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EDUCATION

Bachelor of Science, Chemical Engineering
University of Minnesota at Twin Cities, MN 1998

Master of Science, Applied Pharmaceutical Sciences
University of Rhode Island, Kingston, RI 2005
Title: Properties and Solubilization Effects of Aqueous Sucrose Laurate Dispersions and Microemulsions

Master of Science, Statistics
University of Rhode Island, Kingston, RI 2006
Title: Analysis of Water Quality Data in the Maryland Coastal Bays - A Bayesian Approach

Doctor of Philosophy, Biostatistics
Brown University, Providence, RI 2011
Title: Inference for Spatio-Temporal Signals in fMRI
Advisor: Hernando Ombao

ACADEMIC APPOINTMENTS

Graduate Assistant 06/2005 – 05/2006
Information and Instructional Technology Services, University of Rhode Island, Kingston, RI

Research Assistant 05/2006 – 08/2006
Department of Sociology and Anthropology, University of Rhode Island, Kingston, RI

Research Assistant 06/2007 – 08/2010
Department of Community Health, Brown University, Providence, RI

Assistant Professor 07/2011 – 03/2020
Department of Biostatistics, Vanderbilt University Medical Center, Nashville, TN

Assistant Professor (Affiliated) 07/2012 – 03/2020
Institute of Imaging Science, Vanderbilt University Medical Center, Nashville, TN

Assistant Professor (Faculty Member) 10/2013 – 03/2020
Center for Quantitative Sciences, Vanderbilt University Medical Center, Nashville, TN

Assistant Professor (Affiliated) 04/2019 – 03/2020
Data Science Institute, Vanderbilt University, Nashville, TN

Assistant Professor (Affiliated) 04/2019 – 03/2020
Vanderbilt Institute for Surgery and Engineering, Vanderbilt University, Nashville, TN

Associate Professor 04/2020 – present
Department of Biostatistics
Center for Quantitative Sciences, Vanderbilt University Medical Center, Nashville, TN

Associate Professor (Affiliated) 04/2020 – present
Data Science Institute, Vanderbilt University, Nashville, TN
Vanderbilt Institute for Surgery and Engineering, Vanderbilt University, Nashville, TN
Institute of Imaging Science, Vanderbilt University Medical Center, Nashville, TN

LEADERSHIP APPOINTMENTS

Director of Data Science Core 01/2016 – present
Vanderbilt University Kennedy Center, Nashville, TN

Role: Provide statistical and methodological expertise to Vanderbilt Kennedy Center (VKC) investigators, members, and their trainees; responsible for research performance progress report of Data Science Core (renamed from Biostatistics and Bioinformatics Core in 2020) for multi-million dollar U54 (P50 since 07/2020) grant supporting the VKC

PROFESSIONAL ORGANIZATIONS

Member of American Statistical Association 2005 – present
Member of International Biometric Society (ENAR) 2009 – present
Member of Organization for Human Brain Mapping 2009 – present

PROFESSIONAL ACTIVITIES

Extramural (Invited Seminars and Presentations)

- (1) 04/2011 Spatio-Spectral Mixed Effects Model, Department of Computer Science and Statistics, University of Rhode Island
- (2) 04/2013 Spatio-Spectral Analysis of fMRI Data, Department of Statistics, University of South Carolina
- (3) 06/2013 Spatio-Spectral Mixed Effects Model for fMRI Data, Conference on Frontiers in Applied and Computational Mathematics, New Jersey Institute of Technology
- (4) 08/2013 Longitudinal Analysis of Resting State fMRI Functional Connectivity Networks, Joint Statistical Meetings, Quebec, Canada
- (5) 11/2013 Longitudinal Analysis of Resting State fMRI Functional Connectivity Networks, Middle Tennessee Chapter of the American Statistical Association
- (6) 02/2016 A Bayesian Double Fusion Spatio-Temporal Model for Resting State Brain Connectivity Using Joint Functional and Structural Data, Department of Statistics, National Cheng Kung University, Taiwan
- (7) 02/2016 A Bayesian Spatio-Temporal Model for Functional Connectivity Using Resting State fMRI and DTI Data, Institute of Statistical Science, Academia Sinica, Taiwan
- (8) 12/2016 Simultaneous Control of Error Rates in fMRI Data Analysis, Department of Statistics, National Cheng Kung University, Taiwan
- (9) 04/2018 A Bayesian Hierarchical Spatio-Temporal Double Fusion Model for Functional Connectivity Using Resting State fMRI and DTI Data, Department of Bioinformatics & Biostatistics, University of Louisville
- (10) 06/2018 A Comparison of Brain Connectivity and Cognitive Impairment between Depression and Non-depression, Workshop on Nonstandard Brain Image Analysis (NBIA), Singapore
- (11) 12/2019 Evidence-Based Approach on Functional Magnetic Resonance Imaging Data, Department of Statistics, National Cheng Kung University, Taiwan

- (12) 06/2022 Whole Brain Functional Connectivity: A Bayesian Spatio-temporal Approach, International Conference on Econometrics and Statistics, Kyoto, Japan

Intramural Seminars and Lectures

- (1) 02/2011 Spatio-Spectral Analysis of fMRI Data, Department of Biostatistics
- (2) 10/2011 The Likelihood Paradigm in fMRI Research, Department of Biostatistics
- (3) 10/2011 Spatio-Spectral Analysis of fMRI Data, PNP/VUIIS Neuroimaging Seminar
- (4) 10/2012 Spatio-Spectral Analysis of fMRI Data, Electrical Engineering and Computer Science (EECE 395)
- (5) 12/2012 Controlling Global Error Rates in fMRI, Department of Biostatistics
- (6) 05/2013 Controlling Global Error Rates in fMRI, Institute of Imaging Science
- (7) 08/2013 Neuroimaging Data Analysis, Biostatistics Summer Chalk Talk
- (8) 10/2013 Spatial Correlation in DCE- and DW-MRI, CQS Bioinformatics Program Retreat
- (9) 11/2013 Longitudinal Analysis of Resting State fMRI Functional Connectivity Networks, Korean-American Scientists
- (10) 10/2014 Spatial Information in DW- and DCE-MRI Parametric Maps in Breast Cancer Research, CQS Workshop Series
- (11) 01/2015 A Bayesian Spatio-Temporal Model for Functional Connectivity Using fMRI and DTI Data, PNP/VUIIS Neuroimaging Seminar
- (12) 04/2015 A Bayesian Spatio-Temporal Model for Functional Connectivity Using fMRI and DTI Data, Biostatistics & Bioinformatics Seminar, Vanderbilt Kennedy Center
- (13) 09/2016 A Bayesian Double Fusion Model for Resting State Brain Connectivity Using Joint Functional and Structural Data, Department of Biostatistics
- (14) 03/2017 An Easy Introduction to Bayesian Statistics, Korean Graduate Students & Scholars Association
- (15) 05/2017 Choosing Your Priors, Convincing the Skeptics, Health Services Research Work in Progress Meeting
- (16) 03/2018 Brain Development and Aging through the Lens of Inter-Network Relationships: Application of Statistical Methods to Neuroimaging Data, Biostatistics & Bioinformatics Seminar, Vanderbilt Kennedy Center
- (17) 05/2018 Biomedical Imaging Data Analysis, Continuing Education Seminar Series, Department of Biostatistics
- (18) 02/2021 VKC IDDRC Core Seminar Series: Core E Overview, Vanderbilt Kennedy Center
- (19) 12/2021 A Reproducible and Automated EEG Data Processing Pipeline, Vanderbilt Kennedy Center

Intramural Service:

Brown University

- (1) Member, Graduate Steering Committee in Community Health 01/2007 – 06/2007
- (2) Member, Advisory Committee for Associate Dean in the Division of Bio & Med 08/2007 – 06/2008
- (3) Instructor for Summer Stat Boot Camp for Incoming Students, 08/2009
- (4) Co-leader for Summer Stat Boot Camp for Incoming Students 08/2009

(5) Instructor for Neuroimaging Workshop 08/2010

Vanderbilt University

- (1) Organizer, Biostatistics Weekly Seminar 2012 – 2015
- (2) Founding Member, Neuro-Statistics Working Group 2012
- (3) Member, Collaborative Publication Award Committee 2014 & 2015
- (4) Member, Biostatistics Graduate Student Admission Committee 2016 – present
- (5) Member, Comprehensive Exam Committee 2015 – 2019 & 2021
- (6) Member, Methods Publication Award Committee 2019
- (7) Member, Data and Safety Monitoring Board for Greenlight Plus Study 2020 – present
- (8) Member, Data and Safety Monitoring Board for ACORN Study 2021 – present
- (9) Member, Faculty Search Committee 2021

Referee

- (1) 2013 – present, Statistical Advisor in *PLOS ONE*
- (2) 2018 – present, Statistical Editor in *Kidney Research and Clinical Practice*
- (3) 2019 – present, Statistical Reviewer Board in *Lancet Psychiatry*
- (4) 2015, Grant Reviewer for Natural Sciences and Engineering Research Council of Canada (NSERC)
- (5) ENAR Student Paper Awards (2016, 2017, 2018)
- (6) JAMA Psychiatry, Lancet Neurology, NeuroImage, Neuroscience Letters, Magnetic Resonance Imaging, Journal of Statistical Theory and Practice, Brain Connectivity, Communication for Statistical Applications and Methods, Journal of Computational and Graphical Statistics, IEEE Transactions on Medical Imaging, Computational Statistics, Biometrics, Annals of Applied Statistics, Current Medical Imaging, European Journal of Neurology, Journal of Affective Disorders, Software X, Journal of the Royal Statistical Society: Series B

Session & Workshop Organizer

- (1) *Grand Challenge and Workshop on Multi-Atlas Labeling*, Workshop Committee, 2012 MICCAI, Nice, France
- (2) *Advanced Methods in Brain Imaging Research*, Organizer, 2013 Joint Statistical Meetings, Quebec, Canada
- (3) *MICCAI Challenge Workshop on Segmentation: Algorithms, Theory and Applications*, Program Committee, 2013 MICCAI, Nagoya, Japan
- (4) *Summer Research Institute in Geriatric Mental Health*, Faculty member, 2018 Research Career Institute in the Mental Health of Aging (CIMA), Nashville, TN, USA
- (5) *New Methods in Neuroimaging Data Analysis*, Co-Organizer, Satellite Workshop of 2020 ENAR, Nashville, TN, USA (canceled due to COVID-19)
- (6) *Advanced Research Institute in Geriatric Mental Health*, Faculty member, 2020 Retreat, Winston-Salem, NC, USA (virtual due to COVID-19)
- (7) *Advanced Research Institute in Geriatric Mental Health*, Faculty member, 2021 Retreat, Winston-Salem, NC, USA (virtual due to COVID-19)
- (8) *2022 Statistical Methods in Imaging*, Organizing Committee, Nashville, TN, USA

TEACHING and EDUCATIONAL ACTIVITIES

- (1) Teaching Assistant, Department of Computer Science and Statistics
University of Rhode Island 09/2003 – 05/2005
- (2) Teaching Assistant, Department of Community Health, Brown University 09/2006 – 12/2007
- (3) Course Instructor, Advanced Regression Analysis I (Bios 7345)
Vanderbilt University 08/2014 – present

Student Mentoring (PhD Students in Biostatistics)

2018	Minchun Zhou	Chief Data Scientist at Duckbill Network Tech, Shanghai, China
2018	Allison Hainline	Principal Statistician at GlaxoSmithKline
2020	Ya-Chen (Lisa) Lin	Statistical Scientist at Genentech
2023 (Expected)	Yan Yan	

Student Mentoring (MS Students in Biostatistics)

2018	Rui Wang	Software Engineer at LinkedIn
2020	Cassie Hennessy	Biostatistician at VUMC

Student Mentoring (PhD Committee Member)

05/2014	Xue Yang	PhD in Electrical Engineering
03/2018	Yuankai Huo	PhD in Electrical Engineering
03/2019	Prasanna Parvathaneni	PhD in Electrical Engineering

Student Mentoring (Oral Exam Committee Member)

2017	Sarah Fletcher	PhD student in Biostatistics
2020	Coleman Harris	PhD student in Biostatistics
2021	Kaidi Kang	PhD student in Biostatistics

Mentees

11/2011 – 01/2013	Wei Wang, PhD	Biostatistician II
08/2013 – 04/2016	Nikita Lakomkin	Undergraduate student in Biology
10/2015 – present	Liping Du	Assistant in Biostatistics
03/2016 – 10/2016	Lei Luo	Biostatistician II
09/2018 – 09/2021	Resh Gupta	PhD student in Neuroscience

AWARDS

2009	Levy Travel Award, Brown University
2011	Travel Award for Bayesian Biostatistics Conference
2011	John Van Ryzin Award for Best Paper submitted to ENAR Student Paper Competition
2011	Distinguished Student Paper Award, International Biometric Society's Eastern North American Region (ENAR)
2016	Vanderbilt Center for Quantitative Sciences High Impact Research Award
2016 & 2020	Golden Apple Award for Excellence in Teaching, Dept. of Biostatistics, Vanderbilt University
2022	Jacek Hawiger Award for Teaching Graduate Students and Postdoctoral Fellows in the Classroom, Lecture, or Small Group Setting, Vanderbilt University Medical Center
2022	Academy for Excellence in Education, Vanderbilt University Medical Center

RESEARCH PROGRAMS

Current Support

2P30CA068485-25 (Pietenpol) 07/01/2014 – 08/31/2025

NIH/NCI

Cancer Center Support Grant

Biostatistics Shared Resources (CCSG) at Vanderbilt

Role: Biostatistician

W81XWH-19-1-0812 (Claassen) 09/15/2019 – 09/14/2022

DOD

Effects of Exercise on Glymphatic Functioning and Neurobehavioral Correlates in Parkinson's Disease

Role: Co-Investigator

1R01 NS112252 (Englot) 08/15/2019 – 05/31/2024

NIH/NINDS

Relating Vigilance to Connectivity and Neurocognition in Temporal Lobe Epilepsy

Role: Co-Investigator

U34 DK123895 (Jaser) 09/20/2019 – 08/31/2022

NIH/NIDDK

Identifying Modifiable Risk and Protective Factors for Neurocognitive Complications of Pediatric Type 1 Diabetes

Role: Co-Investigator

VUMC77235(R01EB027498) (Kang) 09/16/2019 – 06/30/2023

NIH/NIBIB

Deformation Corrected Image Guided Laparoscopic Liver Surgery

Role: Site PI

R01 AG062574 (Donahue) 04/15/2020 – 03/31/2025

NIH/NIA

Quantitative Imaging of Brain Glymphatic Function in Humans

Role: Co-Investigator

P50 HD103537 (Neul)

08/06/2020 – 05/31/2025

NIH/NICHHD

Eunice Kennedy Shriver Intellectual and Developmental Disabilities Research Center at Vanderbilt University

The Vanderbilt Kennedy Center

Role: Data Science Core Director

R01 NS092961 (Gore)

02/15/2016 – 01/31/2026

NIH/NINDS

Resting State Connectivity in Primate Spinal Cord

Role: Co-Investigator

Completed Grants

5R01 CA109106 (Gore)

01/01/2012 – 12/31/2016

NIH/NCI

MRI Diffusion in Tumors Using Oscillating Gradients

Role: Biostatistician

5R01 NS075270 (Morgan)

03/01/2012 – 02/28/2017

NIH/NINDS

MRI Structural and Functional Connectivity Changes in Temporal Lobe Epilepsy

Role: Biostatistician

1R21 NS087465 (Smith)

04/01/2014 – 03/31/2016

NIH/NINDS

In Vivo Macromolecular and Protein-based MRI in the Spinal Cord of MS Patients

Role: Co-Investigator

1R21 EY024036 (Landman)

12/01/2013 – 11/30/2015

NIH/NEI

Quantitative Image Analysis Techniques for Optic Nerve Disease

Role: Co-Investigator

1R01 EY023240 (Smith)

03/01/2014 – 02/28/2018

NIH/NEI

Microstructural Characterization of the Optic Nerve in Optic Neuritis

Role: Co-Investigator

1U01CA174706-01 (Yankeelov)

06/01/2015 – 06/30/2019

NIH/NCI

Image Driven Multi-Scale Modeling to Predict Treatment Response in Breast Cancer

Role: Co-Investigator

5R01 EB017230 (Landman) 09/21/2015 – 05/31/2019
NIH/NIBIB
Controlling Quality and Capturing Uncertainty in Advanced Diffusion Weighted MRI
Role: Co-Investigator

2R01NS049251-08 (Miga) 04/01/2014 – 04/30/2020
NIH/MINDS
Multimodal Registration of the Brain's Cortical Surface
Role: Co-Investigator

5U54 HD083211 (Neul) 09/17/2015 – 05/31/2020
NIH/NICHD
Eunice Kennedy Shriver Intellectual and Developmental Disabilities Research Center at Vanderbilt University
Role: Core E Director

5R01 MH11877 (Caskey) 09/23/2016 – 06/30/2020
NIH/NINDS
Establishing a Dose Response for Ultrasound Neuromodulation
Role: Co-Investigator

1R01 MH102246 (Taylor) 01/15/2015 – 11/30/2020
NIH/NIMH
Neural Connectivity Affecting the Antidepressant Response: Testing a Lesion Model
Role: Co-Investigator

1R01 NS097783 (Claassen) 08/01/2016 – 05/31/2021
NIH/NINDS
Biological Determinants of Impulsivity in Parkinson's Disease
Role: Co-Investigator

3-SRA-2015-102-M-B (Virostko) 08/01/2015 – 03/31/2022
Juvenile Diabetes Research Foundation
Quantitative MRI of the Pancreas in Type 1 Diabetes
Role: Co-Investigator

Grants awarded though Dr. Kang's effort is not supported

CQS-Pilot Study (Landman, **Kang**, Patel) 07/01/2013 – 06/30/2014
Center for Quantitative Sciences
Image-based Prognosis of Traumatic Brain Injury
Role: Co-PI

Fellowship (Abramson) 07/01/2014 – 06/30/2016
GE-Radiology Research Academic

Multi-parametric MRI as an Early Response Biomarker in Metastatic Triple Negative Breast Cancer
Role: Co-Investigator

5T32 EB021937 (Miga) 06/01/2016 – 05/31/2021
NIH/NIBIB
Training Program for Innovative Engineering Research in Surgery and Intervention
Role: Co-Investigator

5R01 NS097821 (Dortch) 08/01/2016 – 04/30/2021
NIH/NINDS
Quantitative Assessment of Peripheral Nerve Injury and Repair via Multi-parametric MRI
Role: Co-Investigator

5R01 MH111599 (Corbett) 07/01/2017 – 05/31/2022
NIH/NIMH
Examining Stress and Arousal Across Pubertal Development in ASD
Role: Co-Investigator

IDD-Reads (Key & Kang) 01/01/2021 – 12/31/2021
Vanderbilt Kennedy Center
A Reproducible EEG Data Processing Environment for Large-Scale Data Integration and Analysis
Role: Co-PI

NIH F grants awarded to trainees at Vanderbilt University though Dr. Kang's effort is not supported

F30 CA203220 (McKenna) 03/01/2016 – 11/29/2019
NIH/NCI
Development and Validation of a Predictive Model of Chemotherapy in Breast Cancer

F32 CA216942 (Jiang) 08/01/2017 – 07/31/2019
NIH/NCI
Early Assessment of Radiation Response in Brain Tumors Using Quantitative Temporal Diffusion Spectroscopy

F31 NS106735 (Gonzalez) 09/30/2018 – 09/29/2021
NIH/NIMH
Multimodal Analysis of Interictal and Ictal Brain Connectivity in Temporal Lobe Epilepsy

F31 AT010299 (Gupta) 02/01/2019 – 01/31/2022
NIH/NCCAM
The Effect of Mindfulness-based Cognitive Therapy on ERP Markers of Attentional Aias in Anxiety

PUBLICATIONS AND PRESENTATIONS

Articles in Refereed Journals

(† Student as first author)

- (1) Graham,A.L., Cobb,N.K., Papandonatos,G.D., Moreno,J.L., **Kang,H.**, Tinkelman,D.G., Bock,B.C., Niaura,R.S., Abrams,D.B. “A randomized trial of internet and telephone treatment for smoking cessation”, *Archives of Internal Medicine* 2011;171(1):46-53.
- (2) Graham,A.L., Papandonatos,G.D., **Kang,H.**, Moreno,J.L. “Development and validation of a measure of online perceived social support for smokers”, *Journal of Medical Internet Research* 2011;13(3): e69.
- (3) Gongvatana,A., Cohen,R.A., Correia,S., Devlin,K.N., Miles,J., **Kang,H.**, Ombao,H., Navia,B., Laidlaw,D.H., Tashima,K.T. “Clinical contributors to cerebral white matter integrity in HIV-infected individuals”, *Journal of Neurovirology* 2011;17(5):477-86.
- (4) **Kang,H.**, Ombao,H., Linkletter,C., Long,N., Badre,D. “Spatio-spectral mixed effects model for functional magnetic resonance imaging data”, *Journal of the American Statistical Association* 2012;107(498): 568-577.
- (5) Holme,M.J., Folley,B.S., Sonmezturk,H.H., Gore,J.C., **Kang,H.**, Abou-Khalil,B., Morgan,V.L. “Resting state functional connectivity of the hippocampus associated with neurocognitive function in left temporal lobe epilepsy”, *Human Brain Mapping* 2014;35(3):735-44.
- (6) Holme,M.J., Yang,X., Landman,B.A., Ding,Z., Abou-Khalil,B., Sonmezturk,H.H., **Kang,H.**, Gore,J.C., Morgan,V.L. “Functional networks in temporal lobe epilepsy: a voxel-wise study of resting state functional connectivity and gray matter concentration”, *Brain Connectivity* 2013;3(1):22-30.
- (7) Shokouhi,S., Claassen,D., **Kang,H.**, Ding,Z., Rogers,B., Mishra,A., Riddle,W.R. “Longitudinal progression of cognitive decline correlates with changes in the spatial pattern of brain ¹⁸F-FDG PET”, *Journal of Nuclear Medicine* 2013;54(9):1564-1569.
- (8) Yang,X., **Kang,H.**, Newton,A.T., Landman,B.A. “Evaluation of statistical inference on empirical resting state fMRI”, *IEEE Transactions on Biomedical Engineering* 2014;61(4):1091-9
- (9) Silver,H., **Kang,H.**, Keil,C., Muldowney,J.A.S., Kocalis,H., Fazio,S., Vaughan,D.E., Niswender,K. “Consuming a balanced high fat diet for 16 weeks improves body composition, inflammation and vascular function parameters in obese premenopausal women”, *Metabolism: Clinical and Experimental* 2014;63(4):562-73.
- (10) Li,X., **Kang,H.**, Arlinghaus,L.R., Abramson,R.G., Chakravarthy,A.B., Abramson,V.G., Farley,J., Sanders,M., Yankeelov,T.E. “Analyzing spatial heterogeneity in DCE- and DW-MRI parametric maps to optimize prediction of pathologic response to neoadjuvant chemotherapy in breast cancer”, *Translational Oncology* 2014;7(1):14-22.
- (11) Li,X., Abramson,R.G., Arlinghaus,L.R.,**Kang,H.**, Chakravarthy,A.B., Abramson,V.G., Farley,J., Mayer,I.A., Kelly,M.C., Meszoely,I.M., Means-Powell,J., Grau,A.M., Sanders,M., Yankeelov,T.E. “Multi-parametric MRI for predicting pathological response after the first cycle of neoadjuvant chemotherapy in breast cancer”, *Investigative Radiology* 2015;50(4):195-204.

- (12) Whisenant, J.G., Sorace, A.G., McIntyre, J.O., **Kang, H.**, Sanchez, V., Loveless, M.E., Yankeelov, T.E. "Evaluating treatment response using DW-MRI and DCE-MRI in trastuzumab responsive and resistant HER2-overexpressing human breast cancer xenografts", *Translational Oncology* 2014;7(6):768-779.
- (13) Xu, J., Li, H., Harkins, K.D., Jiang, X., Xie, J., **Kang, H.**, Does, M.D., Gore, J.C. "Mapping mean axon diameter and axonal volume fraction by MRI using temporal diffusion spectroscopy", *NeuroImage* 2014;103:10-19.
- (14) Bi, X., Seabolt, L., Shibao, C., Buchowski, M., **Kang, H.**, Keil, C.D., Tyree, R., Silver, H.J. "DXA-measured visceral adipose tissue predicts impaired glucose tolerance and metabolic syndrome in obese Caucasian and African-American women", *European Journal of Clinical Nutrition* 2015;69(3):329-336.
- (15) Jeong, H., Dewey, B.E., Hirtle, J.A.T., Lavin, P., Sriram, S., Pawate, P., Gore, J.C., Anderson, A.A., **Kang, H.**, Smith, S. "Improved DTI of optic nerve using multishot 2-D navigated acquisitions", *Magnetic Resonance in Medicine* 2015;74(4):953-963.
- (16) Whisenant, J.G., Sorace, A.G., McIntyre, J.O., **Kang, H.**, Sanchez, V., Loveless, M.E., Yankeelov, T.E. "Utility of 18FLT-PET to assess treatment response in trastuzumab-resistant and sensitive HER2-overexpressing human breast cancer xenografts", *Molecular Imaging and Biology* 2015;17:119-128.
- (17) Morgan, V.L., Conrad, B.N., Abou-Khalil, B., Rogers, B.P., **Kang, H.** "Increasing structural atrophy and functional isolation of the temporal lobe with duration of disease in temporal lobe", *Epilepsy Research* 2015;110:171-178.
- (18) Shokouhi, S., Rogers, B.P., **Kang, H.**, Ding, Z., Claassen, D., McKay, J.W., Riddle, W.R. "Modeling clustered activity increase in amyloid- β PET images with statistical descriptors", *Clinical Interventions in Aging* 2015;10:759-770.
- (19) Williams, J.M., Rani, S.D., Li, X., Arlinghaus, L.R., MacDonald, L., Partridge, S.C., **Kang, H.**, Whisenant, J.G., Abramson, R.G., Kinahan, P., Yankeelov, T.E. "Comparison of prone versus supine FDG-PET of the breast: phantom and preliminary clinical studies", *Medical Physics* 2015;42:3801-3813.
- (20) Li, K., Li, H., Zhang, X., Stokes, A.M., Jiang, X., **Kang, H.**, Quarles, C.C., Zu, Z., Gochberg, D.F., Gore, J.C., Xu, J. "Influence of water compartmentation and relaxation on quantitative magnetization transfer imaging in tumors", *Magnetic Resonance in Medicine* 2016;76(2):635-644.
- (21) **Kang, H.**, Blume, J., Ombao, H., Badre, D. "Simultaneous control of error rates in fMRI data analysis", *NeuroImage* 2015;123:102-113.
- (22) Xu, J., Li, H., Li, K., Harkins, K.D., Jiang, X., Xie, J., **Kang, H.**, Dortch, R.D., Anderson, A.W., Does, M.D., Gore, J.C. "Fast and simplified mapping of mean axon diameter using temporal diffusion spectroscopy", *NMR in Biomedicine* 2016;29(4):400-410.
- (23) Nikita, L., **Kang, H.**, Landman, B., Hutson, S.M., Abramson, R.G. "The attenuation distribution across the long axis (ADLA)", *Academic Radiology* 2016;23:718-723.
- (24) Smith, A.K., Dortch, R.D., Dethrage, L.M., Lyttle, B.D., **Kang, H.**, Welch, E.B., Smith, S.A. "Incorporating dixon multi-echo fat water separation for novel quantitative magnetization transfer of the human optic nerve in vivo", *Magnetic Resonance in Medicine* 2017;77(2):707-716.
- (25) Shokouhi, S., McKay, J.W., Baker, S.L., **Kang, H.**, Brill, A.B., Gwirtsman, H.E., Riddle, W.R., Claassen, D.O., Rogers, B.P. "Reference tissue normalization in longitudinal (18)F-florbetapir positron emission tomography of late mild cognitive impairment", *Alzheimer's Research & Therapy* 2016;8:2.
- (26) Whisenant, J.G., Dortch, R.D., Grissom, W., **Kang, H.**, Arlinghaus, L.A., Yankeelov, T.E. "Bloch-Siegert B1-mapping Improves accuracy and precision of longitudinal relaxation measurements in the breast at 3T", *Tomography* 2016;2(4):250-259.
- (27) Sorace, A.G., Syed, A.K., Barnes, S.L., Quarles, C.C., Sanchez, V., **Kang, H.**, Yankeelov, T.E. "Quantitative [18F]-FMISO- PET imaging shows reduction of hypoxia following trastuzumab in a murine model of HER2+ breast cancer", *Molecular Imaging and Biology* 2017;19(1):130-137.
- (28) Arlinghaus, L.R., Dortch, R.D., Whisenant, J.G., **Kang, H.**, Abramson, R.G., Yankeelov, T.E. "Quantitative magnetization transfer imaging of the breast at 3.0 T: reproducibility in healthy volunteers", *Tomography* 2016;2(4):260-266.

- (29) Claassen,D.O., McDonell,K.E., Donahue,M., Rawal,S., Wylie,S.A., Neimat,J.S., **Kang,H.**, Hedera,P., Zald,D., Landman,B., Dawant,B., Rane,S. “Cortical asymmetry in Parkinson's disease: early susceptibility of the left hemisphere”, *Brain and Behavior* 2016;6(12):e00573.
- (30) Xu,Z., Gertz,A.L., Burke,R.P., Bansal,N., **Kang,H.**, Landman,B.A., Abramson,R.G. “Improving spleen volume estimation via computer-assisted segmentation on clinically acquired CY scans”, *Academic Radiology* 2016;23(10):1214-1220.
- (31) Wang,P., Degar,M.S., **Kang,H.**, Ikizler,T.A., Titze,J., Gore,J. “Sex differences in sodium deposition in human muscle and skin”, *Magnetic Resonance Imaging* 2017;36:93-97.
- (32) VanWagner,L.B., Terry,J.G., Chow,L.S., Alman,A.C., **Kang,H.**, Ingram,K.H., Shay,C., Lewis,C.E., Bryan,R.N., Launer,L.J., Carr,J. “Nonalcoholic fatty liver disease and measures of early brain health in middle-aged adults: The CARDIA study”, *Obesity* 2017;25(3):642-651.
- (33) **Kang,H.**, Ombao,H., Fonnesebeck,C., Ding,Z., Morgan,V.L. “A Bayesian double fusion model for resting state brain connectivity using joint functional and structural data”, *Brain Connectivity* 2017;7(4):219-227.
- (34) Vijayan,R.C., Thompson,R.C., Chambless,L.B., Morone,P.J., He,L., Clements,L.W., Griesenauer,R.H., **Kang,H.**, Miga,M.I. “Android application for determining surgical variables in brain-tumor resection procedures”, *Journal of Medical Imaging* 2017;4(1):015003.
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Papers Under Review

- (1) Pfalzer,A.C., Yan,Y., **Kang,H.**, Totten,M., Silverman,J., Bowman,A.B., Erikson,K., Claassen,D.O. “Alterations in metal homeostasis occur prior to canonical markers in Huntington Disease”.

Working Papers

(†Student as first author)

- (1) †**Hainline,A.E.**, **Kang,H.** “Evidence-based inference on resting state functional connectivity”.

In Preparation

- (1) **Kang,H.**, Lee,K. “Bias in region-level functional connectivity”.

Highly Selective Conference Publications (peer-reviewed)

- (1) Yang,X., **Kang,H.**, Newton,A.T., Landman,B.A. “Quantitative evaluation of statistical inference in resting state functional MRI”, 2012 International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), Nice, France.
- (2) **Kang,H.**, Hainline,A., Li,X., Arlinghaus,L.R., Abramson,V.G., Chakravarthy,B., Bingham,B., Yankeelov,T.E. “Multi-modal MRI parametric maps combined with receptor Information to optimize prediction of pathologic response to neoadjuvant chemotherapy in breast cancer”, (Power Pitch, 2.8% acceptance) 2016 International Society for Magnetic Resonance in Medicine (ISMRM), Singapore.
- (3) Huo,Y., Aboud,K., **Kang,H.**, Cutting,L.E., Landman,B.A. “Mapping lifetime brain volumetry with covariate-adjusted restricted cubic spline regression from cross-sectional multi-site MRI”, 2016 International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), Athens, Greece. (Oral Presentation)
- (4) Arlinghaus,L.R.* , Dortch,R., **Kang,H.**, Wharton,D.M., Abramson,R.G., Yankeelov,T.E. “Quantitative magnetization transfer imaging of breast cancer: Initial results at 3T”, 2019 International Society for Magnetic Resonance in Medicine (ISMRM), Montreal, Canada (Power Pitch, less than 8.6% acceptance).

Conference Publications

- (1) Landman,B.A., Yang,X., **Kang,H.** “Do we really need robust and alternative inference methods for brain MRI?”, (Oral) 2012 MICCAI Workshop of Multi-Modal Brain Image Analysis, Nice, France.
- (2) **Kang,H.**, Yang,X., Bryan, F.W., Tripp, C.M., Landman,B.A. “Whole brain functional connectivity using multi-scale spatio-spectral random effects model”, (Oral) 2013 MICCAI Workshop of Multi-Modal Brain Image Analysis, Nagoya, Japan.

Conference Presentations

* denotes presenter († denotes student as first author)

- (1) **Kang,H.***, Gonzalez,L. “Predicting water quality in the Maryland coastal bays using spatio-temporal models,” (Oral) 2007 TIES North American Regional Meeting, University of Washington, Seattle, WA.
- (2) **Kang,H.***, Ombao,H., Blume,J., Patrick,B., and Sanes,J. “Evaluating evidence of activation in fMRI via a novel likelihood paradigm,” (Poster) 2009 Organization for Human Brain Mapping 15th Annual Meeting, San Francisco, CA.

- (3) **Kang,H.*** “Spatio-spectral analysis of fMRI data,” (Oral) 2010 Joint Statistical Meetings, Vancouver, Canada.
- (4) **Kang,H.***, Ombao,H. “Modeling brain connectivity using multi-modal imaging data”, (Oral) 2011 Bayesian Biostatistics Conference, Houston, Texas.
- (5) **Kang,H.***, Ombao,H., Linkletter,C., Long,N., Badre,D. “Spatio-spectral mixed effects model for functional magnetic resonance imaging data”, (Oral) 2011 ENAR Spring Meetings, Miami, FL.
- (6) Morgan,V.L.* , Holmes,M.J., Yang,X., Landman,B.A., Ding,Z., **Kang,H.**, Sonmezturk,H.H., Abou-Khalil,B.W. “Multiregional network of MRI structural and functional connectivity changes in left TLE”, 2012 American Epilepsy Society Annual Meeting, San Diego, CA.
- (7) **Kang,H.***, Blume,J., Ombao,H., Badre,J. “Controlling global error rates in fMRI data analysis”, (Poster) 2012 Organization for Human Brain Mapping, Beijing, China.
- (8) **Kang,H.***, Ombao,H. “Modeling brain connectivity using multi-modal MRI data”, (Oral) 2012 Joint Statistical Meetings, San Diego, CA.
- (9) Abramson,R.G.* , Yankeelov,T.E., **Kang,H.**, Carr,J., Buntin,M., Omary,R.A. “Multiparametric MRI as an early cancer treatment response biomarker: report of GERRAF/RAHSR research in progress”, (Oral) 2014 Association of University Radiologists (AUR), Baltimore, MD.
- (10) Morgan,V.L.* , Dagley,A.S., **Kang,H.**, Abou-Khalil,B., Rogers,B.P. “Structural and functional evolution of temporal lobe epilepsy using linear regression modeling”, 2014 Scientific Meeting of the International Society for Magnetic Resonance in Medicine, Milano, Italy.
- (11) Li,X.* , **Kang,H.**, Arlinghaus,L.R., Chakravarthy,A.B., Abramson,R.G., Abramson,V., Yankeelov,T.E. “Spatial heterogeneity analysis of DCE- and DW-MRI using the logistic ridge regression to predict breast cancer response to neoadjuvant therapy”, (Poster) 2014 Scientific Meeting of the International Society for Magnetic Resonance in Medicine, Milano, Italy.
- (12) Williams,J.M.* , Rani,S.D., Li,X., Whisenant,J.G., **Kang,H.**, Arlinghaus,L.R., Chakravarthy,A.B., Abramson,V., Abramson,R., Yankeelov,T.E. “Prone versus supine 18F-FDG-PET for assessing the response of locally advanced breast cancer to neoadjuvant chemotherapy”, (Poster) 2014 Society for Nuclear Medicine and Molecular Imaging annual meeting, St. Louis, MO.
- (13) **Kang,H.***, Fiecas,M. “Longitudinal analysis of resting-state fMRI functional connectivity networks”, (Oral) 2013 Joint Statistical Meetings, Montreal, Canada.
- (14) **Kang,H.*** “Longitudinal spatio-spectral analysis of resting-state fMRI”, (Oral) 2014 Joint Statistical Meetings, Boston, MA.
- (15) Blume,J.* , **Kang,H.** “Multiple comparisons, fMRI imaging, and one brave (but dead) Atlantic salmon”, (Oral) 2014 Joint Statistical Meetings, Boston, MA.
- (16) Shokouhi,S.* , **Kang,H.**, Rogers,B., Claassen,D., Riddle,W.R. “A β -PET image analysis with weighted two-point correlation functions”, (Oral) 2014 Society of Nuclear Medicine and Molecular Imaging, St. Louis, MO.
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Recipient of the 2015 AMSER Henry Goldberg Medical Student Award
- (19) Wahab,R.* , Spalluto,L., Wahab,S., **Kang,H.** “Female patient gender preference for breast imaging care providers”, (Poster) 2015 Society of Breast Imaging/ ACR Breast Imaging Symposium, Orlando, FL.
- (20) Shokouhi,S.* , Rogers,B.,**Kang,H.** “Early detection of pre-symptomatic AD in a cognitively healthy population”, (Poster) 2015 Brain & BrainPET, Vancouver, Canada.

- (21) Li,X.* , Abramson,V., Arlinghaus,L.R., **Kang,H.**, Williams,J., Abramson,R.G., Chakravarthy,A.B., Pendyala,P., Yankeelov,T.E. “Influence of breast cancer receptor status on multi-parametric magnetic resonance imaging for predicting treatment response: preliminary results”, (Poster) 2015 Scientific Meeting of the International Society for Magnetic Resonance in Medicine, Toronto, Canada.
- (22) Shokouhi,S.* , **Kang,H.**, Claassen,D., Riddle,W.R. “Weighted two-point correlation functions in A-PET analysis”, (Poster) 2015 IEEE Nuclear Science Symposium & Medical Imaging Conference, San Diego, CA.
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