

Curriculum Vitae

FENGQING (ZOE) ZHANG, PH.D.

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I. EDUCATION

- 2014 Ph.D. in Statistics
Northwestern University, Evanston, IL
Advisors: Dr. Ji-Ping Wang and Dr. Wenxin Jiang
- 2010 M.S. in Mathematics
Middle Tennessee State University, Murfreesboro, TN
Advisor: Dr. Don Hong
- 2008 B.S. in Electrical Engineering
Beihang University, Beijing, China

II. FACULTY/PROFESSIONAL APPOINTMENTS

- 2014-Present **Assistant Professor**, Applied Cognitive & Brain Sciences,
Department of Psychology, Drexel University, Philadelphia, PA
- 2017-Present **Affiliated Faculty**, Center for Weight, Eating and Lifestyle Science,
Drexel University, Philadelphia, PA
- 2018-Present **Vice President**, American Statistical Association Philadelphia Chapter

III. RESEARCH INTERESTS

Statistical Research Interests

- Imaging statistics
- Data mining
- High dimensional data analysis

Collaborative Research Interests

- Neuroimaging
- Wearable computing
- Weight loss maintenance and eating disorders

IV. AWARDS AND HONORS

- 2017 **Teaching Excellence Award**, College of Arts and Sciences, Drexel University
- 2017 **Drexel Career Development Award**, Drexel University
- 2017 **Drexel Faculty Summer Research Award**, Drexel University
- 2013 **Travel Fund Award**, Statistical and Applied Mathematical Sciences Institute

2011	ETD Master's Thesis Award , Conference of Southern Graduate Schools
2010	Graduate School Fellowship , Northwestern University
2010	Harold S. Spraker Graduate Mathematics Award , MTSU
2008	Excellent Graduates Award , Beijing Municipal Commission of Education
2005	Kwang-Hua Scholarship , Kwang-Hua Education Foundation

V. GRANT HISTORY

2018-2023	<i>"Improving Weight Loss Outcomes for Binge Eating Disorder"</i> <u>National Institute of Diabetes and Digestive and Kidney Diseases</u> Funded: \$2,243,994	Role: Co-I
2018-2021	<i>"Using Ecological Momentary Interventions to Increase Skill Acquisition and Utilization"</i> <u>National Institute of Mental Health</u> Funded: \$271,050	Role: Co-I
2018-2021	<i>"Mindfulness-based Dance/Movement Therapy for Chronic Low Back Pain"</i> <u>National Institutes of Health</u> Funded: \$717,750	Role: Co-I
2018-2020	<i>"Using Continuous Glucose Monitoring to Detect Eating Disorder Symptoms in Bulimia Nervosa"</i> <u>Davis Foundation</u> Funded: \$200,000	Role: Co-I
2018-2020	<i>"Evaluating Impacts of the Philadelphia Police School Diversion Program: An Alternative-to-Arrest Policing Strategy"</i> <u>National Institute of Justice</u> Funded: \$1,281,046	Role: Co-I
2017-2020	<i>"Long-Term Outcomes and Sustained Impact of the Philadelphia Police School Diversion Program"</i> <u>Office of Juvenile Justice and Delinquency Prevention</u> Funded: \$750,000	Role: Co-I
2017-2020	<i>"Mechanisms of Music Therapy to Palliate Pain in Patients with Advanced Cancer: A Mixed Methods Investigation"</i> <u>National Institute of Nursing Research</u> Funded: \$442,634	Role: Co-I
2017- 2019	<i>"Improving Weight Loss Maintenance by Using Digital Data Sharing to Provide Responsive Support and Accountability"</i> <u>National Institute of Diabetes and Digestive and Kidney Diseases</u> Funded: \$424,725	Role: Co-I
2014- 2019	<i>"An Innovative, Physical Activity-Focused Approach to Weight Loss Maintenance"</i> <u>National Institutes of Health</u>	

	Funded: \$2,709,126	Role: Co-I
2017-2019	<i>“Arts-based Interventions for Socio-Emotional Well-being and Physiological Health in Contexts of Stress”</i> <u>National Endowment for the Arts</u> Funded: \$150,000	Role: Co-I
2017-2018	<i>“bTECH - Behavioral Technology to Enhance Changes in Health”</i> <u>Drexel University DARE (Drexel Areas of Research Excellence) Initiative</u> Funded: \$75,000	Role: Co-I
2015-2017	<i>“Elucidating the Cognitive Underpinnings of Reading Comprehension Difficulties in Children with Down Syndrome”</i> <u>Jerome Lejeune Foundation</u> Funded: \$38,209	Role: Co-I
2016-2017	<i>“Developing Machine-Learning Algorithms to Detect Affect Liability using Wearable Sensors”</i> <u>Drexel University Clinical and Translational Research Institute</u> Funded: \$50,000	Role: Co-I
2017-2017	<i>“Big Data Approach for Assessing Multimodal Neuroimaging Signatures of Eating Disorders”</i> <u>Drexel University Faculty Summer Research Award</u> Funded: \$6,424	Role: PI
2015-2016	<i>“A Smartphone App-based System to Anticipate and Prevent Lapses in Those Attempting to Follow a Weight Loss Diet”</i> <u>Drexel Ventures Innovation Fund</u> Funded: \$75,000	Role: Co-I
2014-2015	<i>“A Companion Smartphone App to Enhance Dietary Adherence through Predictive Machine Learning”</i> <u>The Obesity Society</u> Funded: \$60,000	Role: Co-I

VI. GRANT REVIEW EXPERIENCE

2019	Reviewer for Jefferson University TIPS Pilot Grants
2018	Grant Review Panel for NINDS (National Institute of Neurological Disorders and Stroke)
2018	Reviewer for NSF 17-585: Innovations in Graduate Education (IGE) Program NSF Wide Programs
2018-Present	Reviewer for Drexel Faculty Summer Research Award

2018 Reviewer for NSF 18-513: Major Research Instrumentation Program (MRI)

2016 Technology and Business Development Fund, City University of Hong Kong

VII. PEER REVIEWED PUBLICATIONS

1. Liang, H., **Zhang, F.**, and Niu, X. (2019) Investigating Systematic Bias in Brain Age Estimation with Application to PTSD. *Human Brain Mapping*.
2. Godfrey, M., Hepburn, S., Fidler, D., Tapera, T., **Zhang, F.**, Robinson, C., Lee, N.R. (2019). Autism spectrum disorder (ASD) symptom profiles of children with comorbid Down syndrome (DS) and ASD: A comparison with children with DS-only and ASD-only. *Research in Developmental Disabilities*.
3. **Zhang, F.**, and Gou, J. (2019), Control of False Positive Rates in Clusterwise fMRI Inferences. *Journal of Applied Statistics*.
4. Schumacher, L.M., Kerrigan, S.G., Remmert, J.E., Call, C.C., **Zhang, F.**, & Butryn, M.L. (2019). I think therefore I am? Examining the relationship between exercise identity and exercise behavior during behavioral weight loss treatment. *Psychology of Sport & Exercise*.
5. **Zhang, F.**, Wang, J.-P., Jiang, W. (2019). An Integrative Classification Model for Multiple Sclerosis Lesion Detection in Multimodal MRI. *Statistics and Its Interface*.
6. Butryn, M.L., Martinelli, M.K., Remmert, J.E., Roberts, S.R., **Zhang, F.**, Forman, E.M., & Manasse, S.M. (2019). Executive functioning as a predictor of weight loss and physical activity outcomes. *Annals of Behavioral Medicine*.
7. Duan, H., Wang, X., Wang, Z., Xue, W., Kan, Y., Hu, W., and **Zhang, F.** (2019), Acute Stress Shapes Creative Cognition in Trait Anxiety. *Frontiers in Psychology*.
8. Lowe, M.R., Marmorstein, N., Iacono, W., Rosenbaum, D., Espel-Huynh, H., Muratore, A. F., Lantz, E., and **Zhang, F.** (2019). Body concerns and BMI as predictors of disordered eating and body mass in girls: An 18-year longitudinal investigation. *Journal of Abnormal Psychology* 128(1), 32-43.
9. **Zhang, F.**, Tapera, T.M., and Gou, J. (2018), Application of a New Dietary Pattern Analysis Method in Nutritional Epidemiology. *BMC Medical Research Methodology* 18, 119.
10. **Zhang, F.**, Yang, E., Niu, X., and Zhu Y. (2018). Joint Modeling of the Association between NIH Funding and Its Three Primary Outcomes: Patents, Publications, and Citation Impact. *Scientometrics* 117(1), 591-602.
11. Goldstein, S.P., **Zhang, F.**, Thomas, J.G., Butryn, M.L., Herbert, J.D., and Forman, E.M. (2018). Application of Machine Learning to Predict Dietary Lapses During Weight Loss. *Journal of Diabetes Sciences and Technology* 12(5), 1045-1052.

12. Lowe, M.R., Butryn, M.L., and **Zhang, F.** (2018). Evaluation of Meal Replacements and a Home Food Environment Intervention for Long-term Weight Loss: A Randomized Controlled Trial. *The American Journal of Clinical Nutrition* 107(1), 12-19.
13. Forman, E.M., Goldstein, S.P., **Zhang, F.**, Evans, B. C., Manasse S.M., Butryn, M.L., Juarascio, A.S., Abichandani, P., Martin, G.J., and Foster, G.D. (2018). OnTrack: Development and Feasibility of a Smartphone App Designed to Predict and Prevent Dietary. *Translational Behavioral Medicine* 9, 236-245.
14. Erickson, B., Truelove-Hill, M., Oh, Y., Anderson, J., **Zhang, F.**, Kounios, J. (2018). Resting-State Brain Oscillations Predict Trait-like Cognitive Styles. *Neuropsychologia* 120, 1-8.
15. Call, C.C., Schumacher, L.M., Rosenbaum, D.L., Convertino, A.D., **Zhang, F.**, Butryn, M.L. (2018). Participant and interventionist perceptions of challenges during behavioral weight loss treatment. *Journal of Behavioral Medicine*, 1-12.
16. **Zhang, F.** (2017). Resting-state functional connectivity abnormalities in adolescent depression. *EBioMedicine* 17, 20-21.
17. Gou, J., and **Zhang, F.** (2017), Experience Simpson's Paradox in the Classroom. *The American Statistician* 71(1), 61-66.
18. Manasse, S.M., Flack, D., Dochat, C., **Zhang, F.**, Butryn, M.L., Forman, E.M. (2017), Not so fast: The Impact of Impulsivity on Weight Loss Varies by Treatment Type. *Appetite* 113, 193-199.
19. Rosenbaum, D.L., Espel, H.M., Butryn, M., **Zhang, F.**, and Lowe, M.R. (2017). Daily self-weighing and weight gain prevention: A longitudinal study of college-aged women. *Journal of Behavioral Medicine* 40(5), 846-853.
20. Butryn, M.L., Forman, E.M., Lowe, M.R., Gorin, A., **Zhang, F.**, and Schaumberg, K. (2017). Efficacy of environmental and acceptance-based enhancements to behavioral weight loss treatment: the ENACT trial. *Obesity* 25(5), 866-872.
21. Goldstein, S.P., Evans, B.C., Flack, D., Juarascio, A.S., Manasse, S.M., **Zhang, F.**, and Forman, E.M. (2017). Return of the JITAI: Applying a just-in-time adaptive intervention framework to the development of m-Health solutions for addictive behaviors. *International Journal of Behavioral Medicine* 24(5), 673-682.
22. **Zhang, F.**, Jiang, W., Wong, P.C.M., and Wang, J.-P. (2016), Bayesian Probit Model with Spatially Varying Coefficients and Its Application to Functional Magnetic Resonance Imaging. *Statistics in Medicine* 35(24), 4380-4397.
23. **Zhang, F.**, and Gou, J. (2016), A P-value Model for Theoretical Power Analysis and its Applications in Multiple Testing Procedures. *BMC Medical Research Methodology* 16, 135.

24. Schumacher, L.M., Gaspar, M.E., Remmert, J., **Zhang, F.**, Forman, E.M., and Butryn, M.L. (2016), Small Weight Gains During Obesity Treatment: Normative or Cause for Concern? *Obesity Science & Practice* 2(4), 366-375.
25. Manasse, S.M., Espel, H.M., Kerrigan, S.G., Schumacher, L.M., **Zhang, F.**, Forman, E.M., and Juarascio, A.S. (2016), Does Impulsivity Predict Treatment Outcome for Binge Eating Disorder? A multimodal investigation. *Appetite* 105, 172-179.
26. Viswanathan, V., Shultz, D., Block M., Blood A.J., Breiter, H.C., Calder B., Chamberlain L., Lee N., Livengood S., Mulhern, F., Raman, K., Stern, D.B., and **Zhang, F.** (2016), Using fMRI Analysis to Unpack a Portion of Prospect Theory for Advertising/Marketing Understanding. *Rediscovering the Essentiality of Marketing*, 453-470.
27. **Zhang, F.**, Wang, J.-P., Kim, J., Todd, P., and Wong, P.C.M. (2015), Decoding Multiple Sound Categories in the Human Temporal Cortex Using High Resolution fMRI. *PLOS ONE* 10(2), e0117303.
28. Liang, J., Hong, D., **Zhang, F.**, and Zou, J. (2015), IMSmining: A Tool for Imaging Mass Spectrometry Data Biomarker Selection and Classification. *Springer Proceedings in Mathematics & Statistics* 139, 155-162.
29. Manasse, S.M., Espel, H.M., Forman, E.M., Juarascio, A.S., Butryn, M.L., Ruocco, A.C., **Zhang, F.**, and Lowe, M.R. (2015), The Independent and Interacting Effects of Hedonic Hunger and Executive Function on Binge Eating. *Appetite* 89, 16-21.
30. Block, M.P., Schultz, D.E., Breiter, H., Blood, A., Calder, B., Chamberlain, L., and **Zhang, F.** (2015), Redefining neuromarketing. In: American Academy of Advertising Conference. *Proceedings in American Academy of Advertising*, 53.
31. Breiter, H.C., Block M., Blood A.J., Calder B., Chamberlain L., Lee N., Livengood S., Mulhern, F., Raman, K., Shultz, D., Stern, D.B., Viswanathan, V., and **Zhang, F.***. (2014), Redefining Neuromarketing as an Integrated Science of Influence. *Frontiers in Human Neuroscience* 8, 1073.
*Co-first author.
32. **Zhang, F.**, and Hong, D. (2011), Elastic Net Based Framework for Imaging Mass Spectrometry Data Biomarker Selection and Classification. *Statistics in Medicine* 30, 753-768.
33. Hong, D., and **Zhang, F.** (2010), Weighted Elastic Net Model for Mass Spectrometry Imaging Processing. *Journal of Mathematical Modeling of Natural Phenomena* 5(3), 115-133.
34. Hong, D., Qin, S.Y., and **Zhang, F.** (2010), Mathematical Tools and Statistical Techniques for Proteomic Data Mining. *International Journal of Mathematics and Computer Science* 5(2), 123-140.
35. Kong, Q.C., Li, C.G., and **Zhang, F.** (2007), FPGA Design in Accelerated Graphic Display in Primary Flight Display. *Journal of Electronic Technology and Application* 4, 62-64.

36. **Zhang, F.** and Kong, Q.C. (2007) Distributed Remote Control System of UAV Based on Man-in-loop Real-time Operation. *Proceedings of the 26th China Control Conference*, 119-122.
37. Kong, Q.C., Li, C.G., and **Zhang, F.** (2006), A New Method of Accelerated Graph Display in Primary Flight Display Based on FPGA. Proc. SPIE 6357, *Sixth International Symposium on Instrumentation and Control Technology*, 635732.

Manuscript Currently Under Review:

1. **Zhang, F.**, and Gou, J. (revised and resubmitted), Refined Critical Boundary with Enhanced Statistical Power for Non-Directional Two-Sided Tests in Group Sequential Designs with Multiple Endpoints. *Statistical Papers*.
2. Landrigan, J., **Zhang, F.**, and Mirman, D. (revised and resubmitted), A Data-Driven Approach to Post-Stroke Aphasia Classification and Lesion-Based Prediction. *Brain*.
3. Hamner, T., Hepburn, S., **Zhang, F.**, Fidler, D., Robinson Rosenberg, C., Robins, D.L., and Lee, N.R. (revised and resubmitted), Cognitive and Autism Symptom Profiles in Comorbid Down Syndrome and Autism Spectrum Disorder. *Journal of Developmental & Behavioral Pediatrics*.
4. Kerrigan, S.G., Forman, E.M., Patel, M., Williams, D., **Zhang, F.**, Crosby, R., and Butryn, M.L. (revised and resubmitted), Evaluating the Feasibility, Acceptability, and Effects of Deposit Contracts with and without Daily Feedback to Promote Physical Activity. *Journal of Physical Activity & Health*.
5. Forman, E.M., Goldstein, S.P., Crochiere, R.J., Butryn, M.L., Juarascio, A.S., **Zhang, F.**, and Foster, G.D. (revised and resubmitted), Randomized Controlled Trial of OnTrack, a Just-in-Time Adaptive Intervention Designed to Enhance Weight Loss. *Translational Behavioral Medicine*.
6. **Zhang, F.**, and Gou, J. (submitted), A Unified Framework for Estimation in Log-Normal Models. *Journal of Statistical Planning and Inference*.
7. Niu, X., **Zhang, F.**, Kounios, J., and Liang, H. (submitted), Brain Age Prediction in Adolescents with Anxiety Disorders: A multi-modal Brain Imaging Study. *NeuroImage*.
8. Murray, H.B., **Zhang, F.**, Manasse, S.M., Forman, E.M., Butryn, M.L., and Juarascio, A.S. (submitted), Validation of the Food Craving Acceptance and Action Questionnaire (FAAQ) in a Weight Loss-Seeking Sample. *Psychological Medicine*.
9. Benson, L., **Zhang, F.**, Espel, H.M., Wilkinson, L., and Lowe M. (submitted), Weight Variability during Self-Monitored Weight Loss Predicts Future Weight Loss Outcome. *International Journal of Obesity*.
10. Apollonsky, N., Lerner, N., **Zhang, F.**, Raybagkar, D., Eng, J., and Tarazi, R. (submitted), Laboratory Biomarkers, Cerebral Blood Flow Velocity and Intellectual Function in Children with Sickle Cell Disease. *Advances in Hematology*.

11. Kerrigan, S.G., Forman, E.M., Williams, D., Patel, M., Loyka, C., **Zhang, F.**, Crosby, R.D., and Butryn, M.L. (submitted), Project Step: A randomized controlled trial investigating the independent and interactive effects of frequent feedback and contingent incentives on physical activity. *International Journal of Behavioral Medicine*.

VIII. SOFTWARE DEVELOPMENT

1. IMSmining: a tool for imaging mass spectrometry data biomarker selection and classification. This software package can be downloaded from <http://capone.mtsu.edu/dhong/IMSmining.htm>
2. gsrbs: an R package for group sequential refined secondary boundaries. This software package can be downloaded from <https://CRAN.R-project.org/package=gsrbs>

IX. ORGANIZED CONFERENCE SESSIONS & SYMPOSIA

1. **Zhang, F.**, Session Chair (2019, March) for *Emerging Statistical Issues and Methods for Integrating Multi-Domain mHealth Data* at the Eastern North American Region (ENAR) of the International Biometrics Society Meeting, Philadelphia, PA.
2. **Zhang, F.**, Session Chair (2018, July) for *Recent Advances on Research Synthesis Methods* at the ICSA China Conference with the Focus on Data Science, Qingdao, China.
3. **Zhang, F.**, Session Chair (2018, June) for *Clinical trial design and statistical methods for cancer studies* at the ICSA Applied Statistics Symposium, New Brunswick, NJ.
4. **Zhang, F.**, Session Organizer (2018, June) for *Challenges and Innovations in Modeling Large Scale Imaging Data* at the ICSA Applied Statistics Symposium, New Brunswick, NJ.
5. **Zhang, F.**, Session Organizer (2018, June) for *Recent Advances in Modeling Large-Scale Imaging Data* at the Statistical Methods in Imaging Conference, Philadelphia, PA.
6. **Zhang, F.**, Robinson, L., Chervoneva, I., Shou, H., Linn, K., and Shinohara, R., Local Organizing Committee (2018, June) for *Statistical Methods in Imaging Conference*, Philadelphia, PA.
7. **Zhang, F.**, Session Organizer (2017, July) for *Recent Advances for Modeling Neuroimaging Data* at the 2017 Joint Statistical Meetings (JSM), Baltimore, MD.

X. INVITED PRESENTATIONS

1. **Zhang, F.**, Niu, X., and Liang, H. (2019, December). *Brain Age Prediction in Adolescents with Anxiety Disorders: A Multi-modal Brain Imaging Study*. Paper to be presented at the 11th ICSA International Conference, Hangzhou, China.
2. **Zhang, F.**, Tapera, T.M., and Juarascio, A. (2019, August). *Statistical Modeling for Integrating Data from Multiple Wearable Sensors to Detect Affect Liability*. Paper to be presented at the 2019 Joint Statistical Meetings (JSM), Denver, CO.
3. **Zhang, F.**, Tapera, T.M., and Juarascio, A. (2019, March). *Statistical Modeling for Integrating Data from Multiple Wearable Sensors to Detect Affect Liability*. Paper presented at the Eastern

North American Region (ENAR) of the International Biometrics Society Meeting, Philadelphia, PA.

4. **Zhang, F.**, and Niu, X. (2018, December). *Hierarchical Bayesian Models for Integrating Multimodal Neuroimaging Data*. Paper presented at the 11th International Conference of the ERCIM WG on Computational and Methodological Statistics, Pisa, Italy.
5. **Zhang, F.** (2018, October). *A Big Data Approach to Understanding Complex Behavioral and Neuroimaging Data*. Talk presented at the Biostatistics Seminar, Sidney Kimmel Cancer Center, Thomas Jefferson University, Philadelphia, PA.
6. **Zhang, F.** (2018, July). *A Big Data Approach to Understanding Complex Behavioral and Neuroimaging Data*. Seminar talk at Science Technology & Teaching Forum, Key Lab of Modern Teaching Technology, Ministry of Education, Shaanxi Normal University, Xi'an, China.
7. **Zhang, F.**, and Gou, J. (2018, July). *Control of False-Positive Rates in Clusterwise fMRI Inferences*. Poster presented at the ICSA China Conference with the Focus on Data Science, Qingdao, China.
8. **Zhang, F.**, and Niu, X. (2018, June). *Joint Modeling of Multimodal Neuroimaging Signatures of PTSD*. Paper presented at the ICSA Applied Statistics Symposium, New Brunswick, NJ.
9. **Zhang, F.**, and Niu, X. (2018, June). *An Integrative Model for Assessing Multimodal Neuroimaging Signatures of Post-traumatic Stress Disorder*. Paper presented at the Statistical Methods in Imaging Conference, Philadelphia, PA.
10. **Zhang, F.**, Tapera, T.M., Goldstein, S.P., and Forman, E. (2018, March). *Improved Modeling of Smartphone-based Ecological Momentary Assessment Data for Dietary Lapse Prediction*. Paper presented at the Eastern North American Region (ENAR) of the International Biometrics Society Meeting, Atlanta, GA.
11. **Zhang, F.**, Tapera, T.M., Goldstein, S.P., and Forman, E. (2017, December). *Development of a Smartphone App and Machine Learning Algorithms to Predict and Prevent Dietary Lapses*. Talk presented at the Wearable Computing Group, mHealth Group Seminar, University of Pennsylvania, PA.
12. **Zhang, F.** (2017, October). *Statistical Modeling for High Dimensional Structured Data with Application to Neuroimaging*. Paper presented at the Philadelphia Big Data Symposium, Philadelphia, PA.
13. **Zhang, F.**, and Niu, X. (2017, July). *An Integrative Model for Assessing Multimodal Neuroimaging Signatures of Post-traumatic Stress Disorder*. Paper presented at the 2017 Joint Statistical Meetings (JSM), Baltimore, MD.
14. **Zhang, F.** (2017, May). *Multimodal Neuroimaging, Wearable Computing, and Big Data Integration*. Talk presented at the SMART group seminar, Johns Hopkins University, Baltimore, MD.

15. **Zhang, F.** (May 2016). *Statistical Modeling for High Dimensional Biomedical Imaging Data*. Paper presented at Drexel University Math Department Seminar, Philadelphia, PA.
16. **Zhang, F.**, Jiang, W., and Wang, J.-P. (2015, October). *Analytical Modeling for High Dimensional Structured Neuroimaging Data*. Seminar talk at the Brain Behavior Lab, University of Pennsylvania, Philadelphia, PA.
17. **Zhang, F.** (2015, June). *New Statistical Methods for High Dimensional Biomedical Imaging Data Analysis*. Paper presented at the Biological Discovery from Big Data Workshop, Philadelphia, PA.
18. **Zhang, F.** (2015, April). *Statistical Modeling for High Dimensional Structured Data with Application to Neuroimaging*. Talk presented at the College of Arts and Sciences Dean's Seminar Series, Drexel University, Philadelphia.
19. **Zhang, F.**, Jiang, W., and Wang, J.-P. (2014, September). *Bayesian Probit Model with Spatially Varying Coefficients and Its Application to Functional Magnetic Resonance Imaging*. Paper presented at the Imaging Genetics Seminar, University of Pennsylvania, Philadelphia, PA.
20. **Zhang, F.**, and Hong, D. (2011, March). *Imaging Mass Spectrometry Data Biomarker Selection and Classification*. Paper presented at the Statistics Department Seminar, Northwestern University, Evanston, IL.
21. **Zhang, F.**, and Hong, D. (2009, October). *Recent Progress on Biomarker Selection of IMS Data*. Paper presented at the Bio-math Seminar, Math Department, Middle Tennessee State University, Murfreesboro, TN.
22. **Zhang, F.**, and Hong, D. (2009, May). *Variable Selection Methods for IMS Data Analysis*. Paper presented at the Mass Spectrometry Research Center Seminar, Vanderbilt University, Nashville, TN.

XI. CONTRIBUTED PRESENTATIONS

23. **Zhang, F.**, Tapera, T.M., Goldstein, S.P., and Forman, E. (2018, August). *Improved Modeling of Imbalanced Data for Dietary Lapse Prediction*. Paper presented at the 2018 Joint Statistical Meetings (JSM), Vancouver, Canada.
24. **Zhang, F.**, and Gou, J. (2018, June). *Control of False-Positive Rates in Clusterwise fMRI Inferences*. Poster presented at the 24th Annual Meeting of the Organization of Human Brain Mapping, Singapore.
25. **Zhang, F.**, Jiang, W., and Wang, J.-P. (2016, August). *An Integrative Classification Model for Multiple Sclerosis Lesion Detection in Multimodal MRI*. Paper presented at the 2016 Joint Statistical Meetings (JSM), Chicago, IL.
26. **Zhang, F.**, Jiang, W., and Wang, J.-P. (2015, June). *An Integrative Segmentation Method of Multiple Sclerosis Lesions in Multimodal MRI*. Poster presented at the 21th Annual Meeting of the Organization of Human Brain Mapping, Honolulu, HI.

27. **Zhang, F.**, Jiang, W., and Wang, J.-P. (2013, August). *Bayesian Probit Model with Spatially Varying Coefficients and Its Application to Functional Magnetic Resonance Imaging*. Paper presented at the 2013 Joint Statistical Meetings (JSM), Montreal, Canada.
28. **Zhang, F.**, Jiang, W., and Wang, J.-P. (2013, June). *Bayesian Probit Model with Spatially Varying Coefficients and Its Application to Functional Magnetic Resonance Imaging*. Poster presented at the 19th Annual Meeting of the Organization of Human Brain Mapping, Seattle, WA.
29. **Zhang, F.**, Wang, J.-P., Wong, P.C.M. (2012, June). *Decoding Multiple Sound Categories in the Human Temporal Cortex Using High Resolution fMRI*. Poster presented at the 18th Annual Meeting of the Organization of Human Brain Mapping, Beijing, China.
30. **Zhang, F.**, Wang, J.-P., Wong, P.C.M. (2012, May). *Sound Category Representation in the Human Temporal Cortex Using High Resolution fMRI*. Paper presented at the Cognitive Neuroscience Annual Data Blitz, Northwestern University, Chicago, IL.
31. **Zhang, F.**, and Hong, D. (2010, March). *Elastic Net Based Model for Imaging Mass Spectrometry Proteomic Data Processing*. Paper presented at the Eastern North American Region (ENAR) of the International Biometrics Society Meeting, New Orleans, LA.
32. **Zhang, F.**, and Hong, D. (2009, May). *On Imaging Mass Spectrometry Data Analysis*. Paper presented at Mathematical Modeling in the Medical Sciences in conjunction with the 24th Annual Shanks Conference, Vanderbilt University, Nashville, TN.

XII. SELECTED PRESENTATIONS AS NON-PRESENTING CO-AUTHOR

33. Lagacey, M., **Zhang, F.**, DeYoung, K., Zillmer, E., O'Brien, K., Juarascio, A., (2019, March). *Examining Risk and Protective Factors in the Development of Disordered Eating Behaviors in Freshmen College Athletes*. Poster presented at the International Conference on Eating Disorders, New York, New York
34. Espel-Huynh, H., Thomas, J.G., **Zhang, F.**, Boswell, J.F., Juarascio, A.S., & Lowe, M.L. (2019, March). *Comparing Two Machine Learning Approaches to Predict Treatment Response Patterns in Eating Disorder Treatment*. Paper presented at the 40th Annual Meeting of the Society of Behavioral Medicine, Washington, D.C.
35. Espel-Huynh, H.M., Thompson-Brenner, H., Boswell, J.F., **Zhang, F.**, & Lowe, M.R. (2018, November). *Latent Symptom Change Trajectories During Residential Treatment and Their Impact on Risk for Early Relapse*. Poster presented at the Association for Behavioral and Cognitive Therapies annual conference, Washington, D.C.
36. Butryn, M.L, Forman, E.M., & **Zhang, F.** (2018, November). *Physical Activity Promotion During Long-term Behavioral Weight Loss: An RCT*. Poster presented at the annual meeting of The Obesity Society, Nashville, TN.
37. Espel-Huynh, H.M., **Zhang, F.**, Thomas, J.G., Boswell, J.F., Thompson-Brenner, H., Juarascio, A.J., & Lowe, M.R. (2018, November). *An Application of Machine Learning to Predict Patterns*

of Response to Eating Disorder Treatment. Paper presented at the Obesity and Eating Disorder SIG meeting of the Association for Behavioral and Cognitive Therapies annual conference, Washington, D.C.

38. Schumacher, L.M., Kerrigan, S.K., Call, C.C., Remmert, J.E., **Zhang, F.**, & Butryn, M.L. (2018, April). *I think therefore I am? Examining the Relationship between Exercise Identity and Exercise in Obesity Treatment*. Poster presented at the 39th Annual Meeting and Scientific Sessions of the Society of Behavioral Medicine, New Orleans, LA
39. Butryn, M. L., **Zhang, F.**, Remmert, J. E., Roberts, S. R., & Forman, E. M. (2018, April). *Baseline Executive Functioning Predicts Weight Loss and Physical Activity Outcomes in A Lifestyle Modification Program*. Poster presented at the 39th Annual Meeting and Scientific Sessions of the Society of Behavioral Medicine, New Orleans, LA.
40. Butryn, M. L., Schumacher, L. M., Rosenbaum, D. L., Convertino, A. D., & **Zhang, F.** (2018, April). *Participant and Clinician Perception of Challenges during Behavioral Weight Loss Treatment*. Poster presented at the 39th Annual Meeting and Scientific Sessions of the Society of Behavioral Medicine, New Orleans, LA.
41. Forman, E. M., Goldstein, S. P. **Zhang, F.**, Butryn, M. L., Juarascio, A. S., Manasse, S.M., Martin, G.J. (2018, April). *OnTrack: Can a Smartphone-based Just-time Adaptive Intervention Improve Weight Loss Outcomes?* Poster presented at the 39th Annual Meeting and Scientific Sessions of the Society of Behavioral Medicine, New Orleans, LA.
42. Ding, K., Patterson, C.P., Barakat, L.P., **Zhang, F.**, Daly, B.P. (2018, April). *Assessing the Moderation Effects of Cognitive Functioning, Academic Functioning, and Academic Needs on the Relationship between Disease Management and Health-related Quality of Life in Youth with Sickle Cell Disease*. Poster presented at the 2018 Society of Pediatric Psychology Annual Conference, Orlando, FL.
43. Espel-Huynh, H., Boswell, J.F., Thompson-Brenner, H., Ortiz, S.N., **Zhang F.**, Brooks, G.E., & Lowe, M.R. (2018, April). *Awareness and Tolerance of Emotional Experience as Mechanisms of Change Among Patients Receiving Transdiagnostic, Intensive Eating Disorder Treatment*. Paper presented at the International Conference on Eating Disorders, Chicago, IL.
44. Bradstreet, L. E., **Zhang, F.**, Moberg, P.J., Calkins, M.E., Daly, B., Schultheis, M.T., Robins, D.L. (2018, February). *Relationships Between Autism Traits, Psychosis Traits, and Mentalizing in a Clinical-Community Sample*, International Neuropsychological Society (INS) Washington DC.
45. Espel-Huynh, H.M., Boswell, J.F., **Zhang, F.**, Thompson-Brenner, H., Brooks, G.E., & Lowe, M.R. (2017, November). *Who "Gets Better" During Residential Treatment, and Who Does Not? An Evaluation of Characteristics of Patients Who Are At Risk for Treatment Failure*. Poster presented at the annual Renfrew Conference, Philadelphia, PA.
46. Espel-Huynh, H.M., **Zhang, F.**, Boswell, J.F., & Lowe, M.R. (2017, November). *Latent Symptom Change Trajectories During Eating Disorder Treatment and Their Impact on Outcome*. Poster

presented at the SIG exposition during the annual meeting of the Association for Behavioral and Cognitive Therapies, San Diego, CA.

47. Butryn, M.L., Forman, E.F., **Zhang, F.**, Lowe, M.R., & Gorin, A. (2017, October). *Environmental and Acceptance-based Behavioral Weight Loss: Mechanisms and Long-term Outcomes*. Poster presented at the annual meeting of the Obesity Society, Washington, D.C.
48. Forman, E.M., Goldstein, S.P., Abichandani, P., **Zhang, F.**, Evans, B.C., Manasse, S.M., Juarascio, A.S., Butryn, M.L., Martin, G.M. (2017, March). *Using Machine Learning and Just In Time Adaptive Intervention to Predict and Prevent Dietary Lapses: The DietAlert App*. Paper presented at the 38th Annual Meeting and Scientific Sessions of the Society of Behavioral Medicine, San Diego, CA.
49. Manasse, S.M., Espel, H.M., Schumacher, L.M., Kerrigan, S.G., **Zhang, F.**, Forman, E.M., & Juarascio, A.S. (2016, May). *Are Binge Eating Disorder Patients with Higher Negative Urgency Less Responsive to Treatment?* Poster presented at the annual meeting of the International Conference on Eating Disorders. San Francisco, CA.
50. Muratore, A. F., Espel, H.M., Lantz, E.L., Marmorstein, N.R., Rosenbaum, D.L., **Zhang, F.**, Iacono, W.G., & Lowe, M.R. (2016, October). *Are Dieting and Weight Concern Risk Factors for ED Symptoms? A 12-year Population-based Prospective Study*. Poster presented at the annual meeting of the Eating Disorders Research Society, New York, NY.

XIII. TEACHING EXPERIENCE

- | | |
|------------------|--|
| a. Undergraduate | Computer-Assisted Data Analysis I
(Fall 2017, Spring 2019)
Computer-Assisted Data Analysis II
(Winter 2018, Summer 2019)
Computer-Assisted Data Analysis II (online)
(Summer 2015) |
| b. Graduate | Behavioral Data Mining
(Winter 2015, Winter 2017)
Data Analysis in Psychology I
(Fall 2015, Fall 2016)
Data Analysis in Psychology II
(Winter 2016, Winter 2017)
Independent Study: Machine Learning in Psychology
(Fall 2015)
Independent Study: Multivariate Data Analysis
(Spring 2017)
Independent Study: Neuroimaging Data Analysis
(Spring 2017, Winter 2019)
Independent Study: Confirmatory Factor Analysis
(Spring 2018) |

XIV. THESIS AND DISSERTATION COMMITTEES

Dissertation Committees, Psychology

* primary mentee

1. Lauren Bradstreet, “The Impact of Autism Traits and Psychosis Traits on Mentalizing in Individuals with and without Autism Spectrum Disorder”, PhD in Clinical Psychology, graduated in 2019.
2. Kayci Vickers, “Impact of Structured Recommendations on Consistency in Adherence to Behavioral Regimens in Traumatic Brain Injury”, PhD in Clinical Psychology, graduated in 2019.
3. Peter Hitchcock, “Does Rumination Steal Attention from Potentially Reinforcing Cues?”, PhD in Clinical Psychology, graduated in 2019.
4. Mona Elgohail, “An Internet-based Intervention to Mitigate Depression in Muslim Women Experiencing Infertility: A Randomized Controlled Trial”, PhD in Clinical Psychology, graduated in 2019.
5. Hallie Espel, “Measurement and Prediction of Treatment Failure Among Residential Eating Disorder Patients Using a Novel Routine Outcome Monitoring Measure”, PhD in Clinical Psychology, graduated in 2019.
6. Elizabeth Gale-Bentz, “Do Juvenile Probation Officer Recommendations Mediate the Relationship Between Youth Behaviors and Supervision Review Hearing Outcomes?”, PhD in Law and Psychology, graduated in 2019.
7. Benjamin Locklair, “Beyond Self-Report: Construction and Validation of the Implicit Test of Antisocial Attitudes”, PhD in Law and Psychology, graduated in 2019.
8. Taralee Hamner, “Early Social Learning in Neurodevelopmental Disorders”, PhD in Clinical Psychology, proposed in 2019.
9. Jon Landrigan*, “Exploring Aphasia Using Community Detection Analysis and Machine Learning”, PhD in Applied Cognitive and Brain Sciences, graduated in 2018 (**Chair**).
10. Dave Rosen, “Brain-states for Increased Creative Performance: Jazz Improvisation, Expertise, EEG, and Flow”, PhD in Applied Cognitive and Brain Sciences, graduated in 2018.
11. Brian Erickson, “Trait like Resting State Brain Oscillation Predict Subsequent Problem Solving Strategies”, PhD in Applied Cognitive and Brain Sciences, graduated in 2018.
12. Monica Hill, “Using Machine Learning to Differentiate between Healthy Aging, Mild Cognitive Impairment, & Alzheimer's Disease”, PhD in Applied Cognitive and Brain Sciences, graduated in 2018.
13. Stephanie Kerrigan, “Project Step: Dismantling Several Common Components of Financial Incentive Programs for Physical Activity”, PhD in Clinical Psychology, graduated in 2018.

14. Rebecca Schiedel, “The Role of Psychosocial Maturity and Race in Juvenile Transfer Decisions: An Examination through Statistical Models”, PhD in Law and Psychology, proposed in 2018.
15. Ann-Marie Raphail, “Transcranial Magnetic Stimulation (TMS) study in individuals with visuospatial neglect due to stroke”, PhD in Clinical Psychology, proposed in 2018.
16. Helen Burton Murray, “A Pilot Development Trial of Cognitive-Behavioral Interventions for Gastroparesis”, PhD in Clinical Psychology, proposed in 2018.
17. Staci Berkowitz, “Responsivity to an Analogue Psychological Acceptance Task and Neurophysiological Measures as Predictors of Treatment Response for Public Speaking Anxiety”, PhD in Clinical Psychology, graduated in 2017.
18. Sam Winter, “Predicting Weight-Related Outcomes in Healthy Adolescents: Clinical Applications of fMRI and Machine Learning”, PhD in Applied Cognitive and Brain Sciences, graduated in 2017.
19. Emily Feig, “Assessing the Relationship Between Weight Variability and Eating Regulation”, PhD in Clinical Psychology, graduated in 2017.
20. Aimee Hildenbrand, “Childhood Trauma and Posttraumatic Stress in Pediatric Amplified Musculoskeletal Pain Syndromes”, PhD in Clinical Psychology, graduated in 2016.

Dissertation Committees, Other Departments

21. Daryl Omire-Mayor, “Monitoring and Analysis of the Hemodynamic Response to Noxious Stimuli Using Functional Near Infrared Spectroscopy”, PhD in Biomedical Engineering, graduated in 2018.
22. Dara Winley, “Parent-Teen Emotional Connections as A Protective Factor in African American Families with a Depressed or Suicidal Adolescent”, PhD in Couple and Family Therapy, graduated in 2018.
23. Anderson-Stahl Nathan, “The Basics of Stochastic Calculus”, PhD in Mathematics, proposed in 2018.
24. Xiajing Gong, “Contour Integration via Cortical Interactions in Visual Cortex”, PhD in Biomedical Engineering, graduated in 2016.

Thesis Committees, Psychology

25. Martina Azar, “Self-awareness, Executive Functioning, and Vocational Outcomes in Mild-moderate TBI”, MS in Clinical Psychology, defended in 2019.
26. Tinashe Tapera*, “Advanced Data Mining Models for Psychological and Behavioral Research”, BS/MS in Psychology, graduated in 2018 (**Chair**).

27. Xin Niu*, “Revealing the Neural Basis of Working Memory Using Voxel-based Morphometry MVPA”, PhD in Applied Cognitive and Brain Sciences, defended in 2018 (**Chair**).
28. Delia Sudler, “Perceived Influences of Culture on African American Weight Loss Experiences”, MS in Clinical Psychology, graduated in 2018.
29. Chelsea Day, “Cumulative Risk Factors for Socioemotional Problems in Toddlers with Developmental Delays”, MS in Clinical Psychology, graduated in 2018.
30. Britt Evans, “A Meta-Analysis Comparing Weight Loss Outcomes Between Overweight BED and non-BED Participants in Behavioral Weight Loss Treatment Programs”, MS in Clinical Psychology, defended in 2018.
31. Stephanie Callan, “Is it Addressed in Clinical Supervision and What is the Role of Stress?”, MS in Clinical Psychology, graduated in 2018.
32. Rebecca Williams, “Investigating Emotional Intelligence in Mild-moderate TBI”, MS in Clinical Psychology, proposed in 2018.
33. Amani Piers, “Evaluation of Environmental and Nutritional Changes in a Home Food Environment Intervention for Weight Loss”, MS in Clinical Psychology, proposed in 2018.
34. Rebecca Crochiere, “Integrating Sensor Technology and Machine Learning to Target Dietary Lapses”, MS in Clinical Psychology, proposed in 2018.
35. Chandler Puhy, “Factors Associated with Peer and Teacher Discordant Identification of Relationally Aggressive Students”, MS in Clinical Psychology, proposed in 2018.
36. Ke Ding, “A Secondary Analysis on School-Aged Children with Sickle Cell Disease”, MS in Clinical Psychology, graduated in 2017.
37. Stephanie Goldstein, “A Preliminary Investigation of a Personalized Risk Alert System for Weight Control Lapses”, MS in Clinical Psychology, defended in 2016.

XV. ACADEMIC ADVISOR

Doctoral Students:

Jon Landrigan, PhD in Applied Cognitive and Brain Sciences, 2014-2018

Xin Niu, PhD in Applied Cognitive and Brain Sciences, 2016-2021

Alexei Taylor, PhD in Applied Cognitive and Brain Sciences, 2019-2024

Master Students:

Tinashe Tapera, MS in Psychology, 2016-2018

Riley Cook, MS in Psychology, 2018-2020

Undergraduate Students:

Dennis Rattunde, BS in Mathematics, 2018-2022

XVI. STUDENT AWARDS & HONORS

- | | |
|------|--|
| 2018 | Fellowship at Insight Data Science Program
(Recipient: Jon Landrigan) |
| 2018 | Poster Award at the Annual Conference of Statistical Methods in Imaging
(Recipient: Xin Niu) |
| 2016 | Travel Award from the Summer Institute in Statistics for Big Data
(Recipient: Daniel Flack) |
| 2016 | Travel Award from the Statistical and Applied Mathematical Sciences Institute
(Recipient: Tinashe Tapera) |

XVII. ACADEMIC AND INSTITUTIONAL COMMITTEES

a. Departmental, College, & University Activities

- | | |
|----------------|--|
| 2014 - present | Statistical Consultant |
| 2016 - present | Department Awards Committee |
| 2017 - present | Master Program Curriculum Committee, Department of Psychology |
| 2017 - 2019 | Data Analytics Service for Strategic Planning, Thomas R. Kline School of Law |
| 2017 - present | Drexel Grant Review Committee for Faculty Summer Research Award |
| 2017 - present | Master Student Interview Panel, Department of Psychology |
| 2018 | Poster Judge for Drexel Emerging Graduate Scholars Conference |
| 2018 - present | Judge for the Zelda Provenzano Endowed STEM Writing Award |
| 2016 - 2017 | Behavioral Data Analytics Review Committee |
| 2017 | Women of Color in Psychology Discussion Panel |

b. Professional Activities & Committees

- | | |
|----------------|--|
| 2018 - present | Vice President, American Statistical Association (ASA) Philadelphia Chapter |
| 2018 - 2019 | Publication Officer for the ASA Statistics in Imaging Section |
| 2018 | Poster Judge for the Eastern North American Region (ENAR) of the International Biometrics Society Meeting, Atlanta, GA |

XVIII. PROFESSIONAL SOCIETIES

a. Membership

- American Statistical Association (ASA) member
- Member of Organization for Human Brain Mapping (OHBM)
- Eastern North American Region (ENAR) member

Society for Industrial and Applied Mathematics (SIAM) member

b. Service

Journal & Editorial Activity

2015-present Journal of Health & Medical Informatics
Editorial Board

2015-present Acta Psychopathologica
Editorial Board

Ad hoc Reviewer

The Lancet Psychiatry	Biometrics
BMC Medical Informatics and Decision Making	Journal of Health & Medical Informatics
International Journal of Computational Mathematics	EBioMedicine
Journal of Mental Disorder and Treatment	PLOS ONE
The Lancet Digital Health	EClinicalMedicine
Journal of Data Mining in Genomics and Proteomics	Journal of Maternal and Pediatric Nutrition
Journal of Theoretical and Computational Science	Journal of Radiology