May 2012

CURRICULUM VITAE
Ciprian M. Crainiceanu

PERSONAL DATA

Associate Professor
Johns Hopkins University
Department of Biostatistics
615 N. Wolfe Street, E3636
Baltimore, MD 21205, USA
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EDUCATION AND TRAINING

2003	Ph.D., Statistics, Cornell University Advisor Professor David Ruppert Thesis "Nonparametric Likelihood Ratio Tests"
2002	M.S., Statistics, Cornell University
1998	M.S., Applied Mathematics, University of Bucharest, Romania
1996	B.S., Mathematics, University of Bucharest, Romania

PROFESSIONAL EXPERIENCE

Official appointments

Jan. 2009 - Present	Associate Professor Department of Biostatistics, Johns Hopkins University
March 2004-Dec. 2008	Assistant Professor Department of Biostatistics, Johns Hopkins University
July 2003–Feb. 2004	Visiting Assistant Professor School of ORIE, Cornell University
Aug. 2000–June 2003	Research Assistant for Professor David Ruppert Department of Statistics, Cornell University

PROFESSIONAL EXPERIENCE (continued)

Oct. 1996–June 1999	Teaching Assistant University of Bucharest

Extended visits to other Departments

May 2009	Department of Statistics, University of Bristol, UK
May 2006	Department of Statistics, Ludwig-Maximilians Universität, Germany
September 2005	Department of Statistics, Texas A&M University
January 2005	Department of Statistics, University of Lancaster, UK

PROFESSIONAL ACTIVITIES

Membership

American Statistical Association
The International Biometric Society

Review of proposals

NIH, 2012-2018, member of the study section Biostatistical Methods and Research Design

NIH, June 2012, ad-hoc member of the study section Biostatistical Methods and Research Design

NIH, February 2012, Chair of study section Multidisciplinary Healthcare Delivery Research AREA ZRG1 HDM-T (90) S

NIH, March 2012, mail reviewer for study section Center for Scientific Review Special Emphasis Panel ZRG1 HDM-R (11) B

NIH, October 2011, Co-Chair of study section for Healthcare Delivery and Methodologies ZRG1 HDM-T (90) S

NIH, October 2011, study section member for Healthcare Delivery and Methodologies IRG [HDM] ZRG1 HDM-Q (54)

NIH, February 2011, study section member for Special Emphasis Panel/Scientific Review Group 2011/05 ZRG1 HDM-G (02) M

NIH/CDC, June 2009, study section member for Grants for Public Health Research – Dissertation (Panel H)

EDITORIAL ACTIVITIES

- Associate editor for: Journal of the American Statistical Association Theory & Methods 2008-2010; Biometrics 2008-2012; Statistica Sinica 2008-2011
- Referee for: Advances in Statistical Analysis, Annals of Applied Statistics; Annals of Statistics; Biometrika; Biostatistics; Biometrics; Canadian Journal of Statistics;

Circulation; Clinical Trials; Environmental Science and Technology; Environmental Statistics; Environmetrics; International Journal of Biostatistics; Journal of American Statistical Association; Journal of Epidemiology; Journal of Computational Statistics and Data Analysis; Journal of Computational and Graphical Statistics; Journal of Royal Statistical Society; Journal of Statistical Planning and Inference; Journal of Neuroimaging; Journal of Nonparametric Statistics; NeuroImage; Scandinavian Journal of Statistics; Statistica Sinica; Statistics and Computing; Statistical Science; Statistics in Medicine; Technometrics; Test

- Book reviewer for: Chapman-Hall; Springer Verlag

HONORS AND AWARDS

2011	Cited for Teaching Excellence: JHU Bloomberg School of Public Health
2008	AMTRA: The Advising, Mentoring, and Teaching Award, JHU
2006	Gottfried F. Noether Junior Scholar Award, ASA.
2005	Faculty Innovation Award, Johns Hopkins University.
2002	"Best overall student presentation Award" Albany Chapter, ASA.
1998	Eastern European young researcher TEMPUS Fellowship
1993-94	Eastern European student TEMPUS Fellowship
1992	National Mathematics Contest 'Gheorghe Titeica', 1st.
1992	National Mathematics Olympiad, 3rd.
1988-98	Emeritus Romanian National Fellowship.

PUBLICATIONS

Books

- Carroll RJ, Ruppert D, Stefanski, LA, **Crainiceanu CM**. *Measurement Error in Nonlinear Models: A Modern Perspective,* Chapman & Hall/CRC, 2006

Peer reviewed articles

Statistical methodology

- Bai J, Goldsmith AJ, Caffo BS, Glass TA, **Crainiceanu CM**. *Movelets: A dictionary of movement*, Electronic Journal of Statistics, 6, 559-578, 2012
- **Crainiceanu CM**, Staicu AM, Ray S, Punjabi NM. *Bootstrap-based inference on the difference in the means of two correlated functional processes*, Statistics in Medicine, to appear
- Swihart BJ, Caffo BS, **Crainiceanu CM**, Punjabi NM. *Mixed effect Poisson log-linear models for clinical and epidemiological sleep hypnogram data*, Statistics in Medicine, 2012, doi: 10.1002/sim.4457
- Goldsmith AJ, **Crainiceanu CM**, Caffo BS, Reich D. *Longitudinal Penalized Functional Regression*, Journal of the Royal Statistical Society, Series C, 61(3), 2012
- **Crainiceanu CM**, Staicu A-M. *Comments on "Clustering random curves under spatial interdependence with application to service accessibility" by H. Jiang and N. Serban*, Technometrics, to appear
- Staicu A-M, **Crainiceanu CM**, Reich DS, Ruppert D. *Modeling functional data with spatially heterogeneous shape characteristics*, Biometrics, to appear

- Zipunnikov V, Caffo BS, Davatzikos C, Schwartz B, **Crainiceanu CM**. *Multilevel functional principal component analysis for high dimensional data*, Journal of Computational and Graphical Statistics, 20(4), 852-873, 2011
- Goldsmith AJ, Wand MP, **Crainiceanu CM**. *Functional regression via variational Bayes,* Electronic Journal of Statistics, 5, 572-602, 2011
- **Crainiceanu CM**, Caffo BS, Morris J. *Multilevel functional data analysis,* The SAGE Handbook of Multilevel Modeling, 2011
- **Crainiceanu CM**, Caffo BS, Luo S, Zipunnikov V, Punjabi NM. *Population value decomposition, a framework for the analysis of images,* Journal of the American Statistical Association, discussion paper, 2011, 106(495), 775-790.
- **Crainiceanu CM**, Caffo BS, Luo S, Zipunnikov V, Punjabi NM. *Answer to comments on the paper "Population value decomposition, a framework for the analysis of images",* Journal of the American Statistical Association, 2011, 106(495), 803-806.
- Goldsmith AJ, Caffo BS, **Crainiceanu CM,** Reich D, Du Y, Hendrix C. *Nonlinear tube-fitting for the analysis of anatomical and functional structure*, Annals of Applied Statistics, 5(1), 337-363, 2011
- Greven S, **Crainiceanu CM**, Caffo BS, Reich D. *Longitudinal functional principal component analysis*, Electronic Journal of Statistics, 4, 1022-1054, 2010
- Goldsmith AJ, Bobb J, **Crainiceanu CM**, Caffo BS, Reich D. *Penalized functional regression*, Journal of Computational and Graphical Statistics, 20(4), 830-851, 2011
- **Crainiceanu CM.** *Comments on "Spatial prediction in the presence of positional error", by T.R. Fanshawe and P.J. Diggle*, Environmetrics, 22, 23-24, 2010
- Caffo BS, **Crainiceanu CM,** Verduzco G, Joel S, Mostofski S, Bassett SS, Pekar JJ. *Two-stage decompositions for the analysis of functional connectivity for fMRI with application to Alzheimer's disease risk*, NeuroImage, 51(3), 1140-1149, 2010
- Staicu A-M, **Crainiceanu CM**, Carroll RJ. *Fast Methods for Spatially Correlated Multilevel Functional Data*, Biostatistics, 11(2), 177-194, 2010
- Kneib T, Brezger A, **Crainiceanu CM**. *Generalized Semiparametric Regression with Covariates Measured with Error*. In: Statistical Modelling and Regression Structures Festschrift in Honour of Ludwig Fahrmeir, Kneib T and Tutz G (Eds.), Physica-Verlag, 2010
- **Crainiceanu CM**, Staicu A-M, Di C-Z. *Generalized Multilevel Functional Regression*, Journal of the American Statistical Association, 104(488), 1550–1561, 2009
- **Crainiceanu CM,** Goldsmith AJ. *Bayesian Functional Data Analysis using WinBUGS*, Journal of Statistical Software, 32(11), 2009
- Cheng Y-J, **Crainiceanu CM**. *Cox Models with Smooth Functional Effect of Covariates Measured with Error*, Journal of the American Statistical Association, 104(487), 1144-1154, 2009
- Di C, **Crainiceanu CM**, Caffo BS, Punjabi NM. *Multilevel Functional Principal Component Analysis*, The Annals of Applied Statistics, 3(1), 458-488, 2009
- **Crainiceanu CM.** *Comments on "Bayesian Generalized Method of Moments", by G. Yin*, Bayesian Analysis, 4(2), 213-216, 2009
- **Crainiceanu CM**, Caffo BS, Di C, Punjabi NM. *Nonparametric Signal Extraction and Measurement Error in the Analysis of Electroencephalographic Data,* Journal of the American Statistical Association, 104(486), 541-555, 2009

PUBLICATIONS (continued)

- Luo S, **Crainiceanu CM**, Louis TA, Chatterjee N. *Bayesian Inference for Smoking Cessation with a Latent Cure State,* Biometrics, 65, 970-978, 2009
- Caffo BS, Swihart B, Laffan A, **Crainiceanu CM**, Punjabi NM. *An Overview of Observational Sleep Research with Application to Sleep Transitioning*. Invited from Chance 22 (1), 10-15, 2009
- Caffo BS, **Crainiceanu CM**, Deng L, Hendrix CW. *A case study in pharmacologic imaging using principal curves in single photon emission computed tomography*, Journal of the American Statistical Association, 103(484), 1470-1480, 2008
- **Crainiceanu CM,** Dominici, F, Parmigiani, G. *Adjustment Uncertainty in Effect Estimation*, Biometrika, 95, 635-651, 2008
- **Crainiceanu CM.** *Likelihood Ratio Testing for Zero Variance Components in Linear Mixed Models*. In Model Uncertainty in Random Effects and Latent Variable Models, Ed. David B. Dunson, Springer Verlag, 2008
- Greven S, **Crainiceanu CM**, Kuechenhoff H, Peters A. *Restricted Likelihood Ratio Testing for Zero Variance Components in Linear Mixed Models*, Journal of Computational and Graphical Statistics, 17(4), 870-891, 2008
- **Crainiceanu CM**, Diggle, PJ, Rowlingson, B. *Bivariate Binomial Spatial Modeling of Loa loa Prevalence in Tropical Africa,* Journal of the American Statistical Association, discussion paper, 103(481), pp. 21-37, 2008
- **Crainiceanu CM**, Diggle, PJ, Rowlingson, B. Rejoinder to comments on ``*Bivariate Binomial Spatial Modeling of Loa loa Prevalence in Tropical Africa",* Journal of the American Statistical Association, 103(481), pp. 43-43, 2008
- Luo S, **Crainiceanu CM**, Louis TA, Chatterjee N. *Analysis of Smoking Cessation Patterns Using a Stochastic Mixed Effects Model with a Latent Cured State,* Journal of the American Statistical Association, 103(483), 1002-1013, 2008
- Krivobokova T, **Crainiceanu CM**, Kauermann, G. *Fast Adaptive Penalised Splines,* Journal of Computational and Graphical Statistics, 17(1), pp. 1-20, 2008
- **Crainiceanu CM**, Ruppert D, Carroll, RJ, Adarsh, J., Goodner, B. *Spatially adaptive Penalized splines with heteroscedastic errors*, Journal of Computational and Graphical Statistics, 16(2), pp. 265-288, 2007
- **Crainiceanu CM**, Vogelsang T. *Nonmonotonic Power for Tests of a Mean Shift in a Time Series*, Journal of Statistical Computation and Simulation, 77(6), 457-476, 2007
- Gimenez O, **Crainiceanu CM**, Barbraud C, Jenouvrier S, Morgan BJT. *Semiparametric Regression in Capture-Recapture Modelling*, Biometrics, 62(3), 691-698, 2006
- **Crainiceanu CM**, Ruppert D, Wand MP. *Bayesian Analysis for Penalized Spline Regression Using WinBUGS,* Journal of Statistical Software, 14(14), 2005
- **Crainiceanu CM**, Ruppert D, Claeskens G, Wand MP. *Exact likelihood ratio tests for penalised splines.* Biometrika, 92(1), pp. 91-103, 2005.
- Carroll RJ, Ruppert D, **Crainiceanu CM**, Tosteson T, Karagas M. *Nonlinear and Nonparametric Regression and Instrumental Variables.* Journal of the American Statistical Association, 99 (467), pp. 736-750, 2004.
- **Crainiceanu CM**, Ruppert D. *Restricted Likelihood Ratio Tests in Nonparametric Longitudinal Models.* Statistica Sinica, 14(3), pp. 713-729, 2004.

PUBLICATIONS (continued)

- **Crainiceanu CM**, Ruppert D. *Likelihood ratio tests in Linear Mixed Models with One Variance Component*. Journal of the Royal Statistical Society, Series B, 66, pp. 165-185, 2004.
- **Crainiceanu CM**, Ruppert D. *Likelihood Ratio Tests for Goodness-of-Fit of a Nonlinear Regression Model*. Journal of Multivariate Analysis, 91, pp. 35-52, 2004.
- **Crainiceanu CM**, Ruppert D, Stedinger JR, Behr C*T. Improving MCMC Mixing for a GLMM Describing Pathogen Concentrations in Water Supplies*. In: Case Studies in Bayesian Statistics Volume VI, pp. 207-221, Springer Verlag 2002

Statistical applications

- Sweeney E, Shinohara RT, Shea C, Reich D, **Crainiceanu CM**. *Automatic lesion incidence estimation and detection in multiple sclerosis using multisequence longitudinal MRIs*. American Journal of Neuroradiology, 2012, to appear
- Lauzon CB, Crainiceanu CM, Caffo BS, Landman BA. *Assessment of bias in experimentally measured diffusion tensor imaging parameters using SIMEX*. Magnetic Resonance Medicine, 2012, to appear
- Yang X, Lauzon CB, Crainiceanu CM, Caffo B, Resnick SM, Landman BL. *Biological parametric mapping accounting for random regressors with regression calibration and model II regression*, NeuroImage, to appear
- Paynter NP, **Crainiceanu CM**, Sharett R, Coresh J. *Effect of Correcting for Long Term Variation in Major Coronary Heart Disease Risk Factors: Relative Hazard Estimation and Risk Prediction in the ARIC Study*. Annals of Epidemiology, 22(3): 191-197, 2012
- Shinohara RT, Goldsmith AJ, Mateen S, **Crainiceanu CM**, Reich D. *Predicting Breakdown of the Blood-Brain Barrier in Multiple Sclerosis without Contrast Agents*, American Journal of Neuroradiology, 2011, to appear.
- Aurora RN, Caffo BS, **Crainiceanu CM**, Punjabi NM. *Correlating Subjective and Objective Sleepiness: Revisiting the Association Using Survival Analysis*. Sleep, 34(12): 1707-1714, 2011
- Clement L, De Beuf K, Thas O, Vuylsteke M, Irizarry RA, **Crainiceanu CM**. *Fast Wavelet Based Functional Models for Transcriptome Analysis with Tiling Arrays*. Statistical Applications in Genetics and Molecular Biology, 2011
- Shinohara RT, **Crainiceanu CM**, Caffo BS, Gaitan MI, Reich D. *Population-wide nonparametric quantification of blood-brain-barrier dynamics in Multiple Sclerosis.* NeuroImage, 57(4), pp. 1430-1446, 2011
- Rava M, **Crainiceanu CM**, Marcon A, Cazzoletti L, Pironi V, Silocchi C, Ricci P, de Marco R. *Proximity to wood industries and respiratory symptoms in children: A sensitivity analysis*. Environment International, 38(1), pp. 37-44, 2012
- Warner CV, Syc SB, Stankiewicz AM, Hiremath G, Farrell SK, **Crainiceanu CM**, Conger A, Frohman TC, Bisker ER, Balcer LJ, Frohman EM, Calabresi PA, Saidha S. *The Impact of Utilizing Different Optical Coherence Tomography Devices for Clinical Purposes and in Multiple Sclerosis Trials*. PLoS ONE 6(8): e22947
- Syc SB, Saidha S, Newsome SD, Ratchford JN, Levy M, Ford E, **Crainiceanu CM**, Durbin MK, Oakley JD, Meyer SA, Frohman EM, Calabresi PA. Retinal segmentation of

optical coherence tomography scans reveals ganglion cell layer pathology after acute optic neuritis. Brain, 2011, to appear

- Zipunnikov V, Caffo BS, Davatzikos C, Schwartz B, **Crainiceanu CM**. *Functional principal component analysis for high dimensional brain imaging*. NeuroImage, 58(3), pp. 772-784, 2011
- Goldsmith, JA, **Crainiceanu CM**, Caffo BS, Reich D. *Penalized Functional Regression analysis of white-matter tract profiles in Multiple Sclerosis*. NeuroImage, 57(2), pp. 431-439, 2011
- Korzeniewska A, Franaszczuk PJ, **Crainiceanu CM**, Kuś R, Crone NE. *Dynamics of large-scale cortical interactions at high gamma frequencies during word production: Event related causality (ERC) analysis of human electrocorticography (ECoG)*, NeuroImage, 56(4), pp. 2218-37, 2011
- Warner CV, Syc SB, Stankiewicz AM, Hiremath G, Farrell SK, **Crainiceanu CM**, Conger A, Frohman TC, Bisker ER, Balcer LJ, Frohman EM, Calabresi PA, Saidha S. *The impact of utilizing different optical coherence tomography devices for clinical purposes and in multiple sclerosis trials*. PloS One, to appear
- Tellez-Plaza M, Navas-Acien A, **Crainiceanu CM**, Sharrett AR, Guallar E. *Cadmium and Peripheral Arterial Disease: Gender Differences in the 1999-2004 US National Health and Nutrition Examination Survey*, American Journal of Epidemiology, 2010, to appear
- Gardner RM, Nyland JF, Evans SL, Wang SB, Doyle KM, **Crainiceanu CM**, Silbergeld EK. *Mercury induces an unopposed inflammatory response in human peripheral blood mononuclear cells in vitro*. Environmental Health Perspectives, 117(12), pp. 1932-1938, 2009
- Navas-Acien A, Umans JG, Howard BV, Goessler W, Francesconi KA, **Crainiceanu CM**, Silbergeld EK, Guallar E. *Urine arsenic concentrations and species excretion patterns in American Indian communities over a 10-year period: the Strong Heart Study,* Environmental Health Perspectives, 117(9), pp. 1428-1433, 2009
- Dominici, F, Wang C, **Crainiceanu CM**, Parmigiani G. Model selection and health effect estimation in Environmental Epidemiology, Epidemiology, 19(4), pp. 558-560, 2008
- Tellez-Plaza M, Navas-Acien A, **Crainiceanu CM,** Guallar E. *Cadmium Exposure and Hypertension in the 1999-2004 National Health and Nutrition Examination Survey (NHANES)*, Environmental Health Perspectives, 116(1), pp. 51-56, 2008
- Korzeniewska A, **Crainiceanu CM**, Franaszczuk P, Kus R, Crone N. *Dynamics of event-related causality (ERC) in brain electrical activity,* Human Brain Mapping, 2007
- Selvin E, **Crainiceanu CM**, Brancati FL, Coresh J. *Short-term Variability in Measures of Glycemia and Implications for the Classification of Diabetes*, Archives of Internal Medicine, 167(14), pp. 1545-1551, 2007
- Kottgen A, Russell SD, Loehr LR, **Crainiceanu CM**, Rosamond WD, Chang PP, Chambless LE, Coresh J. *Reduced Kidney Function as a Risk Factor for Incident Heart Failure: The Atherosclerosis Risk in Communities (ARIC) Study*, Journal of the American Society of Nephrology, 18, pp. 1307-1315, 2007
- Sinai A, Bowers CW, **Crainiceanu CM,** Boatman D, Gordon B, Lesser RP, Lenz FA, Crone NE. *Electrocorticographic high gamma activity versus electrical cortical stimulation mapping of naming*, Brain, pp. 1556-1570, 2005

PUBLICATIONS (continued)

- van Schaik G, Schukken YH, **Crainiceanu CM**, Muskens J, VanLeeuwen JA. *Prevalence Estimates for Paratuberculosis Adjusted for Test Variability Using Bayesian Analysis*. Preventive Veterinary Medicine, Preventive Veterinary Medicine, 60(4), 281-295, 2003
- **Crainiceanu CM**, Stedinger JR, Ruppert D, Behr CT. *Modeling the National distribution of Waterborne Pathogen Concentrations with Application to Cryptosporidium parvum,* Water Resources Research, 39(9), pp. 1-15, 2003

Proceedings

- Krivobokova, T, **Crainiceanu CM,** Kauermann, G. *Computationally Efficient Spatially Adaptive Penalized Splines*. Proceedings of the 21st Workshop on Statistical Modeling, Galway, Ireland, 2006.
- **Crainiceanu CM**, Stedinger JR. *Climate Variability and Flood Risk Management*. Risk-based decision making in water resources IX - Proceedings of the ninth conference, Santa Barbara, CA 2000.

Other published work

- **Crainiceanu CM.** *Review of the book Nonparametric Regression Methods for Longitudinal Data Analysis: Mixed-Effects Modeling Approaches* by H. Wu and J.T. Zhang, Journal of American Statistical Association, 102 (478), 2007
- **Crainiceanu CM.** *On the likelihood function for a multivariate MA(q) process*, Annals of the University of Bucharest, 47, pp. 125-130, 1999
- **Crainiceanu CM.** *On the optimum benefit in two and three person games*, Annals of the University of Bucharest, 47, pp. 33-40, 1998

Software

- Krivobokova T, **Crainiceanu** CM, Kauermann, G. (2006) *AdaptFit.* Software for adaptive penalized splines for Gaussian and non-Gaussian regression. Listed as a comprehensive R Archive Network
- Reiss P, Huang L, Goldsmith J-A, **Crainiceanu CM**. (2011) *Refund*. Regression with Functional Data. Listed as a comprehensive R Archive Network

Manuscripts under review/revisions

- Swihart B, Caffo BS, **Crainiceanu CM**. *A unified approach to modeling multivariate binary data using copulas over partitions*
- Goldsmith AJ, Huang L, **Crainiceanu CM**. *Smooth scalar-on-image regression*
- Goldsmith AJ, Greven S, **Crainiceanu CM**. *Corrected Confidence Bands for Functional Data Using Principal Components*
- Woodard DB, **Crainiceanu CM**, Ruppert D. *Hierarchical Adaptive Regression Kernels for Regression with Functional Predictors*
- Greven S, **Crainiceanu CM.** *Solving a Puzzle: Likelihood Ratio Testing for Penalized Splines*

- Di C-Z, **Crainiceanu CM**, Jank W. *Multilevel sparse functional principal component analysis*
- Shinohara RT, **Crainiceanu CM**, Caffo BS, Reich DS. *Longitudinal analysis of spatio-temporal processes: A Case Study of Dynamic Contrast-Enhanced Magnetic Resonance Imaging in Multiple Sclerosis*

CURRICULUM VITAE
Ciprian M. Crainiceanu
Part II

TEACHING

Advisees

Primary advisor, post-graduated

Ana-Maria Staicu	Post-doctoral Fellow, Statistics Currently: Tenure track Assistant Professor at North Carolina State University, Statistics Department
Sonja Greven	Post-doctoral Fellow, Biostatistics Currently: Research Associate at Ludwig Maximilian University Statistics Department
Vadim Zipunnikov	Post-doctoral Fellow, Biostatistics Currently: Tenure track Assistant Professor at Johns Hopkins University, Biostatistics Department
Bruce Swihart	Post-doctoral Fellow, Biostatistics

Primary thesis advisor, graduated

Sheng Luo	Doctoral student, Biostatistics Currently: Tenure track Assistant Professor at University of Texas at Houston, Biostatistics Department
Jeffrey Goldsmith	Doctoral student, Biostatistics Currently: Tenure track Assistant Professor at Columbia University, Biostatistics Department

Thesis co-advisor, graduated

Chongzhi Di	Doctoral student, Biostatistics Currently: Tenure Track Assistant Professor, Fred Hutchinson Cancer Center / Biostatistics Program
Yu-Jen Cheng	Doctoral student, Biostatistics Currently: Tenure Track Assistant Professor, National Tsing-Hua University / Taiwan/ Institute of Statistics

Primary thesis advisor, in progress

Haochang Shou	Doctoral student, Biostatistics
Jonathan Gellar	Doctoral student, Biostatistics
Yifei Sun	Doctoral student, Biostatistics
Lei Huang	Doctoral student, Biostatistics

Academic advisor

Jeffrey Goldsmith	Doctoral student, Biostatistics
Haochang Shou	Doctoral student, Biostatistics
Jonathan Gellar	Doctoral student, Biostatistics
Yifei Sun	Doctoral student, Biostatistics
Lei Huang	Doctoral student, Biostatistics
Sheng Luo	Doctoral student, Biostatistics
Chongzhi Di	Doctoral student, Biostatistics
Yu-Jen Cheng	Doctoral student, Biostatistics
Hong Zhu	Doctoral student, Biostatistics

TEACHING (continued)

Shanshan Li	Doctoral student, Biostatistics

Master students

Bing He	Master student, Biostatistics
Jiawei Bai	Master student, Biostatistics
Sahil Seth	Master student, Biostatistics
Samuel Ogunbo	Master student, Biostatistics
Vanja Sikirica	Master student, Biostatistics
Fasoro Yetunde	Master student, Biostatistics
Yaping Wang	Master student, Biostatistics

Classroom instruction

Johns Hopkins University

Year	Course Description	Enrollment
2007-11	Advanced Methods in Biostatistics VI (140.756) PhD core requirement	10-20 students
2007-11	Advanced Methods in Biostatistics V (140.755) PhD core requirement	10-20 students
2004-06	Advanced Methods in Biostatistics IV (140.754) PhD and ScM core requirement	10-20 students
2005-06	Advanced Methods in Biostatistics II (140.752) Guest lecturer PhD and ScM core requirement (Two weeks of lectures on linear mixed models)	10-20 students
2005-06	Advanced Methods in Biostatistics III (140.753) PhD and ScM core requirement	10-20 students

Cornell University

Year	Course Description	Enrollment
2003	Basic Engineering Probability and Statistics Engineering major core requirement	200 students
2003	Applied Time Series Analysis PhD and ScM elective	10-20 students

Other

2000-03	TA and tutor for introductory and intermediate statistics at Cornell University
1998-99	TA and tutor for introductory and intermediate statistics and operations research at University of Bucharest

RESEARCH GRANT PARTICIPATION

Principal investigator

Title: Adjustment Uncertainty in Effect Estimation
Agency: Johns Hopkins University
Period: 2004-2005

RESEARCH GRANT PARTICIPATION (continued)

Effort: 20%
Role: Principal Investigator

Title: Statistical Methods for Multilevel Multivariate Functional Studies
Agency: NINDS
Period: 2009-2011
Effort: 40%
Role: Principal Investigator

Title: Statistical Methods for Multilevel Multivariate Functional Studies
Agency: NINDS
Period: 2012-2017
Effort: 20%
Role: Principal Investigator

Co-investigator

Title: Atherosclerosis Risk in Communities (ARIC) Study
Agency: NIH/NHLBI
Period: 2000 – 2012
Effort: 5%
Role: Co-investigator

Title: "National Study of Costs and Outcomes of Trauma"
Agency: U.S. Environmental Protection Agency
Period: 2004-2005
Effort: 5%
Role: Co-investigator

Title: Risk Factors for Cardiovascular Disease in a Dialysis Cohort
Agency: NIH/NHLBI
Period: 2004 -2005
Effort: 10%
Role: Co-Investigator

Title: Electrocorticographic Studies of Human Cortical Function
Agency: NIH/NINDS
Period: 2005-2008
Effort: 15%
Role: Co-Investigator

RESEARCH GRANT PARTICIPATION (continued)

Title: Calibration and Mapping for Parasitological and RAPLOA Estimates of LoaLoa Prevalence
Agency: WHO
Period: 2005-2006
Effort: 20%
Role: Co-Investigator

Title: The Multi-Ethnic Study of Atherosclerosis
Agency: NIH
Period: 2005-2007
Effort: 15%
Role: Co-Investigator

Title: Effects of Aging on Sleep Architecture
Agency: NIH
Period: 2005-2009
Effort: 15%
Role: Co-Investigator

Title: Defining the Clinical Significance of HbA1c Prior to the Onset of Diabetes
Agency: NIH/NIDDK
Period: 2007 – 2009
Effort: 5%
Role: Co-Investigator

Title: Longitudinal Changes in Sleep Structure: Implications for Health Outcomes
Agency: NIH
Period: 2007-2012
Effort: 20%
Role: Co-Investigator

Title: Novel Statistical Methods for Gene-Environment Interactions in Complex Diseases
Agency: NHLBI
Period: 2007-2010
Effort: 15%
Role: Co-Investigator

Title: Preprocessing and Analysis Tools for Contemporary Microarray Applications
Agency: NIH
Period: 2007-2012
Effort: 10%
Role: Co-Investigator

Title: Longitudinal Study of Predictors and Consequences of Chronic Kidney Disease

RESEARCH GRANT PARTICIPATION (continued)

Agency: NIH/NIDDK
Period: 2007 – 2013
Effort: 5%
Role: Co-Investigator

Title: Arsenic Exposure, Cardiovascular Disease and Diabetes in Native Americans
Agency: NIH/NHLBI
Period: 2008 – 2012
Effort: 5%
Role: Co-Investigator

Title: Lead, Cadmium, Arsenic, and Cardiovascular Risk in Children
Agency: NIH/NHLBI
Period: 2009 – 2011
Effort: 8%
Role: Co-Investigator

Title: Fundamental Biology of Sudden Cardiac Death and Its Application to Identify Patients at Risk
Agency: NIH/NHLBI
Period: 2009 – 2014
Effort: 5%
Role: Co-Investigator

Title: Proteomic Approach to CKD Biomarker Discovery and Validation
Agency: NIH/NIDDK
Period: 2009 – 2014
Effort: 8%
Role: Co-Investigator

Title: Longitudinal study of markers of oxidative capacity and type 2 diabetes
Agency: NIH/NIDDK
Period: 2010 - 2013
Effort: 5%
Role: Co-Investigator

Title: Metabolome-Wide Analysis for the Risk-Stratification of Sudden Cardiac Death
Agency: NIH/NHLBI
Period: 2010 – 2015
Effort: 5%
Role: Co-Investigator

Title: Statistical Methods for Large N and P Problems
Agency: NIH

RESEARCH GRANT PARTICIPATION (continued)

Period: 2010 – 2016
Effort: 10%
Role: Co-Investigator

Title: Atherosclerosis Risk in Communities (ARIC) Study - Field Center
Agency: NIH/NHLBI
Period: 2010 – 2012
Effort: 5%
Role: Co-Investigator

Title: Johns Hopkins Pediatric Obesity Research and Training Center (U54 grant)
Agency: NIH/NICHD
Period: 2011 – 2016
Effort: 5%
Role: Co-Investigator

ACADEMIC SERVICE

Johns Hopkins Bloomberg School of Public Health

- High Dimensional Data Campaign Planning Group, 2011-
- Better Environment for Research and Science (BERS) 2009-2011
- Head of the Biostatistics Events Committee 2009-2012
- Biostatistics Faculty Search Committee 2008-2011
- Biostatistics second year exam committee 2004-2005
- Curriculum committee 2004-2011
- Faculty senate representative 2006-2008
- Biostatistics seminar series coordinator 2004-2005
- Cofounder of the Biosignals working group 2005
- Organizer of interdepartmental Measurement error short course 2005
- Interviewer for departmental administrator position 2006, 2011

Johns Hopkins statistical consulting

- Biostatistics consulting center/Department consulting for Merck
- Biostatistics center consulting for Stryker
- Organizer for Johnson & Johnson short course on Adaptive Bayesian Designs
- Biostatistics center consulting on clinical trials

Discipline

- ASA Section on Nonparametric Statistics, Program Chair-Elect, 2012-
- ENAR Regional Committee (RECOM) member, 2011-
- ENAR Regional Advisory Board (RAB) member, 2011-
- Program Chair, ENAR Spring Meeting, Miami, FL, 2011
- Member ENAR Regional Advisory Board (RAB), 2011-2013

ACADEMIC SERVICE (continued)

- Program Chair, Statistical Methods for Very Large Data Sets Conference, Baltimore, MD, 2011
- Co-organizer of the short course on "*Semiparametric Regression*": Oberwolfach Seminars, Germany 2009
- Organizer of the short course "*Measurement Error in Nonlinear Models*": University of Bristol, UK
- Co-organizer of the short course on "*Semiparametric Regression*": JSM, Washington, DC, 2009
- Co-organizer of the short course on "*Measurement Error in Nonlinear Models*": ENAR, Arlington, VA 2008
- Co-organizer of the short course on "*Semiparametric Regression*": JSM, Minneapolis, MN 2005
- Organizer of invited session "Statistical Methodology for the Analysis of Sleep Studies" - ISI 2009
- Co-organizer of Biometrics invited session "Statistical Methodology for the Analysis of Sleep Studies" – JSM 2007
- Session chair - JSM (2006, 2007, 2010); ENAR (2007, 2011); ISI (2009)

PRESENTATIONS

- *"Movelets: A dictionary of Movement",* Rice University, Houston, TX, 2012
- *"SubLIME: Automatic lesion incidence estimation and detection using multi-modality longitudinal MRIs",* Indiana University, Indianapolis, IN, 2012
- *"Movelets: A dictionary of Movement",* ENAR, Washington, DC, 2012
- *"Movelets: A dictionary of Movement",* Emory University, GA, 2011
- *"Movelets: A dictionary of Movement",* Johns Hopkins University, MD, 2011
- *"My first 100 terabytes of data: Statistical principles and methods"*, ENAR, Miami, FL, 2011
- *"Population-wide model-free quantification of brain blood barrier dynamics in Multiple Sclerosis"*: Cornell University, NY, 2011
- *"Population-wide model-free quantification of brain blood barrier dynamics in Multiple Sclerosis"*: University of North Carolina at Chapel Hill, NC, 2011
- *"Longitudinal Functional Principal Component Analysis"*: University of Michigan, MI, 2011
- *"Longitudinal Functional Principal Component Analysis"*: North Carolina State University, NC, 2010
- *"My first 100 terabytes of data"*: SAMSI workshop, Durham, NC, 2010
- *"High dimensional multilevel functional principal component analysis"*: JSM conference, Vancouver, Canada, 2010
- *"Longitudinal Functional Principal Component Analysis"*: SRCOS conference, Virginia Beach, VA, 2010
- *"The rise of data and Biostatistics in the 21st century":* University of Ottawa, Ottawa, Canada, 2010
- *"My first 100 terabytes of data"*: UMBC, Baltimore, MD 2010
- *"Analysis of Populations of Images*": Johns Hopkins University, Baltimore, MD 2010
- *"Longitudinal Functional Principal Component Analysis"*: University of Wisconsin-Madison, Madison, WI, 2010
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PRESENTATIONS (continued)

- *"Longitudinal Functional Principal Component Analysis"*: Johns Hopkins University, Baltimore, MD 2101
- *"Longitudinal Object Analysis"*: Yale University, New Haven, CT 2009
- *"Analysis of Populations of Images"*: UMBC, Baltimore, MD 2009
- *"Short Course on Semiparametric Regression*": Oberwolfach, Germany, 2009
- *"Analysis of Populations of Images"*: Cornell University, Ithaca, NY 2009
- *"Longitudinal Object Analysis"*: Duke University, Durham, NC 2009
- *"Longitudinal Object Analysis"*: University of Bristol, UK, 2009
- *"Longitudinal Object Analysis"*: Penn State University, University Park, PA 2008
- *"Longitudinal Object Analysis"*: Thomas Jefferson University, Philadelphia, PA 2008
- *"Bivariate Binomial Spatial Modeling of Loa loa Prevalence in Tropical Africa"*: JSM, invited JASA CS discussion paper, Denver, CO, 2008
- *"Cox models with smooth functional effects of covariates measured with error"*: SRCOS SRC, Charleston, SC, 2008
- *"Cox models with smooth functional effects of covariates measured with error"*: ICSA, Piscataway, NJ, 2008
- *"Sleep Studies"*: Conference in honor of David Ruppert's 60th birthday, Keystone, CO, 2008
- *"Multilevel Functional Principal Component Analysis*": George Washington University, DC, 2007
- *"Multilevel Functional Principal Component Analysis*": CRM-ISM-GERAD Statistics Colloquium Series (jointly organized by the four Universities of Montreal), Montreal, Canada, 2007
- *"Multilevel Functional Principal Component Analysis*": Georgetown University, DC, 2007
- *"Multilevel Functional Principal Component Analysis*": Cornell University, Ithaca, NY, 2007
- *"Multilevel Nonparametric Models*": JSM, Salt Lake City, UT, 2007
- *"Principal curves with application to SPECT colon imaging*" Keystone, CO, 2007
- *"Likelihood Ratio Tests for Zero Variance in Linear Mixed Models* ": ENAR, Atlanta, GA, 2007
- *"Short Course on Semiparametric Regression*": University of Bucharest, Romania, 2006
- *"Cox models with nonlinear effect of covariates measured with error: A case study of chronic kidney disease incidence***":** National Cancer Institute, Bethesda, MD, 2006
- *"Bivariate Binomial Spatial Modeling of Loa loa Prevalence in Tropical Africa"* University of Bucharest, Romania, 2006
- *"Cox models with nonlinear effect of covariates measured with error: A case study of chronic kidney disease incidence"***:** JSM, Seattle, WA, 2006
- **"***Bivariate Binomial Spatial Modeling of Loa loa Prevalence in Tropical Africa"***:** JSM, Seattle, WA, 2006
- *"Bivariate Binomial Spatial Modeling of Loa loa Prevalence in Tropical Africa"***:** Ludwig-Maximilians-Universität, Munich, Germany, 2006
- *"Bivariate Binomial Spatial Modeling of Loa loa Prevalence in Tropical Africa"***:** University of Bielefeld, Germany, 2006
- *"Bivariate Binomial Spatial Modeling of Loa loa Prevalence in Tropical Africa"***:** Columbia University, 2006
- *"Adjustment Uncertainty in Effect Estimation***":** University of Pennsylvania, 2006
- *"STEADy: Structured Estimation under Adjustment Uncertainty***":** University of Maryland, 2005
- *"STEADy: A Case Study in Air Pollution and Mortality***":** WNAR, Fairbanks AK 2005

PRESENTATIONS (continued)

- "*Short Course on Semiparametric Regression*": JSM, Minneapolis, MN 2005
- "*STEADy: A Case Study in Air Pollution and Mortality*"**:** JSM, Minneapolis, MN 2005
- "*Spatially Adaptive Bayesian P-Splines with Heteroscedastic Errors*"**:** ENAR, Austin, TX 2005. IMS invited presentation
- "*Spatially Adaptive Bayesian P-Splines with Heteroscedastic Errors*"**:** University of Pennsylvania, 2005
- "*Spatially Adaptive Bayesian P-Splines with Heteroscedastic Errors*"**:** Lancaster University, UK, 2005
- "*Bayesian Model Averaging*": Johns Hopkins University, 2004
- "*Some Research Problems with Applications*": Johns Hopkins University, 2004
- "*Likelihood Ratio Tests for Zero Random Effects Variance*": Cornell University, 2002, 2004.
- "*Likelihood Ratio Tests for Zero Random Effects Variance*": Johns Hopkins University, 2003.
- "*Likelihood Ratio Tests for Zero Random Effects Variance*": Syracuse University, NY, 2004.
- "*Likelihood Ratio Tests for Zero Random Effects Variance*": University of Rochester, 2004.
- "*Non-parametric Bayesian Analysis in WinBUGS*", Racebrook Environmental Statistics Workshop, November 1-3, 2002
- "*Data Dependent Bandwidth Choice: Source of Non-monotonic Power for Tests of Shift in Mean*", Cornell University, 2002
- "*Bayesian Hierarchical Modeling to Assess Pathogen Risk in Natural Water Supplies*", Case Studies in Bayesian Statistics – Workshop 6, Carnegie Mellon University, 2001
- "*Pathogen Risk Assessment in Water Supplies (An application of Bayesian hierarchical modeling)*", Environmental Statistics Conference, Cornell/Harvard, 2000
- "*Pathogen Risk Assessment in Water Supplies (An application of Bayesian hierarchical modeling)*", ASA - Albany Chapter Conference, Rensselaer, NY 2002
- "*Flood Risk Management on the Mississippi River*", ASCE 8th Engineering Foundation Conference, Santa Barbara, CA, 2000

ADDITIONAL INFORMATION

Areas of Research Interest: Nonparametric statistics, Functional Data Analysis, Bayesian analysis, Measurement error