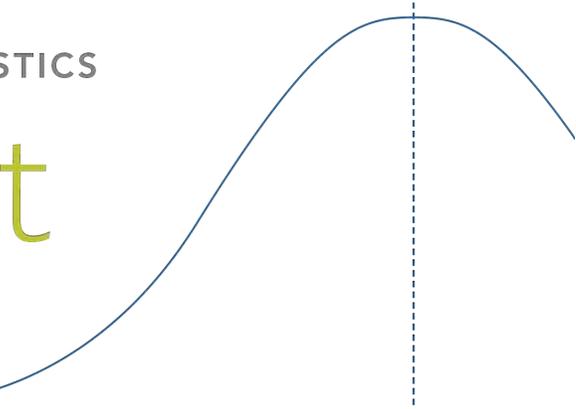


Significant Moments



Newsletter of the Mailman School of Public Health Biostatistics Department

Fall 2016



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Message from the Chair



F. DuBois Bowman, Ph.D.
Chairman and Professor
of Biostatistics

Welcome to the annual edition of *Significant Moments*, the newsletter for the Department of Biostatistics at Columbia University's Mailman School of Public Health. In my third year as chair, I remain honored to lead a great department and am extremely excited about its successes and bright future.

The field of biostatistics continues to chart new territory in response to the rapid increase in the amount and complexity of data available. Biostatistics faculty at Mailman are at the forefront in leveraging such data to drive research discoveries in public health and medicine. Specifically, we develop novel analytic methods to confront modern day challenges of analyzing increasingly complex and massive data sets. We also partner with collaborators across a world-class medical center to conduct research on areas such as HIV/AIDS, neurological and psychiatric disorders, aging, the impact of environmental exposures on cognitive development, and cardiology, to name a few.

We build proudly upon the Department's rich history of over 75 years. Our faculty continue to thrive in every capacity. Dr. Yuanjia Wang recently received the prestigious honor of being named a 2016 Fellow of the American Statistical Association (ASA), bringing the total count of ASA Fellows in the department to 11. Since I became chair, we have hired three outstanding faculty: Dr. Gen Li, Dr. Codruta Chiuzan, and Dr. Christine Mauro. The faculty lead impressive research programs, many of which attract substantial extramural funding. Notably, several faculty have received new grants from the National Institutes of Health, including R01 grants for research conducted by Dr. Ken Cheung (NIMH), Dr. Jeff Goldsmith (NINDS), Dr. Iuliana Ionita-Laza (NIMH), Dr. Ian McKeague (NIGMS), and Dr. Ying Wei (NHGRI) as well as

an R21 grant for a project led by Dr. Min Qian (NIMH). The impact of our research is reflected, in part, by the numerous publications written by our faculty in both top statistical journals and premier public health/medical journals.

The Department continues to attract some of the very best students internationally to our graduate programs. Our graduates are equipped with the technical and critical thinking skills necessary to excel in the workplace. The outstanding quality of our graduates is recognized by employers, and they move on to become leaders in industry, government, and academic settings. The Department maintains exceptional job placement rates for graduating students, and some master's students continue to pursue advanced doctoral training. Given our excellent job placement, coupled with the increasing workforce demands for quantitative training, we have expanded our overall master's enrollment, launched online courses, and will begin a new two-year format for a master of public health degree in Biostatistics. We also recognize the need to cultivate the pipeline of bright undergraduate students entering biostatistics and to foster diversity in the field. The Department successfully completed training undergraduate students in the ninth class of the Biostatistics Enrichment Summer Training (BEST) Diversity Program as well as in the Columbia Summer Institute for Training in Biostatistics (CSIBS).

We have many remarkable instructors among our faculty who ensure that public health students are prepared with strong analytic training. As one example, highlighting the quality of our instruction, Dr. Martina Pavlicova received both the 2016 Presidential Award for Outstanding Teaching by Faculty at Columbia University and the 2016 Mailman School Teaching Excellence Award. Dr. Pavlicova demonstrates a profound commitment to education, which helps to ensure that Mailman continues to train tomorrow's public health leaders of the world.

I am deeply grateful to donors, alumni, and friends for the generous support of the Department of Biostatistics. In particular, I would like to acknowledge and thank Roz Goldstein, a member of the Mailman School of Public Health Board of Overseers, who hosted an event on behalf of the Department of Biostatistics, which raised almost \$85,000. It is my privilege to lead a talented, energetic, and engaged group of faculty and to host world-class graduate programs that produce the next generation of scholars and biostatistics professionals. I invite you to connect with the Department and join in the remarkable work taking place within Mailman as we strive to improve health for all.

Interview with Zhezhen Jin



Professor of Biostatistics

1. What inspired you to pursue a career in Biostatistics?

I came to Columbia in 1994 as a doctoral student in statistics. At that time, there was a required newly developed 1-year course named “Statistical modeling and data analysis” which was taught by Professor William DuMouchel, who was a faculty at the Division of Biostatistics in School of Public Health. The class introduced me to Biostatistics. The course was quite applied and all examples were from real studies. I was amazed by the fact that statistics played such a significant role in medical research and public health. After the completion of the course, Professor DuMouchel asked me if I would like to participate in one of his projects on developing Bayesian meta-analysis software, to which I happily agreed. The experience led me to pursue a career in Biostatistics.

2. As a biostatistician, what do you think is the most important thing that you do to ensure your work gets noticed?

The nature of our work is collaboration with many investigators on different projects. To get noticed, I think we need to make our contributions and build trust with collaborators. To achieve it, we really need to put our minds to the projects and love the work we are doing.

3. What is the most exciting project that you have worked on thus far? Up until now, what do you think are your main achievements?

For statistical research, I have spent many years on how to estimate variance of estimators resulting from some non-standard estimating approaches and developed some practically useful methods, for example, perturbation method and induced smoothing method. For collaborative research, I now have a better understanding of heart related diseases and the challenges in bone marrow and organ transplantations.

4. If there is anything you could change about your career thus far, what would it be?

I hope I could have done research on alternative medicine and quality of life in general. Looking back, I realize I put a boundary to myself and was very slow in adapting to new research areas. If I could start over, I might also study other areas in addition to statistics.

4. What advice can you give to new/junior faculty?

Do things that you are interested in and put your mind and love into what you are doing, do not be afraid of asking or getting rejection. Most importantly, summarize your work in a timely manner and publish it as soon as possible.

Interview with Martina Pavlicova



Associate Professor of Biostatistics at CUMC

1. Did you always want to be an educator? What inspired you to be a teacher?

Absolutely not! My mom was a middle school math and physics teacher. My aunt, grandfather, and two uncles were also involved in education. Pretty much all of my mother's side of my family are, or were, teachers. In my pubescent rebellion against anything and everything familial, I promised myself that I would never ever be a teacher. As I grew older, I realized that half of my family is full of teachers not because we choose to be teachers, but because we cannot help ourselves. Teaching is a part of us.

2. What do you think is the key to being a successful teacher?

I don't really know. I am still puzzled when people ask me about what are the essential parts of my teaching. Most of the time, I just try to entertain myself. I believe that the students will be engaged only if the lecturer is also engaged in the material. I also strongly believe that the students are customers who deserve a wholesome, useful, and functional product. That does not mean that what we teach should be easy or taught down. It means that we, as lecturers, are responsible to let students know the purpose of the new knowledge, what are its applications, its origin, and its logic.

3. What advice would you give to someone who wants to improve their teaching?

Respect the students, individually but also as a whole body. Respect their time and their abilities. Over the years, I have taught over 2000 students in Columbia and never was one not worthy of my respect. All of my students are amazing! Students that I encounter in MSPH are intelligent, hungry for (useful) information, devoted, passionate and selfless. They all are unique and exceptional in their own way. It is my business and my job to find a way how to explain and present my material to them. The quality of my students pushes me to constantly strive to be a better person myself.

I keep changing my lectures and I constantly think about how to present complex statistical methodologies to my students in new ways. Sometimes, I have several possible explanations of the same topic in mind. I try to put myself in the students' shoes to identify which explanation would be the most understandable (and entertaining) to them. We expect the students to evolve but we should keep evolving with them. Success is a function of constant work and a constant search for better ideas and better solutions.

4. What is your passion outside the classroom?

I noticed that I change my primary hobbies about every 5 years. I used to be very much into motorcycle riding and track racing, but after losing my mechanic, I changed motorcycles for a bicycle and did several long distance bike rides (NYC to Montreal, for instance). From there, I started to participate in countless triathlons. From biking, running and swimming, swimming was always my favorite part. So, as my teaching load increased, I simultaneously found more and more peace and relaxation in the water.

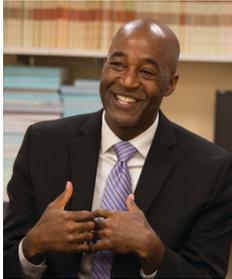
Swimming with its partial sensory deprivation is the best place for me to recover from work and stress. It is also the only sport that I can do while being completely horizontal! It is like laying on the couch only with an additional flapping of arms around. Surprisingly, I can flap my arms around for quite a long time! And, in comparison to running or biking, it is so far less possible to take a call or check emails while swimming.

Research Initiatives

Big Data (Brain Imaging)

DUBOIS BOWMAN

Chairman and Professor of Biostatistics



Dr. DuBois Bowman is leading an innovative research program that seeks to identify neural signatures of Parkinson's disease (PD) from brain imaging scans. PD is a chronic, progressive movement disorder affecting roughly 1 million patients in the U.S. A clinical PD diagnosis is often made well into the course of symptom progression and underlying neurodegeneration, and there is no definitive test to validate a diagnosis.

Dr. Bowman and colleagues have developed a suite of analytic tools for multimodal neuroimaging data to accurately dissociate patients with mild to moderate PD from healthy control subjects. Published in *Frontiers in Neuroscience*, this highly successful discovery phase began with over 46,000 candidate brain measures, reflecting properties of brain function and structure, and identified a panel of 24 strongly predictive imaging markers. The markers collectively reveal important thalamic and limbic system alterations (e.g. hippocampus, amygdala, orbitofrontal cortex, and cingulate gyrus). Identifying these key neuroimaging alterations in PD patients with mild to moderate symptoms creates an opportunity to investigate whether similar, if somewhat less severe, changes emerge prior to the onset of symptoms. Dr. Bowman's research has been conducted under the Parkinson's Disease Biomarker Program (PDBP) launched by the National Institute of Neurological Disorders and Stroke (NINDS).

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Big Data (Genetics/Genomics)

IULIANA IONITA-LAZA

Associate Professor



The tremendous progress in massively parallel sequencing technologies enables investigators to efficiently obtain genetic information down to single base resolution on a genome-wide scale. This progress in data generation has been complemented by numerous efforts to functionally

annotate genetic variants in the human genome. Examples include large scale projects such as ENCODE and Roadmap Genomics. Such functional annotations are essential for understanding the mechanistic processes by which genetic variation leads to disease.

Dr. Ionita-Laza collaborates with investigators from the Psychiatry Department to develop statistical methods for integrating large numbers of different functional predictors into a single, more accurate predictor of functionality. The project involves deriving such integrative functional scores for 127 cell and tissue types, and show how these can be used in conjunction with genetic data at the population level to predict the cell/tissue types that are relevant to specific complex diseases.

Big Data (Neurohabilitation)

JEFF GOLDSMITH

Assistant Professor of Biostatistics



Experiments involving kinematic data - dense recordings of hand or finger position over time during the execution of a motion - can provide deep insights into the neurological processes underlying impairment induced by stroke. Kinematic data are used, for example, to measure skill and

motor control, to quantify learning of specific tasks, and to monitor the recovery of function over time. In these experiments, subjects make hundreds of repeated motions with each hand generating hundreds of thousands of motion recordings. In stroke

Research Initiatives

research, it is hoped that neuroimaging data, including structural MRI, fMRI, and diffusion tensor imaging, can provide insights into the anatomical basis for observed motor control deficits.

Dr. Goldsmith's research focuses on the development of functional data models that incorporate covariates and subject effects on the distribution of reaching motions. The statistical tools are developed in close collaboration with neurologists from Columbia University (Department of Neurology) and Johns Hopkins (Departments of Neurology and Neuroscience). These models help to improve the understanding of the nature of motor control impairment and of natural recovery processes, which is a prerequisite to the development of improved neurorehabilitative therapies.

Big Data/Precision Medicine Brain Imaging

TODD OGDEN

Professor of Biostatistics



One of Dr. Ogden's most current research projects involves using brain imaging data and other complex data that are gathered at the time a patient presents for treatment to help determine which of multiple treatment options are likely to give the best response specific to that patient.

The current study and most immediate application involves imaging data from multiple modalities (structural and functional MRI, EEG, and DTI) in a study of major depressive disorder, but the methodology he is working on is rather general and can extend to a variety of data sources in the treatment of many illnesses.

Precision Medicine (Biomarkers)

YUANJIA WANG

Associate Professor of Biostatistics



Dr. Wang's research focuses on developing data-driven approaches to explore relationship between large-scale biomarkers, clinical measures and health outcomes to assist discoveries in disease etiology, increase diagnostic capabilities for disease, and identify

optimal personalized treatment for individualized clinical decision making.

Specifically, she is interested in developing statistical methodologies to extract useful information from noisy large-scale data with complex structure in cohort studies and clinical trials. For example, her work involves using machine learning approaches to build disease diagnostic criteria, discover personalized disease screening and treatment rules, and estimate the risk of genetic variants on complex age-dependent traits to assist clinical trial design and offer information for genetic counseling. She is enthusiastic about developing rigorous, yet computationally scalable analytical tools to augment the use of big data in individualized medicine. Dr. Wang collaborates extensively with researchers in various clinical fields (e.g., Department of Neurology) who inspire her methodological research by introducing practical and complex real-life problems.

Precision Medicine (Genomics)

YING WEI

Associate Professor of Biostatistics



Quantile regression has emerged as an important modeling approach in a wide range of applications including epidemiology, economics, biology, ecology, and medical studies. Dr. Wei's research focuses on developing quantile regression tools for genetic studies by

analyzing the role of genetic variants on the distri-

Research Initiatives

tribution of disease related biomarkers and outcomes. Preliminary analyses with gene expression data have already showed that different genotypes could result in very different distributions of gene expression levels.

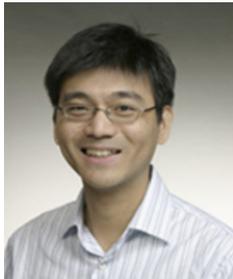
Additionally, the quantile-based analyses allows a further exploration of the population heterogeneity, which facilitates the genomic/precision medicine development, and brings new directions of research in genetics. In her work, Dr. Wei has developed extensive collaborations with a variety of schools and institutions including the Department of Biomedical Informatics, Columbia University.

Precision Medicine (Electronic Medical Records)

YING KUEN CHEUNG

Professor of Biostatistics

Dr. Cheung's research interests include the devel-



opment and evaluation of evidence-based treatments, interventions, and policies at all phases of translational research. One specific area is the evaluation of pharmacological agents in clinical trials for which he has developed efficient designs to identify safe and therapeutic

doses and to select optimal treatments. Dr. Cheung is also looking into methodology for platform trials that aim to evaluate multiple targeted cancer therapies simultaneously in patients of different disease subtypes defined by the expression of the target molecules.

Furthermore, he is working with investigators from the NIH, IBM, and other academic institutions to develop efficient data analytics and algorithms behind an app curation platform. The goal of such a platform is to continuously evaluate and implement health apps in an evidence-based manner. The abundance of apps and the sheer amount of mobile data necessitate a new framework of multidisciplinary collaborations, and provide a context for new regulatory pathway, thus requiring a novel statistical formulation.

ASA Fellows

Under ASA bylaws, the Committee on Fellows can elect up to one-third of one percent of the total association membership as fellows each year. Our department now has 11 ASA Fellows!

Melissa Begg, 2012

Vice Provost for Academic Programs and Professor of Biostatistics at CUMC

DuBois Bowman, 2012

Chairman and Professor of Biostatistics

Ken Cheung, 2014

Professor of Biostatistics

Zhezhen Jin, 2011

Professor of Biostatistics

Bruce Levin, 2001

Professor of Biostatistics

Ian McKeague, 2007

Professor of Biostatistics

Todd Ogden, 2012

Professor of Biostatistics

Wei Yann Tsai, 2001

Professor of Biostatistics

Melanie Wall, 2014

Professor of Biostatistics

Yuanjia Wang, 2016

Associate Professor of Biostatistics

Ying Wei, 2015

Associate Professor of Biostatistics



Faculty, students, and alumni at JSM 2016 in Chicago, Illinois

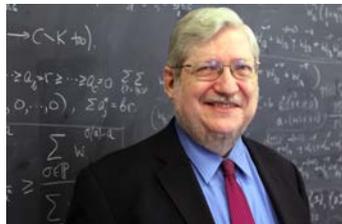
Impact on Public Health

Not So Fast: Mailman Biostatisticians Raise Concerns Over Cancer Screening Study

Questions by Cody Chiuзан and Bruce Levin precede FDA action on the commercial availability of a screening test for ovarian cancer



Codruta Chiuзан, PhD
Assistant Professor of Biostatistics
at CUMC



Bruce Levin, PhD
Professor of Biostatistics

Late last year, *The Lancet* published the long-anticipated results of the largest ovarian cancer screening trial to date. The study of more than 200,000 women over a 14-year period examined a new screening protocol for a disease called the “silent killer” because its symptoms often don’t manifest until the cancer has spread. While results were inconclusive, the investigators presented enticing evidence in the paper that the screening was effective. Shortly after, Abcodia, the company behind the screening test, made it available commercially.

But earlier this month, the Food and Drug Administration issued a “safety communication” statement recommending against the screening test, and a week later, Abcodia voluntarily pulled their product, the \$295 ROCA (“Risk of Ovarian Cancer Algorithm”) test, from the market. The FDA action came on the heels of a June editorial in *American Family Physician* authored by a group of experts - including two Mailman School biostatisticians - that pointed to uncertainties in the *Lancet* study and expressed reservations about the marketing of the screening test.

The proprietary algorithm developed by Harvard biostatistician Steven J. Skates works by assessing changes in levels of a protein biomarker called CA-125 over time. In the 2012 study known as the United Kingdom Collaborative Trial of

Ovarian Cancer Screening (UKCTOCS), postmenopausal women were randomized to one of three groups: multimodal screening (MMS) using ROCA, transvaginal ultrasound (USS), or no screening. On the surface, the results of UKCTOCS published in *The Lancet* several years ahead of the study’s conclusion, were very promising.

For women enrolled in the MMS arm, who were followed up by ultrasound screening when increasing CA-125 was found, ovarian cancer was diagnosed earlier than for those not screened. Even more exciting, the researchers reported a significant reduction in risk of death for women in the subset screened annually for at least seven years. Yet at a February meeting called by the Ovarian Cancer Research Fund that gave rise to the June editorial, Mailman’s Bruce Levin and Cody Chiuзан and others voiced serious concerns about the research and underlined the significant downside of imprecise screening.

A test that is insufficiently specific would generate many false positives—which at the least would give women a bad scare, and at the most, lead to unnecessary surgery, chemotherapy, and radiation. On the other hand, a test that is insufficiently sensitive would miss cancers, potentially delaying necessary treatment.

Impact on Public Health

SIGNIFICANT QUESTIONS

While there was nothing fraudulent about the UKCTOCS study, the Mailman biostatisticians say its most promising results are the result of several misleading statistical contortions.

For starters, they question why it would take seven years to show a survival benefit for the screening test. In the typical screening trial, Levin, a professor of Biostatistics, explains, it may take several years until enrolled patients develop a disease, but in the UKCTOCS trial, the survival curves in both the ROCA and no screening arms overlap perfectly for about ten years, a period during which many women had died. Experts at the June meeting said there was no plausible explanation for the delay in mortality reduction, except perhaps as an artifact of shifting demographics as older study participants dropped out - a possibility the study hadn't explored but is currently. "Older women might be less likely to go through all the repeated screenings," posits Chiuhan, an assistant professor of Biostatistics.

Another more technical issue relates to a mismatch between certain published p-values indicating statistical significance and confidence intervals for mortality reductions indicating insignificance. "Statistics 101 says these two methods ought to agree," she says. To arrive at the findings reported in the *Lancet*, the investigators employed a complex statistical model for the cumulative incidence curves, undertaken only after they deemed the original method, a Cox proportional hazards model, to be suboptimal. According to Levin and Chiuhan, biostatisticians generally abhor this kind of *post hoc* methodological rejiggering. And it turns out the significant p-value referred to a different hypothesis than the one concerning mortality reduction.

THE FINAL ANALYSIS

The two biostatisticians say the UKCTOCS researchers deserve credit for organizing such a complex and ambitious study, and were suitably cautious in their reporting. Others have raised the possibility of financial bias in the *Lancet* paper: Ian J. Jacobs, one of two lead authors is also a co-inventor of ROCA and has a financial stake in its success. But Levin says in no way do the study's shortcomings rise to the level of fundamental errors of the kind he recently helped expose in the PACE trial for myalgic encephalomyelitis (a.k.a. chronic fatigue syndrome).

"The real problem was the overenthusiasm of the investigators with or without the financial impetus to put spin on the findings that should not yet be touted as life-saving," says Levin. "The bottom line is that the screening test is not ready for primetime. We need more evidence of a benefit."

The UKCTOCS study continues for another three years. Will additional data make a difference? We'll just have to wait and see. But according to the Mailman biostatisticians, the bar is always high for screening tests - particularly for a rare disease like ovarian cancer.

As any introductory biostatistics lecture makes clear, even if you have a screening test with 99 percent sensitivity and 99 percent specificity used in a population where one in a hundred people have the disease, you'll get a lot of false positives. "Half the time you'll scare the hell out of a patient and cause anxiety, stress, or other psychosocial consequences while they're not actually diseased," says Levin.

And this is better than the situation for ovarian cancer: while MMS did correctly identify substantially more cancers among those testing positive than did ultrasound alone, still, more than half of the positives were false positives. Says Levin, "That's why we need to be cautious."

NIH Grants

Grants funded by the National Institute of Health
in the academic year 2015–2016

Jeff Goldsmith

R01 NS097423-01 funded by the National Institute of Neurological Disorders and Stroke (Role: PI)

“Functional data analytics for kinematic assessments of motor control”

Kinematic experiments produce a rich dataset that allows unique insights into the subject's control over his or her limbs. Analyses in the neuroscience literature has to date focused on simple summaries of this data, reducing hundreds of motions to single numbers. In place of this immense reduction we propose a collection of models using a functional data analytic perspective to provide a comprehensive framework for the analysis of such data.

Ian McKeague

R01 GM095722 funded by the National Institute of Health (Role: PI)

“Post-selection inference and trajectory analysis”

The broad objective is to provide new methods of post-selection inference for detecting the presence of significant predictors in high-dimensional screening. The project will provide a more powerful alternative to the popular (yet conservative) Bonferroni method of controlling family-wise error rates that are a crucial concern in various biomedical applications.

Min Qian

R21 MH108999 funded by the National Institute of Mental Health (Role: PI)

“Building Multistage Treatment Regimens for Depression after Acute Coronary Syndrome”

The goal of the project is to develop a principled way to construct simple interpretable multistage treatment policies from high-dimensional data that can be used to guide treatment selection throughout the course of the disease.

Ying Wei

R01 HG008980-01 funded by the National Human Genome Research Institute (Role: PI)

“Develop quantile analysis tools for sequencing and eQTL studies”

The project will develop quantile analysis tools to the Expression Quantitative Trait Loci (eQTLs) in single/multiple tissues, and identify the associations between infrequent/rare variants with human complex traits using next generation sequencing data.

Grants

Other grants or contracts where our faculty serve as a principal investigator (PI or Co-PI)

NIH GRANTS

DuBois Bowman

- PI: Bowman, F. D. (Subcontract from Emory University: Buetefisch, C.), NIH R01 (1 R01 NS090677- 01), “Customized Cortical Stimulation Therapy in the Rehabilitation of Stroke Patients,” 2015-2019.

Qixuan Chen

- “Impact of Health Reform on Outpatient Substance Abuse Treatment Programs” (PI: Friedmann; Role: Subcontract PI; Funding source: NIH/NIDA)
- “Assessing Causality: Is Post- Traumatic Stress Disorder Cardio-toxic?” (PI: Koenen / Kubzansky, Role: Subcontract PI, Funding source: NIH/NIMH)

Jeff Goldsmith

- R21 EB018917, NIH/NIBIB “Generalized, multilevel functional response models applied to accelerometer data” (Role: PI. Total: \$248,500)

Iuliana Ionita-Laza

- NIH R21 MH106888 (PI: Iuliana Ionita-Laza), 2015-2017
“Applications of novel statistical methods to CNVs in autism and schizophrenia” (Role: PI. Amount awarded \$400,000).

Zhezhen Jin

- “Systemic Microcirculation in stroke and dementia” (PI: Dr. Gladys Maestre), NIH/NINDS, (07/01/2016-06/30/2021) (Role: Co-PI)
- “The role of the gastric cardia microbiome in the development of Barretts esophagus” (PI: Abrams), NIH/DHHS, 2016-2021 (Role: Co-PI)
- “Quantitative ocular traits and risk factors for glaucoma susceptibility” (PI: Lee), NIH/NINDS, 2016- 2021 (Role: Co-PI)

Min Qian

- “Novel Longitudinal Methods for SMART Studies of Drug Abuse and HIV”, NIDA (R01DA039901-01) (PI: Nahum-Shani/Almirall; Role: Subcontract PI)

CDC GRANTS

Haomiao Jia

- “Poisonings, Coroners, and Differential Suicide Undercounting: Evidence from Suicide Notes” CE002109-02 CDC (Role: Subcontract PI)

SIMMONS FOUNDATION GRANTS

Roger Vaughan

- Simons Foundation VIP Project – Statistical Core (Co-investigator: **Qixuan Chen**)

OTHER GRANTS

Arindam RoyChoudhury

- “Fast Likelihood Estimation of Very Large Species/Population Trees through Order of Divergence”. DoD/NSA H98230-1-15-0320 (Role: PI)
- “Estimation of Large Species/Population Trees Using Tree Space” NSF DMS-1609699 (Role: PI)

Ying Wei

- 2012-2015, NSF DMS-120923, “Statistical Methods for Screening Individual Childhood Growth Paths” (Role: PI)

Department Data: Students

Number of 2016 Graduates

Including October 2015 and February 2016

PhD: 2

DrPH: 1

MPH: 1

MS: 63

Number Returning for Fall 2016

PhD: 19

DrPH: 15

MS: 62

Number Incoming for Fall 2016

PhD: 4

MPH: 3

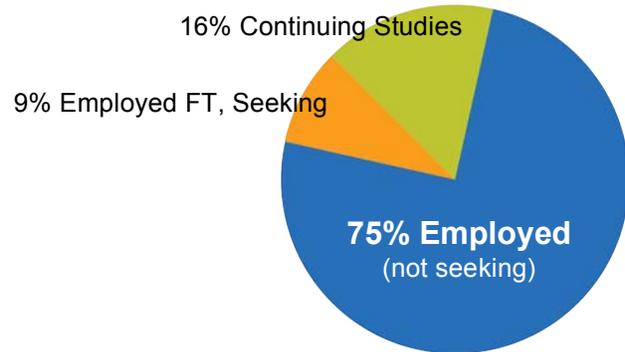
MS: 88

Where Our 2016 Graduates Have Found Jobs

- Bristol-Myers Squibb
- Fulgent Diagnostics
- LA-SER Analytica
- Genoea Biosciences, Inc.
- Assurex Health
- Endologix, Inc.
- Genetech
- MetLife
- IBM
- Regeneron
- Eli Lilly
- Center for Biostatistics in AIDS Research (CBAR), Harvard School of Public Health
- St. Jude Medical
- Northwell Health
- Hospital of the University of Pennsylvania
- Mount Sinai Hospital
- School of Urban Public Health, Hunter College

Biostatistics Employment Stats

Class of 2015



Semester kick-off party, August 2015



Practicum poster session, April 2016

Biostatistics Enrichment Summer Training Diversity Program (BEST) & Columbia Summer Institute for Training in Biostatistics (CSIBS)

Each summer, a highly selective group of undergraduates from across the country attend classes in introductory biostatistics and supervision of a faculty member.

Summer 2016 Number of Students per Program

BEST - 15

CSIBS - 3

Schools They Came From

- Binghamton University
- Simmons College
- Barnard College
- Brandeis University
- Wesleyan Univ.
- Univ. of Maryland-Baltimore County
- UC-Berkeley
- Arizona State University
- Bates College
- University of Florida
- SUNY-StonyBrook
- Gustavas Adolphus College
- Caldwell University
- Grinnell College
- SUNY-Buffalo
- Xavier University of Louisiana
- UNC Chapel Hill

Research Projects

- Investigating the non-specific finding of a brain PET radiotracer (Mentor: Todd Ogden)
- Gender Differences in Psychiatric Disorders at Juvenile Probation Intake (Mentor: Larkin Reynolds)
- Alzheimer's Disease Neuroimaging Initiative: Predicting Cognitive Impairment (Mentor: Seonjoo Lee)
- Do Threat Perceptions Mediate Associations between Health Insurance Status and Posttraumatic Stress Symptoms in Patients with Suspected Acute Coronary Syndrome? (Mentor: Jennifer Sumner)
- Perceptions of Colorectal Cancer Risk: Comparing Actual Risk and Perceived Risk in CUMC Patients (Mentor: Christine Sardo-Molmenti)
- Transferability of Motor Skills (Mentor: Jeff Goldsmith)
- The Role of Narrative Medicine in Improving Team-Based Clinical Care (Mentor: Cody Chiuzan)
- Impact of Medical Marijuana Laws on State-level Marijuana Use by Age and Gender (Mentor: Christine Mauro)
- Social Determinants of Health Moderate Response to a Community-based Diabetes Control Intervention in Urban Hispanics (Mentor: Dana March)



Student Perspectives: Quanyi's Practicum



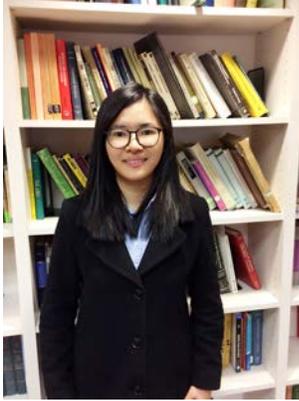
MS, 2016

As a second year masters student in Biostatistics, I feel excited about the upcoming commencement. Thanks to the superb training at the Department of Biostatistics, I gained a lot of knowledge which is really useful and helpful for me. Besides courses I have taken, I also got the chance to accumulate hands-on knowledge and practical experience through research and internships.

Last summer, I worked as a data scientist intern in the New York City Fire Department. I performed data manipulation, statistical modeling and data visualization as daily duties. The most impressive project I worked on was investigating the Legionnaire's Disease outbreak. In this top-priority and high-accuracy-demanding task, FDNY took the responsibility to identify and control the infection source, which was cooling towers on the top of buildings. The investigators were dispatched to go to every building in New York City and see if it contained a cooling tower. In a big city like New York, this investigation was not easy at all. That was when my idea of using a logistics regression model to help came up! We already had data on the buildings which had already been visited and whether or not they had a cooling tower. With this data, I built a logistic model with presence of a cooling tower as the outcome and building characteristics as predictors. We then used this model to predict the probability of having a cooling tower for unvisited buildings, and targeted those buildings with high probabilities. This helped them to complete the task more efficiently. Yes, just a simple logistic regression model was fast, straightforward, and helpful! The sense of accomplishment from serving society and helping an important organization like FDNY has encouraged me to use my knowledge in real life.

This semester, I worked as a TA for Analysis of Categorical Data and got to teach others about logistic regression models. I feel happy to help other students with their problems and pass along what I have learned. About a year ago, I was just like them, full of questions and desiring new knowledge. Now I am ready to apply this knowledge in real life and excited to keep learning!

Student Perspective: Zilan Chai's First Year Experience



MS, 2017

Before joining Mailman, I worked as a medical laboratory technician in a public hospital in Shanghai, China. Our lab gathered a huge volume of health-related data but no one did analysis on it. I thought biostatistics might give me a route to extract information and discover patterns in those data sets, and that was very fascinating for me.

As an international student, to be honest, the first semester was a challenge for me. People, food, and the weather especially - everything was completely different. My biggest fear was that I didn't have a strong enough mathematical background compared to my colleagues. I was very nervous at the very beginning because it seemed that my biological background might not be sufficient to prepare me for those theoretical courses. Some of my classmates had learned some of the courses while they were still an undergraduate, but I hadn't, which inspired me to work harder. Eventually, I survived and I feel much more relaxed now.

In order to enjoy my graduate life, I tried to find things to help me keep focused. I found a group of friends who really helped. I found my advisor, Cody Chiuzan. She really inspires me. Also, I enjoyed the student t-times, colloquium talks, and the receptions held by our department!

My Mailman experience engrained me with two lessons: first, that I am not the smartest person in the room. Second, but more importantly, that I have the ability to embrace every challenge that crosses my path, no matter how intimidating it may seem.

After a half year of learning, I found that Biostatistics is a growing, exciting field where people's quantitative skills are needed to help solve real-life public health questions. I am so grateful for the opportunity to be trained at Mailman, and for the possibilities that await me each day.

Student Awards

The Joseph L. Fleiss Memorial Prize in Biostatistics

Awarded to a Biostatistics student whose outstanding dissertation advances statistical methods and their applications to biomedicine and public health.

NICOLE M. ISHILL LEOCE, DPH'15
ADVISOR: ZHEZHEN JIN, PHD

The Chair's Award for Outstanding Master's Student

Awarded for outstanding academic and research achievements and anticipated contributions to biostatistics and public health.

TAYLOR T. BRACKIN, MS/PS'16 AND
CHUBING ZENG, MS/TM'16

The Sanford Bolton-John Fertig Award in Biostatistics

Awarded to the top doctoral dissertation in Biostatistics, in recognition of the strong influence John Fertig had on students through his encouragement, help, and outstanding teaching.

YING LIU, PHD'16
ADVISOR - YUANJIA WANG, PHD

The Joint Statistical Meetings (JSM) Student Paper Award 2016

Risk Analysis Section:

ANNIE LEE, PHD CANDIDATE
ADVISOR: YUANJIA WANG, PHD

Mental Health Statistics Section:

XIN QIU, PHD CANDIDATE
ADVISOR: YUANJIA WANG, PHD

F31 Fellowship from the National Institute on Aging (NIA)

ANNIE LEE, PHD CANDIDATE
ADVISOR: YUANJIA WANG, PHD

Received dissertation support funds for the project entitled "Efficient Statistical Methods for Association Studies with Dense Genotypes and Family History of Disease."



Staff Awards

The purpose of this award is to recognize the outstanding Mailman School employees who demonstrate the highest standards of excellence and extraordinary performance.

2016 Mailman School's Staff Award of Excellence

COREY ADAMS

Practicum/Administrative Coordinator



2016 Mailman School's Staff Award of Excellence

REBECA YOHANNES

Director – HPC Resources



Interview with Adam Ciarleglio



PhD, 2013

Biostatistics alumnus, Adam Ciarleglio, PhD '13, went on to a post-doc position at NYU after graduating but kept his ties with the department as an instructor. He has recently been hired as a Research Scientist in the Division of Biostatistics at the New York State Psychiatric Institute.

What is your most memorable moment as a PhD student?

My most memorable moment was when I found out that I had passed the statistical theory qualifying exam. I remember Roger, Todd, and Emilia came into the doctoral room and gave us all the good news. It was a day of huge relief and excitement about moving forward!

What's one thing you learned during your time as a PhD student that's helped you most in your career?

Without doubt it has to be learning to program in R. I think I learned how to write efficient code and that has helped tremendously in both my applied and methodological work.

What did you do between graduating from the PhD program and working at NYSPI?

After defending, I began a postdoc at NYU in the Division of Biostatistics in the Department of Child and Adolescent Psychiatry. This was a fantastic experience and I highly recommend doing a postdoc for those getting a doctoral degree in Biostatistics! During my three years at NYU, I collaborated on studies about sleep, asthma, and cognitive decline but spent the majority of my time focused on an NIH funded trial called EMBARC. EMBARC investigates potential biomarkers of antidepressant treatment response. My research focused on applying functional data analysis in decision-making regarding treatment selection for major depressive disorder (MDD). Specifically, I worked with my mentor and collaborators to develop methods for using baseline data derived from various brain imaging modalities to understand heterogeneity in treatment response for subjects with MDD. I continue to work on related problems now and hope to stay involved with EMBARC in the future.

During the time of your postdoc, you remained engaged with the Department, why?

Lots of reasons! First, I taught several courses in the Department during my time as a graduate student and was fortunate enough to be asked to keep teaching throughout my postdoc. The Department has strong educational programs and I wanted to stay involved. Second, I've cultivated and maintained both working and personal relationships with faculty in the Department that I wanted to continue into the future. Third, I have a great deal of respect for the members of the Department and the work that they do so I wanted to stay connected in order to see what they were working on. I've enjoyed participating in FDAWG and coming to seminar talks in both the Department and at NYSPI over the past few years.

What advice would you give to current students who aspire to follow a similar career path?

(1) Consider doing a postdoc! A postdoc can furnish the opportunity to enhance your skills and develop new ones. It can also give you more time to publish and to make connections with researchers outside of your doctoral institution.

(2) Be reverent of but not intimidated by other (bio)statisticians. If you have the chance (e.g., at conferences, seminars, etc.) make an effort to reach out to other (bio)statisticians whose work you are interested in. I've found that (bio)statisticians are generally approachable and happy to talk to you about their work and yours. Based on my experience, there is a high probability that your questions will be warmly received and you might start a conversation that could lead to a job offer or future collaboration.

Faculty Publications

Books

Michael Finkelstein and **Bruce Levin**, *Statistics for Lawyers*, Third Edition (2015), Springer.

Prakash Gorroochurn, *Classic Topics on the History of Modern Mathematical Statistics: From Laplace to More Rent Times* (2016), Wiley, NJ.

Articles

Chen, S., **Bowman, F.D.**, and Mayberg, H.S. (2015). A Bayesian Hierarchical Framework for Modeling Brain Connectivity for Neuroimaging Data. *Biometrics* (DOI: 10.1111/biom.12433).

Xue, W., **Bowman, F.D.**, Pileggi, A.V., and Mayer, A.R. (2015). A Multimodal Approach for Determining Brain Networks by Jointly Modeling Functional and Structural Connectivity. *Frontiers in Computational Neuroscience*. 9(22): 1-11. doi:10.3389/fncom.2015.00022.

Zhang, L., Sterling, N. W., Wang, M., Lee, E.-Y., Eslinger, P. J., Wagner, D., Du, G., Lewis, M. M., Truong, Y., **Bowman, F. D.**, Huang, X. (2015). Cortical Thinning and Cognitive Impairment in Parkinson's Disease Without Dementia. *IEEE/ACM Transactions on Computational Biology and Bioinformatics* (DOI 10.1109/TCBB.2015.2465951).

Chen, Q., Gelman, A., Tracy, M., Norris, F., and Galea, S. (2015). "Incorporating the sampling design in weighting adjustments for panel attrition", *Statistics in Medicine*, 34(28): 3637-3647. [PMID: 26239405]

Hanson, E., Bernier, R., Porche, K., Jackson, F. I., Goin-Kochel, R. P., Snyder, L. G., Snow, A. V., Wallace, A. S., Campe, K. L., Zhang, Y., **Chen, Q.**, D'Angelo, D., Moreno-De-Luca, A., Orr, P. T., Boomer, K.B., Evans, D. W., Kanne, S., Berry, L., Miller, F. K., Olson, J., Sheerl, E., Martin, C. L., Ledbetter, D. H., Spiro, J. E., Chung, W. K. (2015). "The cognitive and behavioral phenotype of the 16p11.2 deletion in a clinically ascertained population", *Biological Psychiatry*, 77(9), 785-793. [PMID: 25064419]

Kruk, M. E. Hermosilla, S., Larson, E., Vail, D., **Chen, Q.**, Mazuguni, F., Byalugaba, B., Mbaruku, G. (2015). "Who is left behind on the road to universal facility delivery? A cross-sectional

multilevel analysis in rural Tanzania", *Tropical Medicine and International Health*, 20(8), 1057-1066. [PMID: 25877211]

D'Aunno, T., Friedmann, P. D., **Chen, Q.**, Wilson, D. M. (2015). "Integration of substance abuse Treatment organizations into Accountable Care Organizations: Results from a national survey", *Journal of Health Politics, Policy, and Law*, 40(4), 795-817. [PMID: 26124307]

Just, A. C., Miller, R. L., Perzanowski, M. S., Rundle, A. G., **Chen, Q.**, Jung, K. H., Hoepner, L., Camann, D. E., Calafat, A. M., Perera, F. P., Whyatt, R. M. (2015). "Vinyl flooring in the home is associated with children's airborne butylbenzyl phthalate and urinary metabolite concentrations", *Journal of Exposure Science and Environmental Epidemiology*. 25(6), 574-579. [PMID: 25690585]

Summer, J. A., Kubzansky, L. D., Elkind, M. S. V., Roberts, A. L., Agnew-Blais, J., **Chen, Q.**, Cerdá, M., Rexrode, K. M., Rich-Edwards, J.W., Spiegelman, D., Suglia, S. F., Rimm, E. B., Koenen, K. C. (2015). "Trauma exposure and posttraumatic stress disorder symptoms predict onset of cardiovascular events in women", *Circulation*, 132(4), 251-9. [PMID: 26124186]

Tai-Tsang Chen. (2015). Milestone Survival: A Potential Intermediate Endpoint for Immune Checkpoint Inhibitors. *Journal of the National Cancer Institute*, 107(9): djv156. PMID: 26113579

Dirk Schadendorf, F. Stephen Hodi, Caroline Robert, Jeffrey S. Weber, Kim Margolin, Omid Hamid, Debra Patt, **Tai-Tsang Chen**, David M. Berman, and Jedd D. Wolchok. (2015). Pooled Analysis of Long-term Survival Data from Phase II and Phase III Trials of Ipilimumab in Unresectable or Metastatic Melanoma. *Journal of Clinical Oncology*, 33(17): 1889-1894. PMID: 25667295

Michele Maio, Jean-Jacques Grob, Steinar Aamdal, Igor Bondarenko, Caroline Robert, Luc Thomas, Claus Garbe, Vanna Chiarion-Sileni, Alessandro Testori, **Tai-Tsang Chen**, Marina Tschaika, and Jedd D. Wolchok. (2015). Five-year Survival Rates for Treatment-naïve Patients with

Advanced Melanoma who Received Ipilimumab Plus Dacarbazine in a Phase III Trial. *Journal of Clinical Oncology*, 33(10): 1191-1196. PMID: 25713437

Lalla E, **Cheng B**, Kunzel C, Burkett S, Ferraro A, Perez K, Lamster IB, (2015). Six-month outcomes in dental patients identified with hyperglycemia: an RCT. *Journal of Clinical Periodontology*, 42, 228-235.

Bin Cheng and Shing Lee, (2015), On the Consistency of the Continual Reassessment Method with Multiple Constraints. *Journal of Statistical Planning and Inference*, 164, 1-9.

Andrew J. Einstein, Lynne L. Johnson, Albert J. DeLuca, Andrew C. Kontak, Daniel Groves, Jennifer Stant, Ted Pozniakoff, **Bin Cheng**, LeRoy E. Rabbani, Sabahat Bokhari, (2015), Radiation Dose and Prognosis of Ultra-Low Dose Stress-First Myocardial Perfusion SPECT in Patients with Chest Pain Using a High-Efficiency Camera. *Journal of Nuclear Medicine*, 56, 545-551.

Northridge ME, Yu C, Chakraborty B, Port A, Mark J, Golembeski C, **Cheng B**, Kunzel C, Metcalf SS, Marshall SE, Lamster IB, (2015), A community-based oral public health approach to promote health equity. *American Journal of Public Health*, 105, S459-S465.

Robin M Brusen, Rebecca Hahn, Santos E Cabreriza, **Bin Cheng**, Daniel Y Wang, Wanda Truong, Henry M Spotnitz, (2015), Wall Thickness, Pulmonary Hypertension, and Diastolic Function Predict Response to Postoperative Biventricular Pacing. *Journal of Cardiothoracic and Vascular Anesthesia*, 29, 1155-1161.

Siqin Ye, **Bin Cheng**, Gregory Y. H. Lip, Richard Buchsbaum, Ralph Sacco, Bruce Levin, Marco R. Di Tullio, Min Qian, Douglas L. Mann, Patrick M. Pullicino, Ronald S. Freudenberger, John R. Teerlink, J.P. Mohr, Susan Graham, Arthur J. Labovitz, Conrado J. Estol, Dirk J. Lok, Piotr Ponikowski, Stefan D. Anker, John L.P. Thompson, Shunichi Homma, for the WARCEF Investigators, (2015), Bleeding Risk and Antithrombotic Strategy in Patients with Sinus Rhythm and Heart Failure with Reduced Ejection Fraction Treated with Warfarin or Aspirin.

American Journal of Cardiology, 116, 904-912.

Ronald S. Freudenberger, **Bin Cheng**, Douglas L. Mann, John L P Thompson, Ralph L Sacco, Richard Buchsbaum, Alexandra Sanford, Patrick M Pullicino, Bruce Levin, John R Teerlink, Susan Graham, J P Mohr, Barry M Massie, Arthur J Labovitz, Marco R Di Tullio, Gregory Y H Lip, Conrado J Estol, Dirk J Lok, Piotr Ponikowski, Stefan D Anker, and Shunichi Homma, for the WARCEF Investigators, (2015), The First Prognostic Model for Stroke and Death in Patients with Systolic Heart Failure. *Journal of Cardiology*, to appear.

Cheng, Chakraborty, Davidson: SMART-AR for quality improvement in depression treatment program. *Biometrics* 2015; 71, 450-459

Mohr, Schueller, ..., **Cheng**: Trials of intervention principles: evaluation methods for evolving behavioral intervention technologies. *J Med Internet Res* 2015; 17:e166

Cheng, Yu, Wall, et al: Patterns of leisure-time physical activity using multivariate finite mixture modeling and cardiovascular risk factors in the Northern Manhattan Study. *Ann Epidemiology* 2015;25:469-474.

Fukuhara S, Takeda K, **Chiuzan C**, Han J, Polanco AR, Yuzefpolskaya M, Mancini DM, Colombo PC, Topkara VK, Kurlansky PA, Takayama H, Naka Y. Concomitant aortic valve repair with continuous-flow left ventricular assist devices: Results and implications. *J Thorac Cardiovasc Surg*. 2016 Jan;151(1):201-210.e2. doi: 10.1016/j.jtcvs.2015.09.128. Epub 2015 Oct 19. PubMed PMID: 26699773.

Ginsburg ME, Thomashow BM, Bulman WA, Jellen PA, Whippo BA, **Chiuzan C**, Lee S, Bai D, Sonett J. The safety, efficacy, and durability of lung-volume reduction surgery: A 10-year experience. *J Thorac Cardiovasc Surg*. 2016 Mar;151(3):717-724.e1. doi: 10.1016/j.jtcvs.2015.10.095. Epub 2015 Oct 30. PubMed PMID: 26670190.

Castaño A, DeLuca A, Weinberg R, Pozniakoff T, Blaner WS, Pirmohamed A, Bettencourt B, Gollob J, Karsten V, Vest JA, **Chiuzan C**, Maurer MS, Bokhari S.

- Serial scanning with technetium pyrophosphate (^{99m}Tc-PYP) in advanced ATTR cardiac amyloidosis. *J Nucl Cardiol.* 2015 Oct 9. [Epub ahead of print] PubMed PMID: 26453570.
- Chiuzan C**, West EA, Duong J, Cheung KY, Einstein AJ. Sample size considerations for clinical research studies in nuclear cardiology. *J Nucl Cardiol.* 2015 Dec;22(6):1300-13. doi: 10.1007/s12350-015-0256-7. Epub 2015 Sep 24. PubMed PMID: 26403142.
- Kiran RP, Murray AC, **Chiuzan C**, Estrada D, Forde K. Combined pre-operative mechanical bowel preparation with oral antibiotics significantly reduces surgical site infection, anastomotic leak, and ileus after colorectal surgery. *Ann Surg.* 2015 Sep;262(3):416-25; discussion 423-5. doi: 10.1097/SLA.0000000000001416. PubMed PMID: 26258310.
- Muennig PA, Quan R, **Chiuzan C**, Glied S. Considering whether Medicaid is worth the cost: revisiting the Oregon Health Study. *Am J Public Health.* 2015 May;105(5):866-71. doi: 10.2105/AJPH.2014.302485. Epub 2015 Mar 19. PubMed PMID: 25790389.
- Chiuzan C**, Garrett-Mayer E, Yeatts SD. A likelihood-based approach for computing the operating characteristics of the 3+3 phase I clinical trial design with extensions to other A+B designs. *Clin Trials.* 2015 Feb;12(1):24-33. doi: 10.1177/1740774514555585. Epub 2014 Oct 27. PubMed PMID: 25349178; PubMed Central PMCID: PMC4344878.
- M. Sabatello, J. Phelan, D. Hesdorffer, S. Shostak, **J. Goldsmith**, S. Sorge, M. Winawer, W. Chung, R. Ottman (2015). Genetic Causal Attribution of Epilepsy and its Implications for Felt Stigma. *Epilepsia*, 56 1542-1550. PMID: 26290354
- C. Wang, S. Vine, A. Hsiao, A. Rundle, and **J. Goldsmith** (2015). Weight-Related Behaviors When Children are in School Versus on Summer Breaks: Does Income Matter? *Journal of School Health*, 85 458-466. PMID: 26032276
- U. B. Schambra, **J. Goldsmith**, H. M. Schambra, K. Nunleya, S. Hariforoosh, Y. Liu, S. S. Moy (2015). Low and moderate prenatal ethanol exposure of mice during gastrulation or neurulation delays neurobehavioral development. *Neurotoxicology & Teratology*, 51 1-11. PMID: 26171567
- T. Kitago, **J. Goldsmith**, M. Harran, L. Kane, J. Berard, S. Huang, S. Ryan, P. Mazzoni, J. Krakauer, and V. Huang (2015). Robotic therapy for chronic stroke: general recovery of impairment or improved task-specific skill? *Journal of Neurophysiology*, 114 1885-1894. PMID: 26180120
- J. Goldsmith**, V. Zippunnikov, J. A. Schrack (2015). Generalized Multi-level Functional-on-Scalar Regression and Principal Component Analysis. *Biometrics*, 71 344-353. PMID: 25620473
- Wang J, Kearney JA, **Jia H**, Shang J. Mental Health Disorders in Elderly People Receiving Home Care: Prevalence and Correlates in the National U.S. Population. *Nurs Res.* 2016 Mar-Apr;65(2):107-16. doi: 10.1097/NNR.0000000000000147. PMID: 26938359
- Jia H**, Lubetkin EI. Impact of nine chronic conditions for US adults aged 65 years and older: an application of a hybrid estimator of quality-adjusted life years throughout remainder of lifetime. *Qual Life Res.* 2016. DOI 10.1007/s11136-016-1226-5. PMID: 26781442
- Jia H**, Zack MM, Thompson WW. Population-based estimates of decreases in quality-adjusted life expectancy associated with unhealthy body mass index. *Public Health Reports.* 2016; 131: 177-184. PMID: 26843684
- Lee YJ, Boden-Albala B, **Jia H**, Wilcox A, Bakken S. The association between online health information-seeking behaviors and health behaviors among Hispanics in New York City: a community-based cross-section study. *J Med Internet Res.* 2015;17(11):e261. DOI: 10.2196/jmir.4368. PMID: 26611438
- Miko BA, Kamath SS, Cohen BA, Jeon C, **Jia H**, Larson EL. Epidemiologic associations between short-bowel syndrome and bloodstream infection among hospitalized children. *J Pediatric Infect Dis Assoc.* 2015;4(3):192-7. Doi:10.1093/jpids/piu079. PMID: 26336089
- Rockett IR, Hobbs GR, Wu D, Jia H, Nolte KB, Smith GS, Putnam SL, Caine ED. Variable classification of drug-intoxication suicides across US States: a partial artifact of Forensics? *PLoS One.* 2015; 10(8):e0135296. doi: 10.1371/journal.pone.0135296. eCollection 2015. PMID: 26295155
- Carter EJ, Wyer P, Giglio J, **Jia H**, Nelson G, Kauari VE, Larson EL. Environmental factors and their association with emergency department hand hygiene compliance: an observational study. *BMJ Qual Saf.* 2015 Jul 31. pii: bmjqs-2015-004081. doi: 10.1136/bmjqs-2015-004081. PMID: 26232494
- Jia H**, Zack MM, Thompson WW, Crosby AE, Gottesman II. Impact of depression on quality-adjusted life expectancy (QALE) directly as well as indirectly through suicide. *Soc Psychiatry Psychiatr Epidemiol.* 2015; 50(6):939-49. PMID: 25660550
- Jin, Z.**, Shao, Y. and Ying, Z. (2015) A Monte Carlo method for variance estimation for estimators based on induced smoothing, *Biostatistics*, 16, 179-188. PMID: 24812418
- Liu, X. and **Jin, Z.** (2015) Optimal survival time related cut-point with censored data, *Statistics in Medicine*, 34, 515-524. PMID: 25382379
- Offer, K., Kolb, M., **Jin, Z.**, Bhatia, M., Kung, A.L., George, D., Garvin, J.H., Robinson, C., Sosna, J., Karamehmet, E. and Satwani, P. (2015) The efficacy of Tacrolimus/Mycophenolate Mofetil as acute graft-versus-host-disease prophylaxis and the impact of sub therapeutic Tacrolimus levels in children following matched sibling donor allogeneic hematopoietic cell transplantation, *Biology of Blood and Marrow Transplantation*, 21, 496-502. PMID: 25536217
- Satwani, P., **Jin, Z.**, Bradley, M.B., Martin, P., Morris, E., Harrison, L., Bhatia, M., Garvin, J.H., George, D., Kurtzberg, J. and Cairo, M.S. (2015) Sequential myeloablative autologous stem cell transplantation and reduced intensity allogeneic stem cell transplantation in children, adolescents and young adults with poor risk refractory or recurrent Hodgkin and non-Hodgkin lymphoma. *Leukemia*, 29, 448-455. PMID: 24938649
- Bhatia, M., Kolva, E., Cimini, L., Satwani, P., George, D., Garvin, J., **Jin, Z.**, Cruz, E. and Sands, S. (2015) Health related quality of life following allogeneic hematopoietic stem cell transplantation for sickle cell disease, *Biology of Blood and Marrow Transplantation*, 21, 666-672. PMID: 25559691
- Sera, F., Russo, C., Iwata, S., **Jin, Z.**, Rundek, T., Elkind, M.S.V., Homma, S., Sacco, R.L. and Di Tullio, M.R. (2015) Arterial wave reflection and aortic valve calcification in an elderly community-based cohort, *Journal of the American Society of Echocardiography*, 28, 430-436. PMID: 25600036
- Russo, C., **Jin, Z.**, Elkind, M.S.V., Rundek, T., Homma, S., Sacco, R.L. and Di Tullio, M.R. (2015) Race-ethnic differences in subclinical left ventricular dysfunction by global longitudinal strain: a community-based cohort study, *The American Heart Journal*, 169, 721-726. PMID: 25965720
- Arnold, S., **Jin, Z.**, Sands, S., Bhatia, M., Kung, A., Satwani, P. (2015) Allogeneic hematopoietic cell transplantation for children with sickle cell disease is beneficial and cost effective: a single center analysis, *Biology of Blood and Marrow Transplantation*, 21, 1258-1265. PMID: 25615608
- Farr, M., Mitchell, J., Lippel, M., Kato, T.S., **Jin, Z.**, Ippolito, P., Dove, L., Jorde, U.P., Takayama, H., Emond, J., Naka, Y., Mancini, D., Lefkowitz, J.H., and Schulze, P.C. (2015) Combination of liver biopsy with MELD-XI scores for post-transplant outcome prediction in patients with advanced heart failure and suspected liver dysfunction, *The Journal of Heart and Lung Transplantation*, 34, 873-882. PMID: 25851466
- Levinson, A.L., Pinkney, K., **Jin, Z.**, Bhatia, M., Kung, A.L., Foca, M.D., George, D., Garvin, J.H., Sosna, J., Karamehmet, E., Robinson, C., Satwani, P. (2015) Acute gastrointestinal GVHD is associated with increased enteric bacterial blood stream infection density in pediatric allogeneic hematopoietic cell transplant recipients, *Clinical Infectious Diseases*, 61, 350-357. PMID: 25948061
- Kapoor, A., Kumar, A., Simmonds, P., Bhua, N., Chauhan, L.S., Lee, B, **Jin, Z.**, Morse, S.S., Shaz, B., Burbelo, P.D. and Lipkin, I.W. (2015) Virome analysis of transfusion recipients reveals a novel human virus that shares genomic features with Hepaciviruses and Pegiviruses, *mBio*, 6, e101466-15. PMID: 26396247
- Sera, F., **Jin, Z.**, Russo, C., Lee, E.S., Schwartz, J.E., Rundek, T., Elkind, M.S.V., Homma, S., Sacco, R.L. and Di Tullio, M.R. (2015) Ambulatory blood pressure control and subclinical left ventricular dysfunction in treated hypertensive subjects, *Journal of the American College of Cardiology*, 66, 1408-1409. PMID: 26383729
- Freedberg, D.E., Lamoué-Smith, E.S., Lightdale, J.R., **Jin, Z.**, Yang, Y., Abrams, J.A. (2015) Use of acid suppression medication is associated with *C. difficile* infection in infants and children: A population-based

- study, *Clinical Infectious Diseases*, 61, 912-917. PMID: 26060292
- Violago, L., **Jin, Z.**, Bhatia, M., Rustia, E., Kung, A.L., Foca, M.D., George, D., Garvin, J.H., Sosna, J., Robinson, C., Karamehmet, E. and Satwani, P. (2015) Human herpes virus-6 viremia is not associated with poor clinical outcomes in children following allogeneic hematopoietic cell transplantation, *Pediatric Transplantation*, 19, 737-744. PMID: 26329541
- Satwani, P., Kahn, J. and **Jin, Z.** (2015) Making strides and meeting challenges in pediatric allogeneic hematopoietic cell transplantation clinical trials in the United States: past, present and future, *Contemporary Clinical Trials*, 45, 84-92. PMID: 26091946
- Luo, X., Chen, P., Wu, A. C., Pan, J., Li, M., Chen, G., Dong, Q., Cline, G., **Jin, Z.** (2015) A proposed statistical framework for the management of subgroup analyses for large clinical trials, *Contemporary Clinical Trials*, 239-243. PMID: 26388115
- Reid, T.J., **Jin, Z.**, Shen, W., Reyes-Vidal, C.M., Fernandez, J.C., Bruce, J.N., Kostadinov, J., Post, K.D. and Freda, P.U. (2015) IGF-1 levels across the spectrum of normal to elevated in acromegaly: relationship to insulin sensitivity, markers of cardiovascular risk and body composition, *Pituitary*, 18, 808-819. PMID: 25907335
- I Ionita-Laza**, Kenneth McCallum, Bin Xu, Joseph Buxbaum Eigen: A spectral approach to the integration of functional genomics annotations for both coding and noncoding sequence variants, *Nature Genetics*, to appear
- A Takata, B Xu, **I Ionita-Laza**, JA Gogos, M Karayiorgou De novo synonymous mutations in regulatory elements contribute to the genetic etiology of autism and schizophrenia, *Neuron*, to appear
- K McCallum, **I Ionita-Laza** An Empirical Bayes Scan Statistic for Detecting Clusters of Disease Related Genetic Variants, *Biometrics*, 2015
- A Talati, G Guffanti, Z Odgerel, **I Ionita-Laza**, H Malm, A Sourander, AS Brown, PJ Wickramaratne, JA Gingrich, MM Weissman Genetic variants within the serotonin transporter associated with familial risk for major depression, *Psychiatry Res.* 228: 170-173.
- Capanu M, **Ionita-Laza I** Integrative analysis of functional genomic annotations and sequencing data to identify rare causal variants via hierarchical modeling, *Front Genet*, 6:17.
- Y Wei, X Song, M Liu, **I Ionita-Laza**, J Reibman Quantile Regression in the Secondary Analysis of Case-Control Data, *Journal of the American Statistical Association*, in press, 2015
- Evans, S.D., Mellins, C.A., **Leu, C.-S.**, Warne, P., Elkington, K.S., Dolezal, C., Santamaria, E.K., Wiznia, A., Bamji, M., Jurgrau-Vouglari, A.S., Abrams, E.J.: HIV Treatment Adherence Measurement and Reporting Concordance in Youth with Perinatally Acquired HIV Infection and Their Caregivers. *AIDS Patient Care and STDs* 2015; 29 (1): 43-51.
- Robbins, R.N., Mellins, C.A., **Leu, C.-S.**, Rowe, J., Warne, P., Abrams, E.J., Witte, S., Stein, D.J., Remien, R.H.: Enhancing lay counselor capacity to improve patient outcomes with multimedia technology. *AIDS and Behavior* 2015; 19(2): 163-176.
- Arya, B., Kerstein, D., **Leu, C.-S.**, Hayes, D., Zuckerman, W.A., Krishnan, U., Lai, W.W.: Echocardiographic Assessment of Right Atrial Pressure in a Pediatric and Young Adult Population. *Pediatric Cardiology* 2015 (in press).
- Mantell, E.J., Smit, J.A., Exner, T.M., Mabude, Z., Hoffman, S., Beksinska, M., Kelvin, E.A., Ngoloyi, C., **Leu, C.-S.**, Stein, Z.A.: Promoting Female Condom Use Among Female University Students in KwaZulu-Natal, South Africa: Results of a Randomized Behavioral Trial. *AIDS and Behavior* 2015; 19(7): 1129-1140.
- Gromadzka, O., Santamaria, E.K., Benavides, J.M., Dolezal, C., Elkington, K.S., **Leu, C.-S.**, McKay, M., Abrams, E.J., Wiznia, A., Bamji, M., Mellins, C.A.: Sexual Health Knowledge in a Sample of Perinatally HIV-Infected and Perinatally Exposed Uninfected Youth. *Journal of HIV/AIDS & Social Services* 2015; 14(3): 277-293.
- Caplan, A., Plunkett, C., and **Levin, B.** (2015). Selecting the Right Tool for the Job (invited paper). *American Journal of Bioethics* 15(4):4-10 (with open peer commentaries, pp. 33-50). PMID4120834
- Caplan, A., Plunkett, C., and **Levin, B.** (2015). The Perfect Must Not Overwhelm the Good: Response to Open Peer Commentaries on "Selecting the Right Tool For the Job". *American Journal of Bioethics* 15(4):W8-W10. PMID4120834
- Zuber, J., Rosen, S., Shonts B., Sprangers, B. Savage, T.M., Richman, S., Yang, S., Lau, S.P., DeWolf, S., Farber, D., Vlad, G., Zorn, E., Wong, W., Emond, J., **Levin, B.**, Martinez, M., Kato, T., Sykes, M. (2015). Macrochimerism in Intestinal Transplantation: Association with Lower Rejection Rates and Multi-visceral Transplants, Without GVHD. *American Journal of Transplantation* [doi: 10.1111/ajt.13325 Epub ahead of print]
- Connors, T.J., Ravindranath, T.M., Bickham, K.L., Gordon, C.L., Zhang, F., Zhang, **Levin, B.**, Baird, J.S., and Farber, D.L. (2015). Airway CD8+ T-cells are Associated with Lung Injury During Infant Viral Respiratory Tract Infection. *American Journal of Respiratory Cell and Molecular Biology* (in press). [doi: 10.1165/rcmb.2015-0297OC, Epub ahead of print 30 Nov 2015.] PMID: 26618559
- Graham S., Ye S., Qian M., Sanford A.R., Di Tullio M.R., Sacco R.L., Mann D.L., **Levin B.**, Pullicino P., Freudenberger R.S., Teerlink J.R., Mohr J.P., Labovitz A.J., Lip G.Y.H., Estol C.J., Lok D.J., Ponikowski P., Anker S.D., Thompson J.L.P., and Homma S. for the WARCEF Investigators. (2014). Cognitive Function in Ambulatory Patients with Systolic Heart Failure: Insights from the Warfarin versus Aspirin in Reduced Cardiac Ejection Fraction (WARCEF) Trial. *PLOS One* (in press).
- Homma, S., Thompson, J.L.P., Qian, M., Ye, S., Di Tullio, M.R., Lip, G.Y.H., Mann, D.L., Sacco, R.L., **Levin, B.**, Pullicino, P.M., Freudenberger, R.S., Teerlink, J.R., Graham, S., Mohr, J.P., Labovitz, A.J., Buchsbaum, R., Estol, C.J., Lok, D.J., Ponikowski, P., and Anker, S.D., for the WARCEF Investigators. (2015). Quality of Anticoagulation Control in Preventing Adverse Events in Heart Failure Patients in Sinus Rhythm: A Warfarin Aspirin Reduced Cardiac Ejection Fraction Trial (Warcef) Substudy. *Circulation: Heart Failure* (in press).
- Ye, S., Cheng, B., Lip, G.Y.H., Buchsbaum, R., Sacco, R.L., **Levin, B.**, Di Tullio, M.R., Qian, M., Mann, D.L., Pullicino, P.M., Freudenberger, R.S., Teerlink, J.R., Mohr, J.P., Graham, S., Labovitz, A.J., Estol, C.J., Lok, D.J., Ponikowski, P., Anker, S.D., Thompson, J.L.P., Homma, S. (2015). Bleeding Risk and Antithrombotic Strategy in Patients with Sinus Rhythm and Heart Failure with Reduced Ejection Fraction Treated with Warfarin or Aspirin. *American Journal of Cardiology* (in press).
- Freudenberger, R.S., Cheng, B., Mann, D.L., Thompson, J.L., Sacco, R.L., Buchsbaum, R., Sanford, A., Pullicino, P.M., **Levin, B.**, Teerlink, J.R., Graham, S., Mohr, J.P., Labovitz, A.J., Di Tullio, M.R., Lip, G.Y., Estol, C.J., Lok, D.J., Ponikowski, P., Anker, S.D., Homma, S.; WARCEF Investigators. (2015) The First Prognostic Model for Stroke and Death in Patients with Systolic Heart Failure. *J. Cardiology* (in press). [PMID 26549533] S0914-5087(15)00309-3. doi: 10.1016/j.jjcc.2015.09.014. [Epub ahead of print]
- Levin, B.** (2015). The Futility Study—Progress Over the Last Decade. *Contemporary Clinical Trials* 45 (Pt A):69-75. PMID: PMC4639404]
- Ardlie KG, Deluca DS, Segrè AV, Sullivan TJ, Young TR, Gelfand ET, Trowbridge CA, Maller JB, Tukiainen T, Lek M, Ward LD, Kheradpour P, Iriarte B, Meng Y, Palmer CD, Esko T, Winckler W, Hirschhorn JN, Kellis M, MacArthur DG, Getz G, Shabalin AA, Li G, Zhou YH, Nobel AB, Rusyn I, Wright FA, Lappalainen T, Ferreira PG, Ongen H, Rivas MA, Battle A, Mostafavi S, Monlong J, Sammeth M, Melé M, Reverter F, Goldmann JM, Koller D, Guigó R, McCarthy MI, Dermizakis ET, Gamazon ER, Im HK, Konkashbaev A, Nicolae DL, Cox NJ, Flutre T, Wen X, Stephens M, Pritchard JK, Tu Z, Zhang B, Huang T, Long Q, Lin L, Yang J, Zhu J, Liu J, Brown A, Mestichelli B, Tidwell D, Lo E, Salvatore M, Shad S, Thomas JA, Lonsdale JT, Moser MT, Gillard BM, Karasik E, Ramsey K, Choi C, Foster BA, Syron J, Fleming J, Magazine H, Hasz R, Walters GD, Bridge JP, Miklos M, Sullivan S, Barker LK, Traino HM, Mosavel M, Siminoff LA, Valley DR, Rohrer DC, Jewell SD, Branton PA, Sobin LH, Barcus M, Qi L, McLean J, Hariharan P, Um KS, Wu S, Tabor D, Shive C, Smith AM, Buia SA, Undale AH, Robinson KL, Roche N, Valentino KM, Britton A, Burges R, Bradbury D, Hambricht KW, Seleski J, Korzeniewski GE, Erickson K, Marcus Y, Tejada J, Taherian M, Lu C, Basile M, Mash DC, Volpi S, Struewing JP, Temple GF, Boyer J, Colantuoni D, Little R, Koester S, Carithers L, Moore HM, Guan P, Compton C, Sawyer SJ, Demchok JP, Vaught JB, Rabiner CA, Lockhart NC, Ardlie KG, Getz G, Wright FA, Kellis M, Volpi S, Dermizakis ET. The GTEx Consortium. The Genotype-Tissue Expression (GTEx) pilot analysis: Multitissue gene regulation in humans. *Science*, 348(6235): 648-660, 2015, PMID: PMC4547484.
- Khalid Khan, Ershad B. Ahmed, Pam Factor-Litvak, **Xinhua Liu**, Zillur Rahman, Hasan A. Ferdous, Abu B. Siddique, Gail A. Wasserman, Vesna Slavkovich, Diane Levy, Jacob Mey, Alexander van Geen, Joseph H. Graziano. "Evaluation of an Elementary School-based Educational Intervention for Reducing Arsenic Exposure in Bangladesh". *Environmental Health Perspectives* 123 (12):1331-6, 2015. PMID25956010
- Brandilyn A. Peters, Megan N. Hall (co-first author), **Xinhua Liu**, Pam Factor-Litvak, Faruque Parvez, Alexander van Geen, Jacob L. Mey, Abu B. Siddique, Mohammad Hasan Shahrir, Moham-

- mad Nasir Uddin, Mohammad Tariqul Islam, Vesna Slavkovich, Vesna Ilievski, Joseph H. Graziano, Mary V. Gamble. "Folic Acid and Creatine as Therapeutic Approaches to Lower Blood Arsenic: A Randomized-Controlled Trial". *Environmental Health Perspectives* 123 (12):1294-301, 2015. PMID25978852
- Brandilyn A. Peters, **Xinhua Liu**, Megan N. Hall, Vesna Ilievski, Vesna Slavkovich, Abu B. Siddique, Shafiul Alam, Tariqul Islam, Joseph H. Graziano, Mary V. Gamble. "Arsenic exposure, inflammation, and renal function in Bangladeshi adults: effect modification by plasma glutathione redox potential". *Free Radical Biology and Medicine* 85:174-82, 2015. PMID25916185
- Brandilyn A. Peters, Megan N. Hall, **Xinhua Liu**, Faruque Parvez, Abu B. Siddique, Hasan Shahriar, Mohammad Nasir Uddin, Tariqul Islam, Vesna Ilievski, Joseph H. Graziano, and Mary V. Gamble. "Low-Dose Creatine Supplementation Lowers Plasma Guanidinoacetate, but Not Plasma Homocysteine, in a Double-Blind, Randomized, Placebo-Controlled Trial". *The Journal of Nutrition* 145(10): 2245-52, 2015. PMID26311810 PMC4580963
- Megan Niedzwiecki, **Xinhua Liu**, Megan N. Hall, Tiffany Thomas, Vesna N Slavkovich, Vesna Ilievski, Diane Levy, Shafiul Alam, Abu B Siddique, Faruque Parvez, Joseph H Graziano, and Mary V. Gamble. "Sex-specific associations of arsenic exposure with global DNA methylation and hydroxymethylation in leukocytes: results from two studies in Bangladesh". *Cancer Epidemiology, Biomarkers & Prevention* 24(11): 1748-57, 2015. PMC4633312 doi: 10.1158/1055-9965.EPI-15-0432
- Kyung Hwa Jung, Stephanie Lovinsky-Desir, Matthew Perzanowski, **Xinhua Liu**, Christina Maher, Eric Gil, David Torrone, Andreas Sjodin, Li Zheng, Frederica P. Perera, Rachel L. Miller. "Repeatedly High Polycyclic Aromatic Hydrocarbon Exposure and Cockroach Sensitization Among Inner-city Children". *Environmental Research* 140:649-656, 2015. PMC4492866
- Kirstie H. Stansfield, Kristen Ruby, Barbara Soares, Jennifer L. McGlothlan, **Xinhua Liu**, Tomás R. Guilarte. "Early life lead exposure recapitulates the selective loss of Parvalbumin-Positive GABAergic Interneurons and Subcortical Dopamine System Hyperactivity Present in Schizophrenia". *Translational Psychiatry* 2015 Mar 10; 5:e522. doi: 10.1038/tp.2014.14 PMID25756805 PMC4354343
- Multimodal Imaging of Central Retinal Disease Progression in a 2-Year Mean Follow-up of Retinitis Pigmentosa. Sujirakul T, Lin MK, Duong J, Wei Y, **Lopez-Pintado S**, et al. *American journal of ophthalmology*. 2015; 160(4):786-98.e4. PubMed [journal]PMID: 26164827
- Serial high sensitivity cardiac troponin T measurement in acute heart failure: insights from the RELAX-AHF study. Felker GM, Mentz RJ, Teerlink JR, Voors AA, Pang PS, Ponikowski P, Greenberg BH, Filippatos G, Davison BA, Cotter G, Prescott MF, Hua TA, **Lopez-Pintado S**, Severin T, Metra M. *European journal of heart failure*. 2015; 17(12):1262-70. PubMed [journal]PMID: 26333655
- Bui E, **Mauro C**, Robinaugh D, Skritskaya N, Wang Y, Gribbin C, Ghesquiere A, Horenstein A, Duan N, Reynolds CF III, Zisook S, Simon NM, Shear MK. (2015). The Structured Clinical Interview for Complicated Grief: Reliability, Validity, and Exploratory Factor Analysis. *Depress Anxiety*. 32 (7), 485-492. PMCID: PMC4565180.
- Prins SJ, Skeem JL, **Mauro C**, Link BG. (2015). Criminogenic factors, psychotic symptoms, and incident arrests among people with serious mental illnesses under intensive outpatient treatment. *Law Hum Behav.*, 39 (2), 177. PMID:25133918.
- Bui E, Horenstein A, Shah R, Skritskaya NA, **Mauro C**, Wang Y, Duan N, Reynolds CF III, Zisook S, Shear MK, Simon NM. (2015). Grief-related Panic Symptoms in Complicated Grief. *J Affect Disord*. 170:213-6. doi: 10.1016/j.jad.2014.08.028. PMCID: PMC4252915
- Zetumer S, Young I, Shear MK, Skritskaya N, Lebowitz B, Simon N, Reynolds CF III, **Mauro C**, Zisook S. (2015). The Impact of Losing a Child on the Clinical Presentation of Complicated Grief. *J Affect Disord*. 170:15-21 doi: 10.1016/j.jad.2014.08.021. PMCID: PMC4253869.
- I. W. McKeague**, A. S. Brown, Y. Bao, S. Hinkka-Yli-Saloma ki, J. Huttunen, Sourander, A. Autism with Intellectual Disability Related to Dynamics of Head Circumference Growth during Early Infancy. *Biological Psychiatry* 77 833-840 (2015). PMID: 25444163.
- I. W. McKeague**. Central Limit Theorems under Special Relativity. *Statistics and Probability Letters*, 99, 149-155 (2015). PMID: 25798020.
- H.El Barmi and **I.W. McKeague**. Testing for Uniform Stochastic Ordering via Empirical Likelihood. *Annals of the Institute of Mathematical Statistics*, DOI: 10.1007/s10463-015-0523-z, published online on 9 July, 2015.
- H. Malm, A. Sourander, M. Gissler M, D. Gyllenberg, S. Hinkka-Yli-Saloma ki, **I. W. McKeague**, M. Artama, and A. S. Brown. Pregnancy Complications Following Prenatal Exposure to SSRIs or Maternal Psychiatric Disorders: Results From Population-Based National Register Data. *Am. J. Psychiatry* 172 1224-32 (2015). PMID: 26238606.
- D. Gyllenberg, A. Sourander, H. M. Surcel, S. Hinkka-Yli-Salomäki, **I. W. McKeague** and A. S. Brown. Hy-pothyroxinemia During Gestation and Offspring Schizophrenia in a National Birth Cohort. *Biological Psychiatry* doi: 10.1016/j.biopsych.2015.06.014. [Epub ahead of print]. PMID: 26194598.
- I. W. McKeague** and M. Qian. An Adaptive Resampling Test for Detecting the Presence of Significant Predictors. DOI: 10.1080/01621459.2015.1095099. *Journal of the American Statistical Association* 110 (2105). JASA-T&M Special Invited Paper for 2015 (with discussion).
- I. W. McKeague** and M. Qian. Rejoinder to the Discussants of "An Adaptive Resampling Test for Detecting the Presence of Significant Predictors". DOI: 10.1080/01621459.2015.1107431. *Journal of the American Statistical Association* 110 (2015).
- Ciarleglio, A., Petkova, E., **Ogden, R. T.**, and Tarpey, T. (2015). Treatment decisions based on scalar and functional covariates. *Biometrics* 71: 884-894.
- Zhao, Y., Chen, H., and **Ogden, R. T.** (2015). Wavelet-based weighted LASSO and screening approaches in functional linear regression. *Journal of Computational and Graphical Statistics* 24: 655-675.
- Schambra, H, M., **Ogden R. T.**, Mart inez-Hern andez, I. E., Lin X., Chang, Y. B., Rahman, A., Edwards, D. J., and Krakauer, J. W. (2015). The reliability of repeated TMS measures in older adults and in patients with subacute and chronic stroke. *Frontiers in Cellular Neuroscience* 9: 335.
- Rodriguez, C. I., Kegeles, L. S., Levinson, A., **Ogden, R. T.**, Mao, X., Milak, M. S., Vermes, D., Xie, S., Hunter, L., Flood, P., Moore, H., Shungu, D. C., and Simpson, H. B. (2015). In vivo effects of ketamine on glutamate-glutamine and gamma-aminobutyric acid in Obsessive-Compulsive Disorder: Proof of concept. *Psychiatry Research: Neuroimaging* 233: 141-147.
- Zanderigo, F., Parsey, R. V., and **Ogden, R. T.** (2015). Model-free quantification of dynamic PET data using nonparametric deconvolution. *Journal of Cerebral Blood Flow and Metabolism* 35: 1368-1379.
- Mikhno, A., Zanderigo, F., **Ogden, R. T.**, Mann, J. J., Angelini, E. D., Laine, A. F., and Parsey, R. V. (2015). Toward non-invasive quantification of brain radioligand binding by combining electronic health records and dynamic PET imaging data. *IEEE Journal of Biomedical and Health Informatics* 19: 1271-1282.
- Reiss, P. T., Huo, L., Zhao, Y., Kelly, C., and **Ogden, R. T.** (2015). Wavelet-domain regression and predictive inference in psychiatric neuroimaging. *Annals of Applied Statistics* 9: 1076-1101.
- Kaufman, J., Sullivan, G. M., Yang, J., **Ogden, R. T.**, Miller, J. M., Oquendo, M. A., Mann, J. J., Parsey, R. V., and DeLorenzo, C. (2015). Quantification of the serotonin 1A receptor using PET: Identification of a potential biomarker of major depression in males. *Neuropsychopharmacology* 40: 1692-1699.
- Sullivan, G. M., Oquendo, M. A., Milak, M., Miller, J. M., Burke, A., **Ogden, R. T.**, Parsey, R. V., and Mann, J. J. (2015). Positron emission tomography quantification of serotonin(1A) receptor binding in suicide attempters with major depressive disorder. *JAMA Psychiatry* 72: 169-178.
- Zanderigo, F., **Ogden, R. T.**, and Parsey, R. V. (2015). Non-invasive blood-free full quantification of PET radioligand binding. *Journal of Cerebral Blood Flow and Metabolism* 35: 148-156.
- Ogden, R. T.**, Zanderigo, F., and Parsey, R. V. (2015). Estimation of nonspecific binding without requiring a reference region. *NeuroImage* 108: 234-242.
- Haney M, Ramesh D, Glass A, **Pavlicova M**, Bedi G, et al. Naltrexone Maintenance Decreases Cannabis Self-Administration and Subjective Effects in Daily Cannabis Smokers. *Neuropsychopharmacology* : official publication of the American College of Neuropsychopharmacology. 2015; 40(11):2489-98. PMID: 25881117, PMCID: PMC4569951
- Campbell AN, Nunes EV, **Pavlicova M**, Hatch-Maillette M, Hu MC, et al. Gender-based Outcomes and Acceptability of a Computer-assisted Psychosocial Intervention for Substance Use Disorders. *Journal of substance abuse treatment*. 2015; 53:9-15. NIHMSID: NIHMS657078 PMID: 25613105, PMCID: PMC4414709
- McClure EA, Campbell AN, **Pavlicova M**, Hu M, Winhusen T, et al. Cigarette Smoking During Substance Use Disorder Treatment: Secondary Outcomes from a National Drug Abuse Treatment Clinical Trials Network study. *Journal of substance abuse treatment*. 2015; 53:39-46. NIHMSID: NIHMS655912 PMID: 25595301, PMCID: I.W. McKeague* and M. Qian* (2015).

- An Adaptive Resampling Test for Detecting the Presence of Significant Predictors (with discussion). To appear in *Journal of the American Statistical Association*. (* The authors are listed in alphabetical order.)
PMC4414703
- Mogali S, Khan NA, Drill ES, **Pavlicova M**, Sullivan MA, et al. Baseline characteristics of patients predicting suitability for rapid naltrexone induction. *The American journal on addictions / American Academy of Psychiatrists in Alcoholism and Addictions*. 2015; 24(3):258-64. NIHMSID: NIHMS701450 PMID: 25907815, PMCID: PMC4496800
- Sullivan MA, Bisaga A, Glass A, Mishlen K, **Pavlicova M**, et al. Opioid use and dropout in patients receiving oral naltrexone with or without single administration of injection naltrexone. *Drug and alcohol dependence*. 2015; 147:122-9. NIHMSID: NIHMS652529 PMID: 25555621, PMCID: PMC4435949
- Cooper ZD, Johnson KW, **Pavlicova M**, Glass A, Vosburg SK, et al. The effects of ibudilast, a glial activation inhibitor, on opioid withdrawal symptoms in opioid-dependent volunteers. *Addiction biology*. 2015; NIHMSID: NIHMS682309 PMID: 25975386, PMCID: PMC4644513
- Tross S, Feaster DJ, Thorens G, Duan R, Gomez Z, **Pavlicova M**, Hu MC, Kyle T, Erickson S, Spector A, Haynes L, Metsch LR. Substance Use, Depression and Sociodemographic Determinants of HIV Sexual Risk Behavior in Outpatient Substance Abuse Treatment Patients. *J Addict Med*. 2015 Dec; 9(6):457-63. PubMed PMID: 26501786.
- Thorens G, **Pavlicova M**, Hu MC, Nunes EV, Campbell AN, Tross S. Comparison of 2 Measures of HIV Sexual Risk Behavior in Women in Outpatient Drug Treatment Programs. *J Addict Med*. 2015 Dec; 9(6):454-6. PubMed PMID: 26501785; PubMed Central PMCID: PMC4630085.
- Bisaga A, Sullivan MA, Glass A, Mishlen K, **Pavlicova M**, Haney M, Raby WN, Levin FR, Carpenter KM, Mariani JJ, Nunes EV. The effects of dronabinol during detoxification and the initiation of treatment with extended release naltrexone. *Drug Alcohol Depend*. 2015 Sep 1; 154:38-45. PubMed PMID: 26187456; PubMed Central PMCID: PMC4536087.
- Levin FR, Mariani JJ, **Pavlicova M**, Brooks D, Glass A, Mahony A, Nunes EV, Bisaga A, Dakwar E, Carpenter KM, Sullivan MA, Choi JC. Dronabinol and lofexidine for cannabis use disorder: A randomized, double-blind, placebo-controlled trial. *Drug Alcohol Depend*. 2016 Feb 1; 159:53-60. PubMed PMID: 26711160; PubMed Central PMCID: PMC4729291.
- Cunningham C, Stitzer M, Campbell AN, **Pavlicova M**, Hu MC, Nunes EV. Contingency management abstinence incentives: Cost and implications for treatment tailoring. *J Subst Abuse Treat*. 2015 Sep 21. pii: S0740-5472(15)00242-1. doi: 10.1016/j.jsat.2015.08.010. [Epub ahead of print] PubMed PMID: 26482136.
- I.W. McKeague and **M. Qian** (2015). Rejoinder of "An Adaptive Resampling Test for Detecting the Presence of Significant Predictors". To appear in *Journal of the American Statistical Association*. (* The authors are listed in alphabetical order.
- G. Cotter, A.A. Voors, M.F. Prescott, G.M. Felker, G. Filippatos, B.H. Greenberg, P.S. Pang, P. Ponikowski, O. Milo, T.A. Hua, **M. Qian**, T.M. Severin, J.R. Teerlink, M. Metra, B.A. Davison. (2015). Growth differentiation factor 15 (GDF-15) in patients admitted for acute heart failure: results from the RELAX-AHF study. *European Journal of Heart Failure* doi: 10.1002/ehf.331. PMID: 2633529
- S. Ye, B. Cheng, G.Y.H. Lip, R. Buchsbaum, R.L. Sacco, B. Levin, M.R. Di Tullio, **M. Qian**, D.L. Mann, P.M. Pullicino, R.S. Freudenberger, J.R. Teerlink, J.P. Mohr, S. Graham, A.J. Labovitz, C.J. Estol, D.J. Lok, P. Ponikowski, S.D. Anker, J.L.P. Thompson and S. Homma (2015). Bleeding Risk and Antithrombotic Strategy in Patients with Sinus Rhythm and Heart Failure with Reduced Ejection Fraction Treated with Warfarin or Aspirin. *American Journal of Cardiology*. 116(6):904-12. PMCID: PMC4554775
- S. Homma, J.L. Thompson, **M. Qian**, S. Ye, M.R. Di Tullio, G.Y. Lip, D.L. Mann, R.L. Sacco, B. Levin, P.M. Pullicino, R.S. Freudenberger, J.R. Teerlink, S. Graham, J.P. Mohr, A.J. Labovitz, R. Buchsbaum, C.J. Estol, D.J. Lok, P. Ponikowski, S.D. Anker and the WARCEF Investigators (2015). Quality of anticoagulation control in preventing adverse events in patients with heart failure in sinus rhythm: warfarin versus aspirin in reduced cardiac ejection fraction trial substudy. *Circ Heart Fail*, 8(3):504-9. PMCID: PMC4439299.
- Woldu SL, Thoreson GR, Okhunov Z, Ghandour R, Rothberg MB, **RoyChoudhury A**, Kim HH, Bozoghlanian M, Newhouse JH, Helmy M, Badani KK, Landman J, Cadeddu JA, McKiernan JM. Comparison of renal parenchymal volume preservation between partial nephrectomy, cryoablation, and radiofrequency ablation. *J Endourol*. 2015 Jan 12 PMID: 25578645
- RoyChoudhury A**, Willis A, Bunge A. Consistency of a phylogenetic tree maximum likelihood estimator *Journal of Statistical Planning and Inference* 2015 161 73-80 PMID: NA
- Castañeda CV, Danzig MR, Finkelstein JB, **RoyChoudhury A**, Wagner AA, Chang P, Pierorazio PM, Allaf ME, McKiernan JM. The natural history of renal functional decline in patients undergoing surveillance in the DISSRM registry. *Urol Oncol*. 2015 Apr; 33(4):166.e17-20. doi: 10.1016/j.urolonc.2014.11.016. Epub 2015 Jan 16. PMID: 25601768
- Delay from biopsy to radical prostatectomy influences the rate of adverse pathologic outcomes. Berg WT, Danzig MR, Pak JS, Korets R, **RoyChoudhury A**, Hruby G, Benson MC, McKiernan JM, Badani KK. *Prostate*. 2015 Jul 1; 75(10):1085-91. doi: 10.1002/pros.22992. Epub 2015 Mar 21. PMID: 25809289
- St-Onge MP, Roberts A, Shechter A, **RoyChoudhury A** Fiber and Saturated Fat Are Associated with Sleep Arousals and Slow Wave Sleep. *J Clin Sleep Med*. 2015 Jun 22. pii: jc-00089-15 PMID: 26156950
- Pak JS, Lascano D, Kabat DH, Finkelstein JB, **RoyChoudhury A**, DeCastro GJ, Gold W, McKiernan JM. Patterns of care for readmission after radical cystectomy in New York State and the effect of care fragmentation. *Urol Oncol*. 2015 Oct; 33(10):426.e13-9. doi: 10.1016/j.urolonc.2015.06.001. Epub 2015 Jul 7. PMID: 26162487
- Lascano D, Pak JS, Kates M, Finkelstein JB, Silva M, Hagen E, **RoyChoudhury A**, Bivalacqua TJ, DeCastro GJ, Benson MC, McKiernan JM. Validation of a frailty index in patients undergoing curative surgery for urologic malignancy and comparison with other risk stratification tools. *Urol Oncol*. 2015 Oct; 33(10):426.e1-12. doi: 10.1016/j.urolonc.2015.06.002. Epub 2015 Jul 9. PMID: 26163940
- Lascano D, Finkelstein JB, Barlow LJ, Kabat D, **RoyChoudhury A**, Caso JR, DeCastro GJ, Gold W, McKiernan JM. The Correlation of Media Ranking's "Best" Hospitals and Surgical Outcomes Following Radical Cystectomy for Urothelial Cancer. *Urology*. 2015 Dec; 86(6):1104-14. doi: 10.1016/j.urology.2015.07.049. Epub 2015 Sep 25. PMID: 26408500
- Pagano MJ, Whalen MJ, Paulucci DJ, Reddy BN, Matulay JT, Rothberg M, Scarberry K, Patel T, Shapiro EY, **RoyChoudhury A**, McKiernan J, Benson MC, Badani KK. Predictors of biochemical recurrence in pT3b prostate cancer after radical prostatectomy without adjuvant radiotherapy. *Prostate*. 2016 Feb; 76(2):226-34. doi: 10.1002/pros.23114. Epub 2015 Oct 20. PMID: 26481325
- Reinstein DZ, Archer TJ, Urs R, Gobbe M, **RoyChoudhury A**, Silverman RH. Detection of Keratoconus in Clinically and Algorithmically Topographically Normal Fellow Eyes Using Epithelial Thickness Analysis. *J Refract Surg*. 2015 Nov 1; 31(11):736-44. doi: 10.3928/1081597X-20151021-02. PMID: 26544561
- Wagner M, **Roychoudhury A**, Campanelli L, Shafer VL, Martin B, Steinschneider M. Representation of spectro-temporal features of spoken words within the P1-N1-P2 and T-complex of the auditory evoked potentials (AEP). *Neurosci Lett*. 2015 Dec 14. pii: S0304-3940(15)30312-8. doi: 10.1016/j.neulet.2015.12.020. [Epub ahead of print] PMID: 26700876
- Pagano MJ, De Fazio A, Levy A, **RoyChoudhury A**, Stahl PJ. Age, Body Mass Index, and Frequency of Sexual Activity are Independent Predictors of Testosterone Deficiency in Men with Erectile Dysfunction. *Urology*. 2015 Dec 29. pii: S0090-4295(15)01182-6. doi: 10.1016/j.urology.2015.12.030. [Epub ahead of print] PMID: 26743389
- Freudenberger RS, Cheng B, Mann DL, **Thompson JL**, Sacco RL, Buchsbaum R, Sanford A, Pullicino PM, Levin B, Teerlink JR, Graham S, Mohr JP, Labovitz AJ, Di Tullio MR, Lip GY, Estol CJ, Lok DJ, Ponikowski P, Anker SD, Homma S; WARCEF Investigators. The first prognostic model for stroke and death in patients with systolic heart failure. *J Cardiol*. 2015 Nov 5. doi:pii: S0914-5087(15)00309-3. 10.1016/j.jcc.2015.09.014. [Epub ahead of print] PubMed [citation] PMID: 26549533
- Ye S, Cheng B, Lip GY, Buchsbaum R, Sacco RL, Levin B, Di Tullio MR, Qian M, Mann DL, Pullicino PM, Freudenberger RS, Teerlink JR, Mohr JP, Graham S, Labovitz AJ, Estol CJ, Lok DJ, Ponikowski P, Anker SD, **Thompson JL**, Homma S;

- WARCEF Investigators. Bleeding Risk and Antithrombotic Strategy in Patients With Sinus Rhythm and Heart Failure With Reduced Ejection Fraction Treated With Warfarin or Aspirin. *Am J Cardiol*. 2015 Sep 15;116(6):904-12. doi:10.1016/j.amjcard.2015.06.016. Epub 2015 Jun 24. PubMed [citation] PMID: 26189039, PMCID: PMC4554775 Homma S, **Thompson JL**, Qian M, Ye S, Di Tullio MR, Lip GY, Mann DL, Sacco RL, Levin B, Pullicino PM, Freudenberger RS, Teerlink JR, Graham S, Mohr JP, Labovitz AJ, Buchsbaum R, Estol CJ, Lok DJ, Ponikowski P, Anker SD; WARCEF Investigators. Quality of anticoagulation control in preventing adverse events in patients with heart failure in sinus rhythm: Warfarin versus Aspirin in Reduced Cardiac Ejection Fraction trial substudy. *Circ Heart Fail*. 2015 May;8(3):504-9. doi: 10.1161/CIRCHEARTFAILURE.114.001725. Epub 2015 Apr 7. PubMed [citation] PMID: 25850425, PMCID: PMC4439299 Emily Roen, Ya Wang, Antonia Calafat, **Shuang Wang**, Amy Margolis, Julie Herbstman, Lori Hoepner, Virginia Rauh, Frederica Perera (2015) "Bisphenol A Exposure and Behavioral Problems among Inner City Children at 7-9 Years of Age", *Environmental Research*, 142:739-45
- Ying Cheng, Linda He, Vidhya Prasad, **Shuang Wang**, Richard Levy (2015) "Anesthesia-induced neuronal apoptosis in the developing retina: a window of opportunity" *Anesthesia & Analgesia*, 121(5):1325-1235
- Chi Zhang, **Shuang Wang**, Hayley Israel, Sherry Yan, David Horowitz, Seth Crockett, Daniela GideaAddeo, Clifford Chao, Kevin Kalinsky, Eileen Connolly (2015) "Higher locoregional recurrence rate for triple-negative breast cancer following neoadjuvant chemotherapy, surgery and radiotherapy" Springerplus 4:386
- Whitney J. Cowell, Sally A. Lederman, Andreas Sjödin, Richard Jones, **Shuang Wang**, Frederica Perera, Virginia Rauh, Julie B. Herbstman (2015) "Prenatal exposure to polybrominated diphenyl ethers and child attention problems at 3-7 years" *Neurotoxicology and teratology*, 52(B): 143-150
- Zhe He, **Shuang Wang**, Elhaam Borhanian, Chunhua Weng (2015) "Assessing the Collective Population Representativeness of Related Type 2 Diabetes Trials by Combining Public Data from ClinicalTrials.gov and NHANES Studies in Health Technology and Informatics", 216:569-73 PMID: 26262115
- Frederica Perera, David H. Phillips, Ya Wang, Emily Roen, Julie Herbstman, Virginia Rauh, **Shuang Wang**, Deliang Tang (2015) "Prenatal Exposure to Polycyclic Aromatic Hydrocarbons /Aromatics, BDNF and Child Development", *Environmental Research*, 142:602-608
- Eric Heyer, Joanna Mergeche, **Shuang Wang**, John Gaudet, Sander Connolly (2015) "Impact of Cognitive Dysfunction on Survival in Patients with and without Statin Use following Carotid Endarterectomy", *Neurosurgery*, 77(6):880-7
- Julia Vishnevetsky, Deliang Tang, Hsin-Wen Chang, Emily Roen, Ya Wang, Virginia Rauh, **Shuang Wang**, Rachel Miller, Julie Herbstman, Frederica Perera (2015) "Combined effect of Prenatal Polycyclic Aromatic Hydrocarbons and Materials Hardship on Child IQ" *Neurotoxicology and Teratology*, 49:74-80
- Lale Odekon, Ruth Landau, Jean-Louis Blouin, David Brodow, **Shuang Wang**, Richard Mark Smiley (2015) "Effect of β 2-Adrenoceptor Genotype on Phenylephrine Dose Administered During Spinal Anesthesia For Cesarean Delivery", *Anesthesia and Analgesia*, 120(6):1309-1316
- Jeanine Genkinger, Laura Stigter, Wieslaw Jedrychowski, Tzu-Jung Huang, **Shuang Wang**, Emily Roen, Renata Majewska, Agnieszka Kieltyka, Elzbieta Mroz, Frederica Perera (2015) "Prenatal Polycyclic Aromatic Hydrocarbon (PAH) Exposure, Antioxidant Levels and Behavioral Development of Children Ages 6-9", *Environmental Research*, 140:136-144
- Jing Shen, **Shuang Wang**, Abby Siegel, Helen Remotti, Qiao Wang, Iryna Sirosh, Regina Santella (2015) "Genome-wide Expression of MicroRNAs is Regulated by DNA Methylation in Hepatocarcinogenesis", *Gastroenterology Research and Practice*, vol. 2015, Article ID 230642, 12 pages
- Christine Hsu, Abhishek Goyal, Alina Iuga, Saravanan Krishnamoorthy, Valerie Lee, Elizabeth Verna, **Shuang Wang**, Fei-Na Chen, Rosa Rodriguez, Jean Emond, Paul Berk, Jay Lefkowitz, Lorna Dove, Robert Brown, Abby Siegel (2015) "Elevated CA19-9 Is Associated with Increased Mortality in A Prospective Cohort of Hepatocellular Carcinoma Patients" *Clinical and Translational Gastroenterology*, 6:e74
- Abby B. Siegel, Abhishek Goyal, Marcela Salomao, **Shuang Wang**, Valerie Lee, Christine Hsu, Rosa Rodriguez, Dawn L. Hershman, Robert S. Brown Jr., Alfred I. Neugut, Jean Emond, Tomoaki Kato, Benjamin Samstein, David Faleck, Raffi Karagozian (2015) "Serum Adiponectin is Associated with Worsened Overall Survival in a Prospective Cohort of Hepatocellular Carcinoma Patients" *Oncology* 88:57-68
- Chen T, Zeng D, **Wang Y*** (2015). Multiple kernel learning with random effects for predicting longitudinal outcomes and data integration. *Biometrics*. 71:918-928. PMID: 26177419.
- Wang Y**, Liang B, Tong X, Marder K, Bressman S, Orr-Urtreger A, Giladi N, Zeng D (2015). Efficient Estimation of Nonparametric Genetic Risk Function with Censored Data. *Biometrika*. 102(3):515-532. PubMed PMID: 26412864; PubMed Central PMCID: PMC4581539
- ChenT, MaY, **WangY** (2015). Predicting Cumulative Risk of Disease Onset by Redistributing Weights. *Statistics in Medicine*. 34(16):2427-43. PMID: 25847392; PMCID: PMC4457675.
- Jiang F, Ma Y, **Wang Y** (2015). Fused Kernel-Spline Smoothing for Repeatedly Measured Outcomes in a Generalized Partially Linear Model with Functional Single Index. *Annals of Statistics*. 1929-1958. 43(5). NIHMSID: 686160.
- Gianini L, Liu Y, **Wang Y**, Attia E, Walsh T, Steinglass J. (2015). Abnormal eating behavior in video-recorded meals in anorexia nervosa. *Eating Behaviors*. 19, 28-32. PMCID: PMC4644429
- Bui E, Mauro C, Robinaugh DJ, Skritskaya NA, **Wang Y**, Gribbin C, Ghesquiere A, Horenstein A, Duan N, Reynolds C, Zisook S, Simon NM, Shear MK. (2015). The Structured Clinical Interview for Complicated Grief: Reliability, Validity, and Exploratory Factor Analysis. *Depression and Anxiety*. 32(7):485-92. PMCID: PMC4565180.
- Marder K, **Wang Y**, Alcalay Ry, Mejia-Santana H, Tang M, Lee A, Ray D, Mirelman A, Saunders-Pullman R, Clark L, Ozelius L, Orr-Urtreger A, Giladi N, Bressman S for the LRRK2 Ashkenazi Jewish Consortium. (2015). Age Specific Penetrance of the LRRK2 G2019S Mutation in the Michael J. Fox Ashkenazi Jewish (AJ) LRRK2 Consortium. *Neurology*. 85(1):89-95. PMCID: PMC4501942.
- Marino L, Nossel I, Choi J, Neuchterlein K, **Wang Y**, Essock S, Bennett M, McNamara K, Mendon S, Dixon L. (2015) The RAISE Connection Program for Early Psychosis: Secondary Outcomes and Mediators and Moderators of Improvement. *Journal for Nervous and Mental Disease*. 203(5):365-71. PMCID: PMC4414797
- Dixon L, Goldman H, Bennett M, **Wang Y**, McNamara K, Mendon S, Goldstein A, Choi C, Lee R, Lieberman J, Essock S. (2015) Implementing Coordinated Specialty Care for Early Psychosis: The RAISE Connection Program. *Psychiatric Services*. 66(7), 691-698.
- Hellerstein DJ, Erickson G, Stewart JW, McGrath PJ, Hunnicutt-Ferguson K, Reynolds SK, OShea D, Chen Y, Withers A, **Wang Y** (2015). Behavioral activation therapy for return to work in medication-responsive chronic depression with persistent psychosocial dysfunction. *Comprehensive Psychiatry*. 57:140-147. PMID: 25464836.



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Cheers to a new academic year! Dr. Shing Lee, Dr. Qixuan Chen and Dr. Cody Chiuзан (left to right)



Ready for a Broadway show Georgia André and daughter, Corey Adams (left to right)



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