4. Haiyue Song (2024-2025)

Doctoral Dissertation Advisor (Brown)

1. Youdan (Kelsey) Wang (2015-2020) Brown University, PhD candidate in Biostatistics
Dissertation: *Meta-Analysis of N-of-1 Trials Using Bayesian Hierarchical Models*
2. Jiabai Yang (2018-2022) Brown University, PhD candidate in Biostatistics
Dissertation: *Topics in Heterogeneous Treatment Effects Estimation*
3. Kexin Qu (2019-2024) Brown University, PhD candidate in Biostatistics
Dissertation: *Bayesian Methods for Analyzing Individual-Level Data from Multiple Trials Considering Correlation, Non-compliance and N-of-1 Designs*

Doctoral Dissertation Committee Member (Brown)

1. Wei Cheng (2012-2016) Brown University, PhD candidate in Biostatistics
Dissertation: *Network Meta-analysis of Diagnostic Accuracy Studies*
2. Mun Sang Yue (2015-2017) Brown University, PhD candidate in Biostatistics
Dissertation: *Evaluation of Predictive Accuracy of Tests and Impact of Tests on Patient Outcomes*
3. Alexandra Ellis (2015-2018) Brown University, PhD candidate in Health Services Research
Dissertation: *Emulators to facilitate the development and analysis of computationally expensive decision analytic models in health*

Masters Academic Advisor (Brown)

Year	Student
2012-2014	Christopher Halladay
2012-2014	Mengqi Jin
2012-2014	Ching Han Hsaio
2013	Olivia Ruggiero
2013-2015	Joseph Servadio
2013-2015	Feifei Ding
2013-2015	Ruoshui Zhai
2014-2015	Chieh Chu
2014-2015	Zhongli Zhang
2014-2016	Valerie Langberg
2014-2016	Alex Reda
2014-2015	Lin Lin
2014-2016	Megan Thompson
2014-2015	Andrew Leith
2015-2016	Sarah Robertson
2015-2016	Ian Pan
2016-2017	Marisa Millenson
2016-2017	Rishi Kowalski
2017-2018	Jessica Kaminski
2017-2018	Derrick Yam
2017-2018	Yiquan Xu
2017-2018	Bowei Wei
2020-2020	Runyu Hai

2020-2020	Augustus Ge
2020-2020	Kaori Ito
2020-2020	Yan Zhao
2020-2020	Uttam Bhetuwal
2020-2022	Joanna Walsh
2022-2023	Destiny Rankins
2024-2025	Mo Zhou
2024-2025	Weijing Yin
2025-	Belinda Kang

Masters Thesis Advisor (Brown)

1. Lisa Wang (2012-2013) Brown University, Master of Science in Biostatistics
Thesis: *Simulation Study of the Effect of Correlation in Bivariate Meta-Analysis of Sensitivity and Specificity*
2. Christopher Halladay (2013-2014), Brown University, Master of Science in Biostatistics
Thesis: *Looking for studies beyond PubMed: what is the benefit of searching multiple sources when conducting systematic reviews?*
3. Mengqi Jin (2013-2015), Brown University, Master of Science in Biostatistics
Thesis: *Using contextual information to improve clinical reviews' section ranking performance*
Awarded Best Masters Thesis, Brown Department of Biostatistics
4. Chieh Chu (2014-2015), Brown University, Master of Science in Biostatistics
Thesis: *Derivation of Clinical Prediction Rules for Severe Dehydration of Children Living in Resource-limited Areas*
5. Andrew Leith (2014-2016), Brown University, Master of Science in Biostatistics
Thesis: *Causal inference for point exposures with heterogeneous treatment effects using inverse probability of treatment weighting*
6. Sarah Robertson (2015-2016), Brown University, Master of Science in Biostatistics
Thesis: *Development and Validation of Clinical Prediction Models for Dehydration of Children living in Resource-Limited Areas*
7. Ziling Qin (2016-2017), Brown University, Master of Science in Biostatistics.
Thesis: *Development and validation of clinical prediction models for dehydration of children living in resource-limited areas using machine learning*
8. Yuanfei Chen (2016-2017), Brown University, Master of Science in Biostatistics
Thesis: *Developing Stopping Rules for a Machine Learning System in Citation Screening*
9. Marisa Millenson (2016-2017), Brown University, Master of Science in Biostatistics
Thesis: *Six-Month Oral Medication Adherence Early in Disease Course as a Predictor of Pediatric Inflammatory Bowel Disease-Specific Outcomes Over Time*
10. Rishi Kowalski (2017-2018), Brown University, Master of Science in Biostatistics
Thesis: *Analysis of Chief Complaint Text in Electronic Health Records for Identifying Suicidal Activity*

11. Bo Wang (2017-2018), Brown University, Master of Science in Biostatistics.
Thesis: *Simulation-based comparison of methods for meta-analysis of single proportions and rates*
Awarded Best Masters Thesis, Brown Department of Biostatistics
12. Khalil Ziaoui (2018-2019), Brown University, Master of Science in Biostatistics
Thesis: *Genetic contributions to the onset of depressive symptoms during adolescence*
13. Fuyu Zou (2018-2019), Brown University, Master of Science in Biostatistics
Thesis: *Bayesian network meta-analysis of nitinol stents, covered stents, drug-eluting stents and drug-coated balloons in the femoropopliteal artery*
14. Charles Blain Morin (2018-2019), Brown University, Master of Science in Biostatistics
Thesis: *Assessing Outcome Reporting Bias in a Systematic Review of Venous Thromboembolism Prophylaxis*
15. Lauren Bergam (2019-2020), Brown University, Master of Science in Biostatistics
Thesis: *A Network Meta-Analysis Evaluating Behavioral Interventions to Prevent STIs in Latino Adolescents Living in the United States*
16. My Vu (2020-2021), Brown University, Master of Science in Biostatistics
Thesis: *Assessing discrimination and calibration of ordinal risk prediction models*
17. David Carbonello (2020-2021), Brown University, Master of Science candidate in Biostatistics
Thesis: *Prediction of Acute Kidney Injury in Hospitalized COVID-19 Patients Using Machine Learning*
Awarded Best Masters Thesis, Brown Department of Biostatistics
18. Allison Quintana (2021-2022), Brown University, Master of Science in Biostatistics
Thesis: *Evaluating clinical utility of multi-category outcome risk prediction models*
19. Fandi Chang (2021-2022), Brown University, Master of Science in Biostatistics
Thesis: *Using Bayesian Multilevel Models to Analyze the Treatment Effects of Behavior Interventions from N-of-1 Trials*
20. Jasmine Wang (2021-2022), Brown University, Master of Science in Biostatistics
Thesis: *Predicting tracheostomy using ventilator support at 36 and 44 weeks in infants with severe bronchopulmonary dysplasia*
21. Talia Seshiaiah (2022-2023), Brown University, Master of Science in Biostatistics
Thesis: *Impact of Sequential N-of-1 Trials on Self-Selected Atrial Fibrillation Triggers and the Participant Decision-Making Process*
22. Zexuan Yu (2022-2023), Brown University, Master of Science in Biostatistics
Thesis: *Impact of FP coverage mandate on FP consultations and procedures among commercially and non-commercially insured reproductive-aged females in Rhode Island*
23. Yiwen Liang (2023-2024), Brown University, Master of Science in Biostatistics

Thesis: *A Comparison of Three Modeling Approaches for Analyzing the Impact of Rhode Island Urban Heat Islands on Emergency Medical Services Utilization*

24. Yunan Chen (2024-2025), Brown University, Master of Science in Biostatistics
Thesis: *A Comprehensive Review of the Stepped Wedge and Multiple Baseline Designs*

25. Depeng Wang (2025-2026), Brown University, Master of Science in Biostatistics
Thesis: *Developing an R Package for the Analysis of N-of-1 Studies Using a Bayesian Framework and Meta-Analysis Approach*

Thesis Committee Member/Reader (Brown)

1. Alyssa Feldman (2013-2014), Brown University, Master of Science in Biostatistics
Thesis: *Temporal Trends of Global Infectious Disease Outbreaks*

2. Anja Zgodic (2013-2014), Brown University, Master of Science in Biostatistics
Thesis: *Possible Pitfalls of Cumulative Sum Charts and Funnel Plots in Monitoring Clinical Performance and Outcomes*

3. Hao Deng (2014-2015), Brown University, Master of Public Health
Thesis: *Switch or Continuous Strategy of Single-agent Maintenance Therapy for Stage III/IV Non-small Cell Lung Cancer Patients Treated with Chemotherapy: A Systematic Review and Meta-Analysis*

4. Yanbing Wang (2016-2017), Brown University, Master of Science in Biostatistics.
Thesis: *Local Sensitivity Assessment of Discrete-Time Cox Regression to Informative Censoring with Application to an HIV-Care Engagement Study*

5. Carol Shum (2018-2019), Brown University, Master of Science in Biostatistics.
Thesis: *Comparison of Different Methods of Group Sequential Analysis*

6. Kirsten Voorhies (2019-2020), Brown University, Master of Science in Biostatistics.
Thesis: *Extensions of Leave-One-Out Meta-Analysis to Measure Replicability of Treatment Effects*

7. Mingxuan Bo (2019-2020), Brown University, Master of Science in Biostatistics
Thesis: *Factors Associated with Readmission of Pancreatic Cancer Patients Following Surgical Treatment*

8. Emma McMillan (2020-2021), Brown University, Master of Public Health candidate
Thesis: *A Systematic Review and Meta-Epidemiologic Analysis Comparing Enriched Enrollment Randomized Withdrawal (EERW) Trials and non-EERW Randomized Controlled Trials of Extended-Release Opioids for Chronic Non-Cancer Pain*

9. Whitney Su (2021-2022), Brown University, Master of Science candidate in Biostatistics
Thesis: *Modified Bootstrap for Causal Inference*

10. Jing Fu (2024-2025), Brown University, Master of Science candidate in Biostatistics
Thesis: *A Comprehensive Simulator for Spatially Resolved Transcriptomics*

11. Chang Guo (2025-2026), Brown University, Master of Science candidate in Biostatistics
Thesis: *Predicting Childhood Obesity at Age 7 Using Birth Characteristics and Early Growth Trajectories*

Doctoral (Outside Brown)

PhD Committee Member/Chair

1. Martin McIntosh (1995-1996) Harvard University, PhD in Statistics
Dissertation: *Controlling for an Ecological Parameter in Meta-Analysis and Hierarchical Models*
2. Irene Olsen (1998-2001) Tufts University, Ph D in Nutrition Science and Policy
Dissertation: *Neonatal Growth In Extremely Premature Infants*
3. Madhu Rao (2004-2010) Tufts University, PhD in Clinical and Translational Science (committee chair)
Dissertation: *TGF- β 1 Gene Variants in Chronic Kidney Disease – A Candidate Gene Study*
4. Mei Chung (2007-2010) Tufts University, PhD in Nutrition Science and Policy
Dissertation: *Translation and Application of Evidence-based Methodologies to the Field of Nutrition*
5. Winifred Yu (2007-2011) Tufts University, PhD in Nutrition Science and Policy
Dissertation: *The Application of Evidence-Based Methods to Nutrition Research and Challenges Encountered: Fiber and Cardiovascular Outcomes*
6. Anna Chaimani (2011- 2014) University of Ioannina, Greece, PhD in Hygiene/Epidemiology
Dissertation: *Investigating Bias in Network Meta-Analysis*
7. Raveendhara R. Bannuru (2010-2015) Tufts University, PhD in Clinical and Translational Science
Dissertation: *Pharmacological Treatments for Knee Osteoarthritis: A Network Meta-Analysis Approach to Investigate Comparative Effectiveness, Economic Efficiency, and the Placebo Effect*
8. Salima Punja (2011-2014) University of Alberta, Alberta, Canada. PhD in Epidemiology
Dissertation: *N-of-1 Methods and their Contribution to Systematic Reviews and Meta-analyses*
9. Kanella Panagiotopoulou (2023-2025) Université Paris Cité , Paris, France. PhD in Epidemiology
Dissertation: *Modelling Departures from Normality in Network Meta-Analysis*

Masters (Outside Brown)

Thesis Committee Member

1. Cathy Milch (1998-2006) Tufts University, Masters in Clinical Research
Thesis: *Differences in Triage Threshold for Patients Presenting with Possible Acute Coronary Syndromes: More than Meets the Eye*
2. Tauqeer Karim (1998-2001) Tufts University, Masters in Clinical Research
Thesis: *A Meta-Analysis of the Risk of Kidney Failure Following Recombinant Erythropoitin Therapy in Patients with Advanced Chronic Kidney Disease*
3. John Ogren (1999-2001) Tufts University, Masters in Clinical Research

Thesis: *The Skills and Behaviors of Children with Autism Spectrum Disorders: Development and Testing of a Questionnaire*

4. Manoj Reddy (2000-2003) Tufts University, Masters in Clinical Research
Thesis: *Dose Response Relationship of Angiotensin-Converting Enzyme Inhibitors in Chronic Renal Disease*
5. Alex Macalalad (2002-2003) Tufts University, Masters in Clinical Research
Thesis: *Mathematical Methods Using Genotype To Detect HIV Resistance to Antiretroviral Therapy*
6. James Hagadorn (2000-2004) Tufts University, Masters in Clinical Research
Thesis: *Cumulative Illness Severity and Lability of Illness Severity as Risk Factors for Progression from Prethreshold to Threshold Retinopathy of Prematurity: A Multivariable Analysis*
7. Katrin Uhlig (2001-2004) Tufts University, Masters in Clinical Research
Thesis: *Cross -Sectional characterization of Lipoprotein(a) in Chronic Kidney Disease*
8. Chris Mix (2001-2004) Tufts University, Masters in Clinical Research
Thesis: *The Impact of Modifiable Clinical Factors Upon Costs Associated with Kidney Transplantation*
9. Florence Solages (2002-2004) Tufts University, Masters in Clinical Research
Thesis: *Dietary Variety: Effects on Metabolism and Energy Intake*
10. Denise Rollinson (2004-2006) Tufts University, Masters in Clinical Research
Thesis: *The Treatment of Alcohol Intoxicated Patients in Academic Emergency Departments: Practices and Attitudes of Emergency Physicians*
11. Beata Puri (2004-2005) Tufts University, Masters in Clinical Research
Thesis: *Treatments of Chronic Steroid-Refractory Iridocyclitis in Children with Juvenile Rheumatoid Arthritis: A Systematic Review*
12. Nombulelo Magula (2004-2006) Tufts University, Masters in Clinical Research
Thesis: *Adherence to HAART in the First Year of the Rollout Program at King Edward VIII Hospital, KwaZulu-Natal, South Africa*
13. George Fares (2006) Tufts University, Masters in Clinical Research
Thesis: *A Critical Review of Meta-Analyses of Intervention Trials in Nephrology*
14. Bertrand Jaber (2003-2007) Tufts University, Masters in Clinical Research
Thesis: *Cytokine Gene Polymorphisms in Acute Renal Failure: Associates with Disease Severity*
15. Marci Drees (2005-2007) Tufts University, Masters in Clinical Research
Thesis: *Prior Environmental Contamination Increases Risk for Acquisition of Vancomycin-Resistant Enterococci*
16. Lien Quach (2006-2008) Tufts University, Masters in Clinical Research
Thesis: *Drug Use and Other Risk Factors Related to Lower Body Mass Index among HIV-Infected Individuals*

17. Craig Gordon (2006-2008) Tufts University, Masters in Clinical Research
Thesis: *Interferon Treatment in Hemodialysis Patients with Chronic Hepatitis C Virus Infection - a Systematic Review of the Literature, Meta-analysis and Individual Patient Data Analysis of Treatment Efficacy*
18. Dena Rifkin (2006-2008) Tufts University, Masters in Clinical Research
Thesis: *Kidney Function and Changes in Inflammatory Markers in Older Adults*
19. Nick Stoychkoff (2006-2008) Tufts University, Masters in Clinical Research
Thesis: *The Nephrotic Syndrome in Diabetic Kidney Disease*
20. Martin Wagner (2007-2009) Tufts University, Masters in Clinical Research
Thesis: *Mycophenolate Mofetil versus Azathioprine for Primary Immunosuppression in Kidney Transplant Recipients*
21. Georges Kitsios (2008-2010) Tufts University, Masters in Clinical and Translational Science
Thesis: *Heterogeneity of the phenotypic definition of coronary artery disease and its impact on genetic association studies*
22. Gowri Raman (2008-2010) Tufts University, Masters in Clinical and Translational Science
Thesis: *Off-Label Uses of Drug-Eluting Stents in Coronary Artery Disease: A Systematic Review and Meta-analysis*
23. Aneet Deo (2009-2010) Tufts University, Masters in Clinical and Translational Science
Thesis: *Systematic Evaluation of Loss to Analysis in Randomized Controlled Trials in Chronic Kidney Disease*
24. Johanna Contreras (2009-2010) Tufts University, Masters in Clinical and Translational Science
Thesis: *Factors Associated with Delayed Pre-Hospital Time in Patients with Suspected Acute Coronary Syndrome: Effect of Gender*
25. Issa Dahabreh (2009-2011) Tufts University, Masters in Clinical and Translational Science
Thesis: *Genotype misclassification in genetic association studies of the rs1042522p53 (Arg72Pro) polymorphism: a systematic review of studies in breast, lung, colorectal, ovarian, and endometrial cancer*
26. Annette Tobar (2010-2011) Tufts University, Masters in Clinical and Translational Science
Thesis: *The Comparative Effectiveness of Anti-TNF Therapy in Crohn's Disease: A Network Meta-Analysis of Indirect Comparisons*
27. Smita Padala (2009-2011) Tufts University, Masters in Clinical and Translational Science
Thesis: *Accuracy of a Glomerular Filtration Rate Estimating Equation over Time in People with a Wide Range of Kidney Function*
28. Moain Abu Dabrh (2010-2012) Tufts University, Masters in Clinical and Translational Science
Thesis: *Metabolic Syndrome, Helicobacter pylori and cagA. The Disease, the Bug and the Gene*
29. Michael Milagkos (2011-2013) Tufts University, Masters in Clinical and Translational Science
Thesis: *Leukotriene receptor antagonists versus placebo in the treatment of asthma in adults and*

adolescents: a systematic review and meta-analysis