Full Curriculum Vitae
Date: December 4, 2024

Personal

Name: Hongtu Zhu
Lab name: Bio**S**tatistics and **I**maging **G**enomics **A**nalysi**S** **L**ab
(BIG-S2=Statistics and Signal)
Lab Website: https://www.med.unc.edu/bigs2/
Our Lab Knowledge Portal Website: https://bigkp.org/
Our Lab Summary Statistics Website:
https://www.med.unc.edu/bigs2/data/gwas-summary-statistics/

Education

Postdoctoral training   2003   Yale University,   USA
Postdoctoral training   2001   Pacific Institute for Mathematical Science,
Canada
Ph.D in Statistics   2000   The Chinese University of Hong Kong.
M.Sc in Statistics   1996   Southeast University,   P.R. China.

Professional Experience

University of North Carolina at   August 2011-   Professor of Biostatistics
Chapel Hill
University of North Carolina at   July 2021-   Professor of Computer Science
Chapel Hill
University of North Carolina at   December 2021-   Professor of Statistics and
Chapel Hill   Operational Research.
University of North Carolina at   January 2022-   Professor of Genetics
Chapel Hill
University of North Carolina at   September 2023-   Professor of Radiology
Chapel Hill
DiDi Chuxing   May 2018-March 2021 DiDi Fellow, Chief
Scientist of   AI,
Director of Department of Statistical and
Decision   Sciences consisting of four research teams
with 30+ members
and
Director of Department of Feature Engineering
consisting of five research teams with 85+ members
The Chinese University of Hong Kong, Oct 2019-May 2024   Adjunct Professor
MD Anderson Cancer Center   May   2017- April 2018 Endowed Bao-Shan Jing
Professorship in Diagnostic Imaging
MD Anderson Cancer Center   May   2016- April 2018   Professor
Rice University   May   2016   Adjunct Professor
Texas A&M University   May   2016   Adjunct Professor
University of North Carolina at   August 2006-July 2011 Associate Professor

Chapel Hill
New York State Psychiatric Institute April 2004-July 2006   Research Scientist IV
Columbia University   July 2003-July 2006   Assistant Professor

Honors

The COPSS Snedecor Award   2025
Fellow,   Institute of Electrical and Electronics Engineers (IEEE)   2025
Daniel Wagner Prize for Excellence in Operations
                            Research Practice，   Informs   2019
MICCAI Oropharynx Cancer (OPC) Radiomics Challenge ::
     Human Papilloma Virus (HPV) winner team leader   2017
A Grand Challenge for Tissue Microarray Analysis in Thyroid Cancer Diagnosis:
ISBI 2017 winner team leader   2017
CPRIT senior Investigator of Texas State with 4M for research   2015
Arthur H. Wuehmann Prize,
              American Academy of Oral and Maxillofacial Radiology   2011
Fellow,   American Statistical Association,   2011
Fellow,   Institute of Mathematical Statistics,   2011

Memberships

American Statistical Association
International Biometric Society
Human Brain Mapping
Institute of Mathematical Statistics
International Society for Bayesian Analysis
International Chinese Statistical Association
IEEE
Society of Medical Imaging Computing and Computer Assisted Intervention

Department/University Service

Columbia University
2004-2006   Research/Postdoctoral Fellow Training Committee at Columbia
                 University

University of North Carolina at Chapel Hill
2006-2007   Doctor Examination Committees I and II, Graduate Studies
                 Committee
2007-2008   Doctor Examination Committees I and II, Seminar Committee
2008-2009   Doctor Examination Committees I and II, Seminar Committee
2009-2015   Doctor Examination Committees I and II, Graduate Studies
                 Committee

2011-2015   Research Council/Conflict of Interest Committee for School of Public Health
2022-2023   Nomination Committee
2023-now   The Faculty Assembly Delegation，ex officio Faculty Counsel.

Professional Service

Grants Review:
   National Science Foundation, 2007, 2009, 2010, 2011, 2012, 2013, 2014
   NIH Challenge grants, 2009.
   NIH Neurological, Aging and Musculoskeletal Epidemiology Study Section,
        2009, 2010.
   NIH ZRG1 BST-N(90), 2011.
   NIH NINDS NeuroNEXT program, 2012, 2013
   NIH ZRG1 BDCN-L(60)R, 2013
   NIH ZRG1 AARR-F (52) (53) R 2014/01
   NIH ZNS1 SRB-B (39)   2014-01
   National Sciences and Engineering Research Council of Canada, 2010, 2011.
   Chile Foudecyt National Research Funding Competition   2010, 2011
   CIHR- Methodological Innovations for Neuroimaging Datasets, 2013
   CIHR- Secondary Analysis of Neuroimaging Datasets, 2013
   NIH Zrg1 BDCN-L(60)R, 2014.
   NIH G79, 2014
   NIH Clinical Neuroscience and Neurodegeneration (CNN) Study Section 2015-.
   NSF Collaborative Research in Computational Neuroscience (CRCNS),
        2015, 2016, 2017, 2018
   NIH Big Data to Knowledge (BD2K) training grant panel, 2015, 2016
   NIMH T32 training grant panel, 2015, 2017
   NIH ZRG1 HDM-W 03 2016
   NIH ZRG1 RPHB-W (53) R 2016
   NIH ZRG1 BDCN-N (55) R   2016
   NIH BCHI Study Section   2017
   NIH ZRG1-IMST-U-50 2017
   NIH ZMH1-ERB-M-01 2017
   NIH ZMH1-ERB-X-04   2017
   NIH ZRG1-IFCN-J (57) 2017
   NIH BMRD   2018
   NIH APDA   2018
   NIH ZAT SM (63) P 2021.
   NIH ZRG1 F13-Z (20) L, 2020.
   NIH ZDC1 SRB-Z (42) 1 2021.
   NSF SCALE MoDL Panel 2 2021.
   NIH ZAT SM (63) P 2022.
   NIH ZMH1 ERB-S (02) S 2022
   NSF 21530 2023

NIMH Schizophrenia and Related Disorders During Mid- to Late-Life (R01 &
R21) 2023
NIDCD Clinical Trial application 2023
NSF DMS 2023
NSF APTO 2023
NIH ZRG1 EPH-E (02) 2024
NIH NIA U19 2024
NIH NIEHS K99 2024.
NIH NIDCD P50 2024

Associate Editor:
    2009-2011   Biometrics,
    2007-2018   Statistics and its Interface,
    2011-2017   Neurosurgery
    2011-   Statistica Sinica
    2012-2018   Journal of American Statistical Association, A&CS
    2013-2018   Annals of Statistics
    2014-2018   Journal of American Statistical Association, T&M
    2015-2020   Statistics in Biosciences
    2015-2021   Computational Statistics and Data Analysis.
    2019-2023   Journal of Royal Statistical Society，Series B
Statistical Consultant and Reviewer
    2024-   New England Journal of Medicine-AI
Editor for A&CS and Coordinating Editor:
    2025-2027   Journal of American Statistical Association

Guest Editor for a special issue on NeuoroImaging analysis in *Statistics and its Interface*
Guest Editor for a special issue on Random Forest in *Science in China*
Student Award Committee: ICSA 2006 Applied Statistics Symposium.
International Chinese Statistical Association Board of Directors 2012-2014
Regular member of *Promoting the Practice and Profession of Statistics* Committee
American Statistical Association

Reviewer Committee:
International Conference on Medical Imaging Computing and Computer Assisted
    Intervention (MICCAI) 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016
IEEE International Symposium on Biomedical Imaging   2013, 2012, 2011, 2010
Neural Information Processing Systems (NIPS) Conference 2010, 2016，2020,
2021, 2022.

Advisory Committee:
    Society of Imaging Neuroscience Statisticians.
    Section on Statistics in Imaging in ASA

Advisory Board:
    EPSRC Centre for Clinical Imaging in Healthcare at Cambridge University.
    http://cmih.maths.cam.ac.uk

One of eight founding members of Section on Statistics in Imaging in ASA
Acting Chair 2012-2013 of Section on Statistics in Imaging in ASA
ENAR Education advisory committee: ENAR 2011.
ENAR Student Award Committee: 2010-2013.
SBSS Student Award Committee: 2012.

Conference Organizer:

Short Courses:

    SAMSI NDA 2013 summer workshop
    JSM 2013 on Statistical Methods for Neuroimaging Data Analysis.
    Advanced Statistical Program 2014 in Northeast Normal University
    SAMSI CCNS summer school organizer and instructor.
    NESS 2022 Statistical Learning Methods for Neuroimaging Data Analysis
    ICSA 2024 short course on deep learning methods.

One of four Program Leaders (H. Zhu, Robert Kass, Haipeng Shen, and J. Wang) and Program Chair:

SAMSI summer workshop on Neuroimaging Data Analysis (NDA)   2013
Program Leader for SAMSI full-year program on Challenges in Computational Neuroscience (CCNS) with five workshops, one short course, and two regular courses 2015-2016
2022 International Symposium on Modern Data Science Application, Practice, and Theory,   2022.

Co-chair

Neuroimaging Data Analysis workshop at Banff,	2016
Tsinghua-Sanya Mathematics and Statistics Workshop	2016
Information Processing in Medical Imaging (IPMI) 2017	2017
Workshop on Applications-Driven Geometric Functional Data Analysis	2017
Recent Advances in Statistical Analysis of Imaging Data	2020
Statistical Learning Methods for Modern AI	2021
Reinforcement Learning for Intelligent Transportation Systems Workshop, 2021.	IJCAI

KDD Workshop on Decision Intelligence and Analytics for Online Marketplaces, 2022, 2023

Reinforcement Learning Methods and Applications,	2022.
IMSI Workshop: Challenges in Neuroimaging Data Analysis	2024

NeuroConnect 2024: Advancing Brain Network Research Workshop   2024
First MBZUAI Workshop on Statistics for the Future of AI   2024
Foundation Models and Their Biomedical Applications: Bridging the Gap, August 17-
22, 2025

Bi-weekly Applied Reinforcement Learning Seminar Series   2020-2022
https://www.arlseminar.com/

 Program Committee:
 CFE-CMStatistics 2015
 Eco-Statistics   2017
 ICSA International Conference 2016
 Bayesian Nonparametric Meeting 2015
 JSM 2013
 International Conference on Image and Signal Processing (ICSP) 2009, 2011, 2012.
 The third IMS-China Conference 2011
 Machine Learning in Medical Imaging (MLMI) 2011, 2012
 Spatio-temporal image analysis workshop STIA'12, 2012
 International Symposium on Advancements in Neuroimaging 2012. Co-Chair
 AAAI 2019, 2022， 2023, 2024.
 IJCAI 2019, 2020, 2021
 KDD 2019, 2020, 2021, 2023

 Planning Committee:
     ENAR 2010

 Invited Sections:
     JSM 2025, JASA ACS Discussion Paper,   August 2025.
     JSM 2024, Invited Section Organizer,   August 2024.
     JSM 2023, Invited Section Organizer,   August 2023.
     JSM 2022, Invited Section Organizer,   August 2022.
     JSM 2022, Roundtable,   August 2022.
     JSM 2021,   Roundtable,   August 2021.
     JSM 2015,   Introductory lecture organizer,   August 2015.
     JSM 2013,   Invited Section Organizer,   August 2013.
     JSM 2012,   Invited Section Organizer,   August 2012.
     JSM 2011,   Roundtable,   August 2011.
     2rd IMS Pacific Rim, Invited Section Organizer, July 2012.
     2rd IMS China, distinguished lecture session organizer, July 2011
     ENAR 2011, Roundtable,   March 2011.
     ENAR 2021, Invited Section Organizer,   March 2021
     ENAR 2012, Invited Section Organizer,   March 2012.
     ENAR 2011, Invited Section Organizer,   March 2011.
     ENAR 2010, Invited Section Organizer,   March 2010.
     ENAR 2009, Invited Section Organizer,   March 2009.
     ICSA 2007,   Raleigh, NC, Invited Section Organizer, July 2007.

ENAR 2005, Invited Section Organizer, March 2005.

Frequently review over 50 papers per year for the following journals:

Ecology, Science, Nature，Cell, Nature Genetics，Nature Aging,
Nature Communication， Medical Physics,   NeuroImage,
 Technometrics, Imaging Neuroscience, Nature Mental Health,
Computational Intelligence and Neuroscience,   Psychological Methods,
Neuroinformatics,   Psychometrika,   Human Brain Mapping,
IEEE Transactions on Medical Imaging,   Annals of Statistics,
American Statistician, Test,   Journal of Applied Statistics,
Australian and New Zealand Journal of Statistics,
Biometrics,   Biostatistics,   Annals of Applied Statistics
British Journal of Mathematical Psychology and Statistics,
Canadian Journal of Statistics,   Communication in Statistics,
Computational Statistics and Data Analysis,
International Journal of Biostatistics, Computational Statistics,
Journal of American Statistical Association,
Journal of Computational and Graphical Statistics,
Journal of Multivariate Analysis. Journal of Social and Clinical Psychology,
Journal of Statistical Computation and Simulation,
Journal of Statistical Planning and Inference,
Scandinavian Journal of Statistics, Statistical Papers,
Statistica Sinica, Statistics, Statistics and Its Interface,
Statistics in Medicine, Statistical Modeling: An International Journal,
Statistics and Probability Letters,   Bayesian Analysis
Journal of Royal Statistical Society, Series B and C.
JAMA Internal Medicine

Panel of Review: Mathematical Reviews

Software development:
   https://github.com/BIG-S2

FADTTS: A functional analysis of diffusion tensor tract statistics
            available at http://www.nitrc.org/projects/fadtts/
FRATS   available at http://www.nitrc.org/projects/frats/
FVGWAS: Fast Voxelwise Genome Wide Association Analysis
            available at https://www.nitrc.org/projects/fvgwas/
All our tools are available at
        https://github.com/BIG-S2

Citation:
Google Scholar:
   Citation: 30877+ since 2001; 18175+ since 2020.

h-index: 86 since 2001; 62 since 2020.
I10-index: 321 since 2001; 249 since 2020.

Presentations

1. **The 33rd International Genetic Epidemiology Society (IGES) annual meeting，November 3-5, Denver, 2024, Keynote speaker.**
2. American Society of Human Genetics，November 6-9，2024.
3. **Keynote speaker for CANSSI Showcase 2024, November 15，2024.**
4. Department of Statistics, University of South Carolina, Oct, 2024.
5. Department of Management and Data Science, UTSA, Oct, 2024.
6. **Penn Big Data Conference 2024, September 16-17, Upenn, 2024, invited speaker.**
7. UT Dallas Department of Mathematical Science, September 25, 2024.
8. UT Southwestern Medical Center，September 26, 2024.
9. IMSI workshop on NDA, August 26-30, 2024, organizer and speaker.
10. JSM 2024, August 3-7, 2024, panel moderator and invited speaker.
11. ICML 2024, poster presentation, July 23-26, 2024.
12. Banff workshop on Statistical, Computational, Translational, and Ethical Challenges in Biobank Data Analysis, July 25，2024.
13. **The 2024 Cardiac Regulatory Mechanisms Gordon Research Conference, June 23-27, 2024，invited speaker.**
14. Workshop on Future Statistical Education, June, Invited Speaker
15. **ICSA Applied Statistical Symposium 2024, June 16-19, Keynote Speaker.**
16. Statistics in the Age of AI 2024, May 9-11, GWU, Invited panel.
17. AI Day for Federal Statistics, May 2, National Academy of Sciences, Invited Speaker.
18. Department of Biostatistics, Columbia University, April 2024.
19. Statistical Aspects of Trustworthy Machine Learning, Banff, Feb, 2024
20. **Statistics and AI workshop, MBZUAI, January 2024, Keynote Speaker.**
21. Poster Presentations at NeurIPS December 2023.
22. Department of Biostatistics and Bioinformatics, University of Wisconsin at Madison, September 2023.
23. Department of Statistics, Purdue University, October 2023.
24. JSM, August 2023.
25. MBZUAI, August 2023.
26. Summer School on Statistics and Finance, Shangdong University, July 2023.
27. STARF2023, Keynote Speaker, Nankai University, July 2023.
28. ST Jude Children's Research Hospital, May 2023.
29. UT Houston, School of Biomedical Informatics, March 2023.
30. CMSE, MSU, March 2023.
31. ENAR March 2023.
32. NICHD, Feb 2023.
33. Poly University of Hong Kong, Dec 2022.
34. University of Connecticut, Nov 2022.

35. University of Chicago， Oct 2022.
36. Renmin University, Oct/Nov 2022
37. East normal University, Oct 2022.
38. KDD DIA-OM, August 2022.
39. JSM 2022, August 2022.
40. East Normal University, Summer School on Statistics, July 2022.
41. ICSA Canada, July 2022.
42. East Normal University, June 2022.
43. IMS 2022, June 2022.
44. Department of Mathematics and Statistics, NYSU Binghamton, May 2022.
45. Department of Statistics, Oregon State University, May 2022.
46. Departments of Biostatistics and Statistics, UW, April 2022.
47. School of Data science, Fudan University, April 2022.
48. Keynote Speaker at Bernoulli Society, East Asia and Pacific Region Probability and Statistical meeting, March 2022.
49. NISS-Merck Meetup Webinar， March 2022.
50. Helen Barton Lecture, UNC at Greensboro, Feb 2022.
51. National Cancer Center, Feb 2022.
52. Keynote Speaker at PSC Workshop on Big Data and Algorithms for Imaging Genomics at Hawaii，January 2022.
53. Department of Statistics, Upenn, December 2021.
54. New England Statistical Society, Nov 2021.
55. Department of Statistics, NUS, Oct 2021.
56. Department of Biostatistics，UMich，October 2021.
57. School of Mathematics，Southeast University， October 2021.
58. Department of Biostatistics, Vanderbilt University, September 2021.
59. Department of Biostatistics， URMC CTSI Analytics Colloquium，Sep 2021.
60. ICSA Canada, August 2021.
61. KDD 2021，oral presentation， August 2021.
62. JSM 2021, August 2021.
63. Department of Epidemiology and Biostatistics, UCSF, August 2021.
64. Department of Statistics and Data Science, Southern China of Science and Technology, May 2021.
65. Department of Statistics and Data Science, Southern China of Science and Technology, Dec 2020.
66. Department of Statistics, Purdue University, Oct 2020.
67. JSM 2020
68. Summer course: Shanghai University of Finance and Technology, July 2020
69. Summer Course: East Normal University, July 2020
70. Reming University， April 2020
71. Stanford University， March 2020.
72. University of Hong Kong, Dec 2019.
73. The Chinese University of Hong Kong, Dec 2019.
74. NeurIPS 2019， Industrial Expo and Workshop on D2-City Challenge, Dec 2019.

75. University of Toronto, Toronto, Dec 2019.
76. Keynote Speaker for Big-data Analytics, Wuhan, Nov 2019.
77. Foundation for Data Science, Changchun, Oct 2019.
78. Nankai Special Lecture, September 2019.
79. AI Talk, DiDi, September 2019.
80. JSM 2019. Denver. July 2019.
81. Summer School on Imaging science, XiAn, June 2019.
82. Big-data and Modern Statistical Methods. Shanghai, June 2019.
83. CCFA 2019, Nanjing, May 2019.
84. Smart Mobility Workshop 2019. Hong Kong, May 2019.
85. Keynote Speaker. 2019 Conference on Survival Analysis and Applied Statistics，Lingyi，Shangxi, May 2019.
86. 2rd GIFT Long Triangle Capital Summit, YangZou, May 2019。
87. Academic Sinica, Taipei, April 2019。
88. 2019 AI Science Frontier Meeting, Beijing，2019.
89. UNC Chapel Hill, Biostatistics, Feb 2019.
90. AAAI 2019, January 2019.
91. 2018 International Conference on Data Science, Shanghai, December 2018.
92. The Chinese University of Hong Kong, October 2018.
93. JSM 2018.
94. Hong Kong University, July 2018
95. Renming University, July 2018
96. Peking University, June 2018
97. UIUC, March 2018.
98. Michigan State University, Feb 2018.
99. Fudan Big-data Forum, Dec 2017.
100.   Yale University, Nov 2017
101.   University of Texas, MD Anderson Cancer Center, Nov 2017
102.   University of Pittsburg, Oct 2017
103.   University of Texas, MD Anderson Cancer Center, Oct 2107
104.   DiDi Transportation, Sept 2017
105.   ASA Houston Chapter, Sept 2017
106.   CMO-Oaxaca, Sept 2017.
107.   JSM 2017, July 2017.
108.   IPMI 2017, June 2017.
109.   Southern University of Science and Technology, June 2017.
110.   ZhongShan University, June 2017.
111.   Tsinghua University, June 2017.
112.   The international workshop for mathematical imaging and digital,geometry, Beijing, China, June 2017.
113.   UC Davis, May 2017.
114.   Texas A&M, April 2017.
115.   UNC-CH Statistics, April 2017.
116.   UT Public Health, March 2017.
117.   Rice University, February 2017.
118.   National Cancer Institute, January 2017.

119. Tsinghua-Sanya Mathematics Institute, December 2016.
120. ICSA 2016, December 2016.
121. Fudan big-data conference. December 2016.
122. University of Pittsberg, Nov 2016.
123. North Carolina State University, Oct 2016.
124. Nonparametric Workshop, UMich, Oct 2016.
125. International Congress of Chinese Mathematicians, invited speaker for 45 minutes, August 2016.
126. JSM 2016, August 2016.
127. IMS neuroimaging workshop, invited speaker, Singapore, July 2016.
128. IMS Pacific Rim, invited speaker, June 2016.
129. SII imaging workshop, invited speaker, June 2016.
130. SAMSI CCNS transition workshop, May 2016.
131. University of Florida, April 2016.
132. University of Newcastle, April 2016.
133. Workshop on Advances in Manifold-valued Data, Nottingham, U.K., April, 2016.
134. ENAR 2016, invited section, March 2016.
135. Princeton University, Wilks seminar, March 2016.
136. USC Enigma, Feb 2016.
137. USC Data Science and Statistics, Feb 2016.
138. Banff Workshop on NDA, Banff, BIRD Institute, Jan 2016.
139. CMStatistics, London, Dec 2015.
140. Oxford University, Dec 2015.
141. Warwick University, Dec 2015.
142. iBRIGHT 2015, MD Anderson, Nov 2015.
143. University of Virginia, Oct 2015.
144. Florida State University, September 2015.
145. JSM 2015, Seattle, August 2015
146. SAMSI summer school on CCNS, July 2015
147. Frontier of Functional Data Analysis, Banff, BIRD Institute, July 2015.
148. Human Brain Mapping, June, 2015.
149. Frontier of Statistics, Chinese Academy of Science, June, 2015.
150. ASA SI imaging workshop, University of Michigan, May, 2015.
151. Department of Biostatistics, New York University, April 2015.
152. ENAR 2015, Miami, March 2015.
153. MD Anderson Cancer Center, December, 2014.
154. Big Data Workshop in Shanghai, November 2014
155. Department of Biostatistics, Emory University, August 2014
156. JSM 2014, August 2014.
157. Academic Sinica, Peking, July 2014
158. School of Mathematics, Sun Yat-sen University, July 2014
159. IMS Pacific Rim, Taiwan, July 2014
160. Statistica Sinica, Taiwan, June 2014

161. Department of Mathematics, National Sun Yat-sen University, Taiwan, June 2014
162. Department of Finance Mathematics and Engineering, Southern China University of Science and Technology, May 2014
163. Department of Mathematics, Southeast University, May 2014
164. Department of Mathematics, Nanjing Normal University, May 2014
165. Department of Statistics, Chinese University of Hong Kong, May 2014
166. Department of Mathematics, Nanyang Technological University, May 2014
167. Department of Statistics, National University of Singapore, May 2014.
168. BIRS for Mathematical Innovation and Discovery, Canada, Feb, 2014.
169. Department of Applied Mathematics and Statistics, John Hopkins University, November, 2013.
170. Department of Biostatistics, Brown University, November, 2013.
171. Department of Statistics, Virginia Tech University, September 2013.
172. JSM 2013, August 5-10, 2013
173. IPMI 2013, June 28-July 3, 2013
174. HBM 2013, June 15-20, 2013
175. SAMSI NDA program, June 4-14, 2013
176. Department of Statistics, Purdue University, March 2013.
177. Department of Statistics, University of Michigan, Sep 2012.
178. JSM 2012, invited speaker and organizer.
179. ICSA, Boston, June 2012, Invited Speaker.
180. Mathematical Bioscience Institute, May 2012, Invited Speaker.
181. International Conference on Medical Image Analysis and Clinical Applications, June 2012, Keynote Speaker
182. Human Brain Mapping, June 2012, poster presenter.
183. St Johns Children's hospital. April 2012.
184. ENAR 2012. Washington DC. Invited session organizer and speaker.
185. MICCAI 2011. Sept 2011.
186. Department of Biostatistics, John Hopkins University, Sep 2011.
187. MBIA (Multimodal Brain Image Analysis) 2011 workshop, Sep 2011. Invited Speaker.
188. Research Symposium on Frontier of Statistics, July 2011, Hefei. Invited Speaker.
189. IMS China 2011 Distinguished Lecture Series organizer and speaker, July, Xian, China.
190. Department of Statistics, Fudan University, China, June 2011.
191. Department of Mathematics, Yunnan University, China, July 2011.
192. Department of Mathematics, Southeast University, China, July 2011.
193. Institute of Applied Mathematics, Chinese Academy of Science, June 2011
194. Institute of Automation, Chinese Academy of Science, June 2011.

195.   International Workshop on Perspectives on High-dimensional Data Analysis (IWPHDA), at Fields Institute of Mathematical Sciences, Canada, June 2011.

196.   Interface Meeting, Invited Section, NISS, June 2011.

197.   ENAR 2011. Invited Section, March 2011.

198.   Department of Statistics, University of **Minnesota**, Nov 2010.

199.   MICCAI 2010 Selected Poster Presentations, Peking, September 2010.

200.   China Institute of Applied Mathematics, Peking, September 2010.

201.   Renming University, Peking, September 2010.

202.   STIA'10 workshop at MICCAI 2010 as an oral presentation, Peking, September 2010.

203.   Department of Biostatistics, University of Michigan, October, 2010.

204.   Department of Statistics, Duke University, October, 2010.

205.   JSM 2010, Topic Contributed Section, August 2010

206.   Center for Structural and Functional Neuroscience, University of Montana, April 2010.

207.   Invited speaker at Frontier of Statistical Decision Making and Bayesian Analysis, March, 2010.

208.   ENAR 2010, Invited Section, March 2010.

209.   Invited speaker at NICDS Centre De Recherches Mathematiques, Nov 2009.

210.   Center for Statistical Science, Brown University, Oct 2009.

211.   Department of Operational Research and Finance Engineer, Princeton University, Nov. 2009.

212.   Department of Epidemiology and Biostatistics, Yale University, Oct 2009.

213.   Department of Mathematics and Statistics, Georgia State University, Oct 2009

214.   Department of Psychology, UNC at Chapel Hill, Sep 2009.

215.   ISMRM 2009, Selected oral and poster presentations. Hanolulu, April 2009.

216.   IPMI 2009, Selected poster presentation, Virginia, July, 2009.

217.   ENAR 2009, Invited Section,   March 2009.

218.   MICCAI 2009, Selected presentation, London, Sep, 2009.

219.   MMBIA 2009, Selected oral and poster presentations, August 2009.

220.   ICSA 2009, Invited Section, San Francisco, June 2009.

221.   JSM 2009, Invited Section, Washington D.C., August 2009.

222.   SPIE Medical Imaging 2009, FL, Two Selected Oral Presentations, Feb 2009.

223.   Department of Biostatistics and Statistics, Wisconsin-Madison, October 2008.

224.   JSM 2008, Topic Contributed Section, Salty City, August 2008.

225.   Interface Meeting, Invited Section, NISS, May 2008.

226.   Department of Statistics, Texas A & M University, April 2008.

227.   ENAR 2008, Invited Section, Virginia, March 2008.

228.   Department of Statistics, Pennsylvania State University, Dec 6, 2007.
229.   JSM 2007, Invited Section Chair and Topic Contributed Section, Salty City, August 2007.
230.   ICSA 2007, Raleigh, NC, Invited section organizer and presenter, July 2007.
231.   ENAR 2007, Atlanta, GA, March 2007.
232.   SAMSI, Durham, NC, December 7, 2006.
233.   JSM 2006, Seattle, Washington, August 2006.
234.   MMBIA 2006: IEEE Computer Society Workshop on Mathematical Methods in Biomedical Image Analysis, Selected Poster Presentation, July 2006.
235.   ICSA 2006, June 2006.
236.   Department of Epidemiology and Public Health, Yale University, April 2006.
237.   Division of Biostatistics, New York University, April 2006.
238.   Department of Statistics, George Washington University, October 2005.
239.   Eighth IMS North American New Researchers' Conference, August 2005.
240.   Statistical Society of Canada, Invited speaker, June 2005.
241.   Department of Statistics, Kansas State University, April 2005.
242.   ENAR meeting, Austin, TX, March, 2005. ENAR Invited Section Chair and speaker.
243.   Columbia-UPenn-Yale Forum on Statistics in Psychiatry, May 2004.
244.   International Biometric Society, ENAR 2004, March 2004.
245.   The Seventeenth New England Statistics Symposium, University of Connecticut, April, 2003.
246.   Department of Biostatistics, Harvard University, March 2003.
247.   Department of Biostatistics, Columbia University, February 2003.
248.   Department of Mathematics and Statistics, University of Guelph, Canada, Jan, 2003.
249.   Department of Statistics, University of Manitoba, Canada, Jan, 2003.
250.   Department of Mathematics and Statistics,   Memorial University of Newfoundland, Dec, 2002.
251.   Department of Biostatistics, University of Alabama at Birmingham, December 2002.
252.   Fox Chase Cancer Center, Dec, 2002.
253.   University of Texas School of Public Health at Houston, November 2002.
254.   First Annual Proteomics Data Mining Conference, Duke University, September 23,2002.
255.   ENAR meeting, Washington, D.C, March 2002. IMS Invited Section Chair.
256.   ICSA meeting, Hong Kong, August 2001. Section Chair and IMS invited speaker.
257.   SSC meeting, Vancouver, June 2001.

258.   Frontier Science and Technology Research Foundation, Inc, Boston, January 2001.
259.   Psychometric Society meeting, Vancouver, July, 2000.
260.   SSC meeting, Ottawa, June, 2000.
261.   Department of Mathematics and Statistics, University of Victoria, Feb, 2000.
262.   Department of Methodology and Statistics, University of Utrect, Netherland, October 1999.

Teaching Record

• Courses
  Columbia University, 2003 fall
      Nonparametric Statistics
  University of North Carolina at Chapel Hill,
     2007-2010, 2012. 2014, Bios 763. Generalized Linear Models and Applications. 16 students
     2011-   Bios 773 Statistical and Mathematical Analysis of Medical Images. 10 students
     2014-   Bios 762. Regression Models and Applications. 16 students
     2015-   Bios 762. Regression Models and Applications. 30 students.
     2020,   2021, 2022, 2023   Bios 772 Statistical and Mathematical Analysis of Medical Images. 6+7+10+12 students
     2025   Bios 740: Deep Learning Methods for Biomedical Applications with Pytorch

• **MS. Students supervised**

Zhida Wu   (Biostatistics),
Jiaorui Tang   (Biostatistics)

• **Ph.D. Students supervised**

  Columbia University
  Yimeng Lu: 2006.   Co-advise with Eva Petkova
      Title: Clustering Functional Data.
      First Job: Biostatistician at *Novartis*.
University of North Carolina at Chapel Hill
 Xiaoyan Shi: 2008.   Co-advise with Joseph G. Ibrahim
       Title: Model Diagnostics and Semiparametric Models for Neuroimaging Data.
       Current Job: Senior Statistician at SAS
       Honor: ENAR Distinguished Student Paper Awards, ENAR 2008;
            Best Doctor Dissertation award of Biostatistics department at UNC-CH.
Yimei Li : 2009. Joint with Joseph G. Ibrahim
       Title: Statistical Analysis of Complex Neuroimaging Data.

Current Job: Professor of Biostatistics at St Johns Children's hospital
Honor: ENAR Distinguished Student Paper Awards, ENAR 2009,
        Kupper Publication Awards.
Ramon I. Garcia: 2009   Joint with Joseph G. Ibrahim
    Title: Variable Selection for Models with Missing Data
    First Job: Student at a seminary school.
    Honor: ENAR Distinguished Student Paper Awards, ENAR 2009.
Hyunsoon Cho: 2009   Joint with Joseph G. Ibrahim
    Title: Diagnostic Measures for Statistical Models
    First Job: Biostatistician at National Cancer Institute
    Current Job: Associate Professor, National Cancer Center of Korean
Ying Yuan: 2011   Joint with Steven Marron
    Title: Statistical Analysis of Symmetric Positive Definite Matrices
    First Job: Postdoctor fellow.
    Second Job: Assistant member of Biostatistics at St Johns Children's hospital
    Honor: ICSA Distinguished Student Paper Awards, ICSA 2011.
Zhaowei Hua: 2011   Joint with David B. Dunson
    Title: Bayesian Analysis of Varying Coefficient Models and Applications.
    First Job: Millennium, Biostatistician
Ja-an Lin, 2013   (Biostatistics),   Joint with J. G. Ibrahim
    Title: Statistical Analysis of Ultra-high Dimensional Imaging Genetic Data.
    Honor: ENAR Distinguished Student Paper Awards, ENAR 2013.
    First Job: FDA, Biostatistician
Khondker Zakaria, 2013 (Biostatistics),   Joint with J. G. Ibrahim
    Title: Bayesian Analysis of Ultra-high Dimensional Imaging Genetic Data.
    Honor: ENAR Distinguished Student Paper Awards, ENAR 2013.
    First Job: Medivation Inc, Biostatistician
Emil Cornea, 2014   (Biostatistics),   Joint with J. G. Ibrahim
    Title: Statistical Analysis of Data on Riemannian Symmetric Space.
    First Job: Research Assistant Professor, UNC-Chapel Hill, Psychiatry
Michelle Miranda, 2014 (Statistics),   Joint with J. G. Ibrahim
    Title: Bayesian Analysis of Ultra-high Dimensional Imaging Data.
    First Job: Postdoctoral fellow, NeuroMat Institute, Cidade Universitária
    Current Job : Assistant Professor at University of Victoria，   Canada
Qiang Sun, 2014   (Biostatistics),   Joint with J. G. Ibrahim
    Title: Regularization Methods for High Dimensional Data.
    Honor: ICSA 2013 and 2014 Distinguished Student Paper Awards
  The Grizzle lecture for Best Biostatistics Alumni Awards at UNC-Chapel Hill.
    First Job: Postdoctoral fellow, Princeton University
    Current Job: Associate Professor with tenure at University of Toronto
Shaobang Rao, 2014 (Biostatistics),   Joint with J. G. Ibrahim
    Title: Statistical Analysis of Diffusion Weighted Imaging Data.
    First Job: Biostatistician, Pfizer.
Xiaolei Zhou, 2015   (Biostatistics)
    Title: Model Assessment for Models with Missing Data
    First Job: Biostatistician, RTI.

Yang, Hojin, 2016 (Biostatistics), Joint with J. G. Ibrahim
        Title: Learning Methods in Reproducing Kernel Hilbert Space Based on High-dimensional Features
            First Job: Postdoctoral fellow, MD Anderson
            Second Job：Assistant Professor at University of Navada
 Eunjee Lee, 2016 (Statistics), Joint with J. G. Ibrahim
    Title: Bayesian Analysis of Survival Models with High-dimensional Imaging and Genetic Data.
        Honor: ENAR 2015 Distinguished Student Paper Awards
            ASA SI 2017 Distinguished Student Paper Awards
        First Job: Research Assistant Professor, University of Michigan
        Second Job：Associate Professor, Chungnam National University, Korea.
Bryant Christopher, 2016 (Biostatistics), Joint with J. G. Ibrahim
        Title: Bayesian Analysis of Brain Networks
        First Job: XXX
Yu Yang, 2017 (Statistics), Joint with Steve Marron
        Title: Advanced Statistical Methods for Imaging Genetic Data.
        Honor: ICSA 2016 Distinguished Student Paper Awards
        First Job: Business Analyst in Goldman Sachs
JingWen Zhang 2018 (Biostatistics), Joint with J. G. Ibrahim
        Title：Advanced Methods for discovering genetic markers associated with high dimensional imaging data.
        First Job：Postdoctoral Fellow， Harvard Biostatistics
Yue Wang 2018 (Biostatistics), Joint with Ibrahim
        Title：Partial least squares method for functional regression models with high dimensional neuroimaging data.
        First Job：Postdoctoral Fellow， UW Biostatistics
        Second Job：Assistant Professor， University of Colorado Anschutz Medical Campus
 Yufeng Leo Liu 2018 (Statistics), Joint with Yufeng Liu
        Title：Advanced Statistical Learning Techniques for High-Dimensional Imaging Data
        First Job：R&D，Uber at SF CA。
Chao Huang 2019 (Biostatistics)
        Honor: ASA SI 2014 Distinguished Student Paper Award
        Title：Advanced Statistical Learning Methods for Heterogeneous Imaging Data.
        First Job: Assistant Professor at Florida State University
Fan Zhou 2019 (Biostatistics) Joint with Haibo Zhou
        Title：Advanced Analysis Methods for Large-scale Structured Data.
        First Job: Associate Professor at Shanghai University of Finance and Technology
         Honor: ICSA 2019 New researcher award。
                UNC Bios 2020 Margolin award.
Jasmine Yang 2019 (Statistics) Joint with Steve Marron

Title：Statistical Methods for Deconvolution in Cancer Genomics
First Job: Statistician at AbbVie

Bingxin Zhao 2020 （Biostatistics）

Title：Topics in high-dimensional asymptotics of ridge-type estimators.
First Job: Assistant Professor at Purdue University
Second Job: Assistant Professor in Department of Statistics and Data Science at University of Pennsylvania
Honor: ENAR 2020 Distinguished Student Paper Awards
Dean's Distinguished Dissertation Awards for Biological and Life Sciences, 2022.

Wang Xifeng 2021 (Biostatistics) Joint with J.G. Ibrahim

Title：Statistical Learning Methods for Diffusion Weighted Imaging
First Job: Statistician at AbbVie

Yue Shan 2021 (Biostatistics) Joint with Yun Li

Title：Statistical Learning Methods for Imaging Genetics
First Job: Statistician at Pharmaceutical company in Shanghai

Ziliang Zhu 2021 (Biostatistics) Joint with Joseph G. Ibrahim

Title：Statistical Learning Methods for Imaging Genetics
First Job: Statistician at Google Data Science

Tomlinson, Chalmer Edward 2022 (Biostatistics) Joint with Sean Simpson

Title: Using Novel Statistical Methods and Network Science to Understand Brain Function.

Tianyou Luo 2023 (Biostatistics) Joint with Yun Li.

Title: Statistical Learning Methods in Imaging Genomics.
First Job: R&D at a tech company.

Yue Yang 2024 (Biostatistics)

Title: Knowledge-enhanced learning methods for Alzheimer's disease.
First Job: R&D on preclinical discovery at Takeda

North Carolina State University

Luo, Shikai   (Statistics),   Joint with Song, R.
Current Position: R & D leader at Byteby

- **Visiting Ph.D. Students Supervised:**

Meiyan Huang (South Medical University) Honor: ASA Imaging Section Best paper award.   First Job: Assistant Professor at South Medical University
Xinchao Luo   (East Normal University)   First Job: Janssen R&D in Shanghai
Wenliang Pan (Sun Yat-Sen University)   First Job: Associate Professor at Sun Yat-Sen University
Yuan Yu (Shanghai University of Finance and Econometrics) First Job: Assistant Professor at Shangdong University of Science and Technology

Li Heng (Beijing Institute of Technology) First Job: Assistant Professor at Southern China University Science and Technology

Hao Wang (Northeast Normal University)   First Job: Assistant Professor at Dongbei University of Finance and Economics

Youquan Pei (Shanghai University of Finance and econometrics) First Job: Assistant Professor at Shangdong University

Ting Li (Fudan University)   Current Job: Associate Professor at Shanghai University of Finance and econometrics

Liming Zhong (South Medical University)   First Job: Assistant Professor at South Medical University

Di Xiong （Shanghai University）   First Job: Assistant Professor at Shanghai University

Ke Zhang (Northeast Normal University)

Ruiqi Bai (Fudan University)

Current Ph.D. Students:

<u>University of North Carolina at Chapel Hill</u>
Xinjie Qiao (Biostatistics)   (on going)
Xiaoqi Li   (Health Informatics)   (on going)
Jie Cheng (Biostatistics)   （on going）
Owen Jiang （Biostatistics）   （on going）
Shuai Huang (Biostatistics)   Joint with Yun Li   (on going)
Peter Guan (Biostatistics)   Joint with Joe Ibrahim   (on going).
Runpeng Dai (Biostatistics)   (on going).
Borui Tang (Biostatistics)   (on going).
Sara Xiaoyu Qi (Biostatistics)   (on going).
Reinhardt, Alec Evan (Biostatistics)   Joint with Joe Ibrahim   (on going).

Master Students:

Mingcheng Hu (Biostatistics)   （on going）

- **Ph.D. committee**
  Columbia University
    Hui Wang (Statistics)
       Statistical Analysis of Genetic Data,   2004;
    Songmei Wu (Biostatistics)
       Statistical Analysis of PET Data,   2004;
  University of North Carolina at Chapel Hill

Juhyun Park   (Biostatistics):
   Bayesian Density Regression and Predictor-dependent clustering,   2008;
Meagan Clement (Biostatistics):
   Analysis Techniques for Diffusion Tensor Imaging Data,   2008;
Jingdan Zhang   (Computer Science):
   Object Detection and Segmentation using Discriminative Learning,   2008;
Wei Gao (Biomedical Engineer):
   Functional Brain Network and Design for Diffusion Tensor Imaging, 2009.
Seunggeun Lee (Biostatistics):
   Principal Component Analysis of Genetic Data,   2010.
Liddy Chen (Biostatistics):
   Trial design issues in complex survival models,   2010.
Suprateek Kundu (Biostatistics):
   Bayesian nonparametric methods for conditional distributions,   2012.
Matthew W Wheeler (Biostatistics):
   Gaussian Process Mixed Membership Models   2012.
Baiming Zou (Biostatistics):
Robust and Efficient Statistical Inference for Electronic Medical Record Data
and Image Data.   2013.
Verde, Audrey Rose (Neurobiology):

                                                                               2014

Eldeniz, Cihat (BME)
   Quantitative MR T1 measurements with TOWERS: T-One With Enhanced
Robustness and Speed   2014

M.S. Committee
   University of North Carolina at Chapel Hill
   Jocelyn M. Beville (Orthodontics):
   Three dimensional analysis of bone anchored maxillary protraction in growing
class III patients.   2012

• Postdoctoral/Research fellows/Visiting scholars supervised

Columbia University

   Rachel Marsh (2003-2005)
      Topic: Functional and Structural MRI and Applications in Psychiatry
   Daniel Gorman (2004-2006)
      Topic: Functional and Structural MRI and Applications in Psychiatry
   Jose Amat (2003-2006)
      Topic: Functional and Structural MRI and Applications in Psychiatry
   Tiziano Colibazzi (2004-2006)
      Topic: Functional and Structural MRI and Applications in Psychiatry
   Nianshen Tang (2006)
      Topic: Semiparametric Methods for Neuroimaging Data.
   Miguel Moreno-Iniguez (2005-2006)

Topic: Functional and Structural MRI and Applications in Psychiatry

Yale University

Martha Skup (2010)   Visiting student from Yale University.

University of North Carolina at Chapel Hill

Xiaoyan Shi (2008-2009)
   Topic: Semiparametric Methods for Neuroimaging Data.
   Current Position: Senior Statistician and Software Engineer at SAS
Huang Tao (2012-2015)
   Topic: Statistical Analysis of Manifold Data.
Niansheng Tang (2009, 2013)
   Topic: Statistical Diagnostic Methods.
   Current Position: Distinguish Professor at Yunnan University, IMS Fellow
Ruixin Guo (2009-2011)
   Topic: Machine Learning Methods for Neuroimaging Data.
   Current Position: Assistant Professor at University of Colorado Denver
Zaixing Li (2011-2012)
  Topic: Functional Methods for Neuroimaging Data.
  Current Position: Professor at China University Mining and Technology
Ying Yuan (2011-2011)
 Topic: Statistical Analysis of Imaging and Genetic Data.
 Current Position: R&D researcher
Linglong Kong (2010-2012)
 Topic: Robust Methods for Neuroimaging Data.
 Current Position: Professor of Statistics at University of Alberta, Canada
   And Canada Research Chair.
Jiaping Wang (2009-2013)
 Topic: Multiscale Adaptive Methods for Functional Imaging Data.
 Current Position: Assistant Professor of Statistics at University of North Texas
Partha Sarathi Mukherjee (2011-2012)
 Topic: Statistical Analysis of Diffusion Tensor Data.
 Current Position: Assistant Professor of Statistics at Boise State University
Zhaohua Lu (2011-2013)
 Topic: Dynamic Analysis of Functional Data.
 First Position: Research Assistant Professor at Penn State University
 Current Position: R&D at a pharmaceutical company.
Dan Yan (2013-2014)
 Topic: Statistical Analysis of Tensor Data.
 First Position: Assistant Professor at Rutgers University
 Current Position: Associate Professor at Hong Kong University/
Jing Chang (2012-2014)
 Topic: Statistical Analysis of Imaging and Genetic Data.
Qibing Gao (2012-2013)

Topic: Diagnostic measures for functional data
Current Position: Professor at Nanjing Normal University

Dan Shen (2012-2014)
Topic: Statistical Analysis of Imaging Data.
Current Position: Assistant Professor at South Florida University

Mihye Ahn (2011-2015)
Topic: Statistical Analysis of Functional Imaging Data.
Current Position: Associate Professor with tenure at University of Navada

Max Chen (2014-2015)
Topic: Statistical Analysis of Imaging Data.
Current Position: R&D at Sandia National Laboratories

Yuai Hua (2011-2015)
Topic: Statistical Analysis of Perfusion Images.

Baiguo An (2014-2015)
Topic: Adaptive Smoothing Methods for Functional Imaging Data.
Current Position: Associate Professor at Central China Finance University

Fangchan Xie (2014-2015)
Topic: Zero-inflated models
Current Position: Professor, Nanjing Normal University

Dehan Kong (2013-2016)
Topic: Functional Data Analysis in Neuroimaging Applications.
Current Position: Associate Professor with tenure at University of Toronto.

Yize Zhao (2014-2016)
Topic: Statistical Analysis of Imaging and Genetic Data
First Position: Assistant Professor at Weill Cornell Medicine, Cornell University.
Current Position: Associate Professor with tenure at Yale University， Biostatistics

Benjamin Risk (2015-2017)
Topic: Statistical analysis of functional MRI data.
Current Position: Associate Professor with tenure at Emory University.

Zhengwu Zhang (2015-2017)
Topic: Shape analysis and network analysis.
First Position: Assistant Professor at Rochester University
Current Position: Associate Professor of Statistics with tenure at UNC-CH

Kaijie Xue (2017-2018).
Topic: Functional data analysis of neuroimaging data.
Current Position: Professor of Statistics at Shanghai University of International Business and Economics since July 2023

Kaixuan Yu (2016-2018)
Topic: Cancer genomics analysis
Current Position: R&D leader at DiDi Chuxing

Jin Yan (2016-2018)
Topic: Cancer imaging analysis

Rongji Liu (2016-2018)
Topic: Cancer imaging and genetic analysis

Current Position: Assistant Professor of Statistics at University of Georgia.
Hai Shu (2016-2018)
Topic: Big data integration.
Current Position: Assistant Professor of Biostatistics at New York University.
Ziqi Chen (2016-2018)
Topic: Cancer Imaging Analysis.
Current Position: Professor，East China Normal University
Kim, Junghi (2016-2018)
Topic: Cancer genetic analysis.
Current Position：Statistician at FDA
Ting Li (2023-2024)
Topic: Causal inference in biomedical studies.
Current Position: Associate Professor of Statistics at Shanghai University of Finance and econometrics
Jinghan Xie (2023-2024)
Topic: Biobank data integration.
Current Position: Associate Professor of Statistics at Yunnan University.

Current:

   Tengfei Li (2015-)
      Topic: Missing data in large-scale neuroimaging data analysis.
       Current Position: Research Assistant Professor at UNC Radiology
    Yukang Jiang (2024-2027)
      Topic: Electronic Health Records and Multimodal Data Anaalysis.

Contracts & Grants

Ongoing PI/MPI Research Support

1R01AG085581   Zhu (Contact-PI) and Li (MPI)
9/30/2024-9/29/2029
Construction and Application of Comprehensive Knowledge Graphs for Alzheimer's Disease.
Total Direct Cost: 4,100,000

1R01AR082684   Niethammer (Contact-PI) and Zhu (MPI)
4/1/2024-3/31/2029
A comprehensive imaging genetics framework for osteoarthritis research
Total Direct Cost: 2,500,000

Gillings Innovation Laboratory (GIL) Zhu （Contact-PI） and Yun Li (MPI).
12/1/2023-11/30/2025
Knowledge-enhanced Foundation Models for Brain-related Disorders.
Total Direct Cost: 100,000

1U01AG079847, Zhu (subcontract-PI) from UTHSC at Houston. **9/1/2023-8/31/2028**
AIM-AI: an Actionable, Integrated and Multiscale genetic map of Alzheimer's disease
via deep learning
Total Direct Cost: 600,000

RF1AG082938   Zhu（Contact-PI）and Zhao (MPI)   9/1/2023-8/31/2026
Mapping the Genetic-Imaging-Clinical Pathway for Alzheimer's Disease
Total Direct Cost: 1,680,000

Completed PI and MPI Research Support
1 R01MH116527   Zhang (Contact-PI) and Zhu (MPI)   3/1/2018-2/28/2024
Analysis of Big Data Squared in Biomedical Studies
Total Direct Cost: 1,600,000

CPRIT senior Investigator of Texas State.   Zhu (PI)   4/1/2016-4/1/2018
Total Direct Cost: 4,000,000

R01EB020426   (Lin, Chen, Jojic, and Zhu)   4/15/2014-4/15/2017
SCH: Proactive Health Monitoring Using Individualized Analysis of Tissue
Elastic*
Role. Co-Principal Investigator.   Total Direct Cost: 657,033

T32MH106440   (Zhu (primary) and Gilmore)   7/1/2015--6/30/2020
NIMH
Biostatistics and Mental Health Neuroimaging and Genomics Training Grant
Role. Principal Investigator.   Total Direct Cost: 1,844,696

SES-1357666   (Chow and Zhu) 9/15/2014--8/31/2017   1%
National Science Foundation
Developing Dynamic Tools for Analyzing Irregularly Spaced Longitudinal Affect
Data
Role. Co-Principal Investigator.   Total Direct Cost: 350,000

DMS-1407655   (Zhu)   9/15/2014--8/31/2018 2%
National Science Foundation
Advanced Statistical Methods for Functional Imaging Data.
Role. Principal Investigator.   Total Direct Cost: 300,000

5 R01 MH086633-02   (Zhu)   3/1/2010--11/30/19   20%
National Institute of Mental Health
Statistical Analysis of Biomedical Imaging Data in Curved Space
Role: Principal Investigator   Total Direct Cost: 3,300,000

BCS-0826844   (Chow and Zhu) 9/15/2008--8/31/11   10%

National Science Foundation
Collaborative Research: Developing Non-Stationary and Network-based Methods for Modeling the Perception and Physiology of Emotion
Role: Co- Principal Investigator   Total Direct Cost: 423,802

SES-0643663   (Zhu)   4/1/2006--3/31/10   9%
National Science Foundation
Diagnosing Statistical Models for Longitudinal and Family Data
Role: Principal Investigator   Total Direct Cost: 94,819

5 R21 AG033387-02   (Zhu)   3/1/2009--2/28/11   15%
National Institute on Aging
Longitudinal Analysis of Biomedical Imaging Data
Role: Principal Investigator   Total Direct Cost: 275,000

OVERLAP: NONE

Peer-reviewed Full Papers in Conference Proceedings

 (MICCAI and IPMI are the most preeminent medical imaging conferences; KDD, NeurIPS, IJCAI, ICML, AAAI and ICDM are the most preeminent data mining, machine learning, and artificial intelligence conferences with acceptance rates around 20%.)

1. S. Yu, W. Xu, X. Wang, X. Zhou, H. Zhu., and F. Zhou. Enhancing Training Robustness through Influence Measure. ***ICLR, 2025.***
2. **Ting Li** · Chengchun Shi · Qianglin Wen · Yang Sui · Yongli Qin · Chunbo Lai · *H. Zhu*. Combining Experimental and Historical Data for Policy Evaluation**. *ICML 2024.***
3. Tsai, T. Y., Lin, L., Hu, S., Chang, M. C., Zhu, H., & Wang, X. (2024). UU-Mamba: uncertainty-aware u-mamba for cardiac image segmentation. In *2024 IEEE 7th International Conference on Multimedia Information Processing and Retrieval (MIPR)* (pp. 267-273). IEEE.
4. Xia, P., Zhu, K., Li, H., Zhu, H., Li, Y., Li, G., ... & Yao, H. (2024). Rule: Reliable multimodal rag for factuality in medical vision language models. In *Proceedings of the 2024 Conference on Empirical Methods in Natural Language Processing* (pp. 1081-1093).
5.   Peng Xia,Ze Chen, Juanxi Tian, Yangrui Gong, Ruibo Hou, Yue Xu, Zhenbang Wu, Zhiyuan Fan, Yiyang Zhou, Kangyu Zhu, Wenhao Zheng. Zhaoyang Wang, Xiao Wang, Xuchao Zhang, Chetan Bansal, Marc Niethammer, Junzhou Huang, *Hongtu Zhu*, Yun Li, Jimeng Sun, Zongyuan Ge, Gang Li, James Zou, Huaxiu Yao. CARES: A Comprehensive Benchmark of Trustworthiness in Medical Vision Language Models, ***NeurIPS D&B Track 2024***.
6. Shuai Li, Ziqi Chen, Hongtu Zhu, Christina Dan Wang, Wang Wen. Nearest-Neighbor Sampling Based Conditional Independence Testing. *AAAI 2023*.

7. Y Sun, Y. Huang, H. Zhu, F. Zhou. Adversarial learning of distributional reinforcement learning. *ICML 2023*.

8. Li, T., Shi, C.,Wang, J. L., Zhou, F., *Zhu, H.T*. Optimal sequential treatment allocation for efficient policy evaluation. *NeurIPS 2023*.

9. Li, S., Zhang, Y., Zhu, H., Wang, C. D., Shu, H., Chen, Z., Sun, Z., and Yang, Y. K-neareast-neighbor local sampling based conditional independence testing. *NeurIPS 2023*.

10. C. Feng , J. Hu , X. Wang, S. Hu , B. Zhu, X. Wu , Hongtu Zhu and S. Lyu. Controlling Neural Style Transfer with Deep Reinforcement Learning. *IJCAI 2023*.

11. Wu, G., Song, G., Lv, X., Luo, S., Shi, C. and *Zhu, H.* DNet: Distributional network for distributional individualized treatment effects. *KDD 2023*.

12. Hai Shu, Ronghua Shi, Hongtu Zhu, Ziqi Chen. mFI-PSO: A Flexible and Effective Method in Adversarial Image Generation for Deep Neural Networks. *The 2022 International Joint Conference on Neural Networks.* Oral presentation.

13. X Tang, F Zhang, Y Wang, D Shi, B Song, Y Tong, H Zhu, J Ye. Value Function is All You Need: A Unified Learning Framework for Ride Hailing Platforms, *KDD 2021.* Oral presentation

14. **Liu，C**., Feng, H., Xu, J., Qin, Z. and *Zhu, H.* Optimizing bike-share repositioning: networked inventory management with spatiotemporal modeling. *IEEE Big Data 2021*.

15. **Fan Zhou**, Xiaocheng Tang, Chenfan Lu, Fan Zhang, Zhiwei Qin, Jieping Ye, and *H. Zhu* "Multi-Objective Distributional Reinforcement Learning for Large-Scale Order Dispatching", *IEEE ICDM 2021*.

16. Qin, Z., Zhu, H.T., and Jieping Ye. Reinforcement learning for ridesharing: a survey. *IEEE Intelligent Transportation Systems Conference 2021*.

17. Guojun Wu, Yanhua Li, Shikai Luo, Ge Song, Qichao Wang, Jing He, Jieping Ye, Xiaohu Qie and *H. Zhu*。 A Joint Inverse Reinforcement Learning and Deep Learning Model for Drivers' Behavioral Prediction. *CKIM 2020*.

18. Xiaocheng Tang, Zhiwei Qin, Fan Zhang, Zhaodong Wang, Zhe Xu, Yintai Ma, Hongtu Zhu, Jieping Ye.   A Deep Value-network Based Approach for Multi-Driver Order Dispatching. *KDD 2019* (acceptance rate <15%).

19. Tao Huang, Yintai Ma, Zhiwei Tony Qin, Jianfeng Zheng, Henry X Liu, Hongtu Zhu, Jieping Ye。 Origin-destination Flow Prediction with Vehicle Trajectory Data and Semi-supervised Recurrent Neural Network。 *2019 IEEE International Conference on Big Data (Big Data)*，1450-1459。

20. **Zhou, F., Li, T.F.,** Zhou, H.B., Ye, J. P. and *Zhu, H.T*. Graph-Based Semi-Supervised Learning with Non-ignorable Non-response. *NeurIPS 2019* (acceptance rate <20%).

21. Haipeng Chen, Yan Jiao, Zhiwei Qin, Xiaocheng Tang, Hao Li, Bo An, Hongtu Zhu, and Jieping Ye. InBEDE: Integrating Contextual Bandit with TD Learning for Joint Pricing and Dispatch of Ride-Hailing Platforms. *IEEE International Conference on Data Mining (ICDM)， 2019* (acceptance rate <9%).

22. **Lin, Z. H.** and *Zhu, H.T.* MFPCA: Multiscale Functional Principal Component Analysis. *AAAI 2019* (acceptance rate <18%).

23. **Zhang, J.W.**, Ibrahim, J. G., **Li, T.F.**, and *Zhu, H.T*. A Powerful Global Test Statistic for Functional Statistical Inference. *AAAI 2019* (acceptance rate <18%).

24. **Shu, H.** and *Zhu, H.T*. Sensitivity analysis of deep neural networks. *AAAI 2019*. (acceptance rate <18%)

25. **Tengfei Li, Xifeng Wang, Tianyou Luo, Yue Yang,Bingxin Zhao, Liuqing Yang, Ziliang Zhu**, *Hongtu Zhu* (2019). Adolescentfluid intelligence prediction from regional brain volumes and cortical curvatures using BlockPC-XGBoost.In *Proceedings of the First Challenge in Adolescent Brain Cognitive Development Neurocognitive Prediction (ABCD-NP)*, held in conjunction with MICCAI 2019, 11791,167-175.

26. Z. Wang, Z. (Tony) Qin, X. Tang, J. Ye, and **H. Zhu.** Deep Reinforcement Learning with Knowledge Transfer for Online Rides Order Dispatching. *IEEE International Conference on Data Mining (ICDM)*，2018.

27. **Dai, L., Li, T.,Shu, H., Zhong, L.,** Shen, H., and *Zhu, H*. (2018). Automatic brain tumor segmentation with domain adaptation. *Brainlesion: Glioma, Multiple Sclerosis, Stroke and Traumatic Brain Injuries (BrainLes 2018).*

28. **Tengfei Li, Fan Zhou, Ziliang Zhu, Hai Shu,** and *H. Zhu*. A Label-Fusion-Aided Convolutional Neural Network for Isointense Infant Brain Tissue Segmentation. *ISBI 2018*.

29. **R. Liu, C. Huang, T. Li, L. Yang,** and *H. Zhu.* Statistical Disease Mapping for Heterogeneous Neuroimaging Studies. *ISBI 2018*.

30. **Zhang, J.W.,** Ibrahim, J.G., R.C. Knickmeyer, M. Styner, Gilmore, J. H., and *H. Zhu.* HFPRM: Hierarchical Functional Principal Regression Model for Diffusion Tensor Image Bundle Statistics. *IPMI 2017*.

31. **F. Zhou, T. Li, H. Li**, and *H. Zhu*. TPCNN: Two-phase Patch-based convolutional Neural Network for Automatic Brain Tumor Segmentation and Survival Prediction. *The Multimodal Brain Tumor Segmentation Challenge: MICCAI BRATS 2017.*

32. Pan, W. L., Styner, M., and *Zhu, H.* Conditional local distance correlation for manifold-valued data. *IPMI 2017*. Oral.

33. S. Yang, Vladimir Jojic, Jun Lian, Ronald Chen, Hongtu Zhu, and Ming Lin. Classification of Prostate Cancer Grades and T-Stages based on Tissue Elasticity Using Medical Image Analysis. *MICCAI 2016.*

34. Y. Zhao, F. Zou, Z. Lu, R.C. Knickmeyer, and *H. Zhu.* Bayesian Feature Selection for Ultra-high Dimensional Imaging Genetics Data. *MICCAI Workshop on Imaging Genetics, 2015.*

35. **Luo, X. C.,** Zhu, L. X., Kong, L. and *Zhu, H.T.* Functional Nonlinear Mixed Effects Models For Longitudinal Image Data. *Information Processing in Medical Imaging (IPMI)* 2015. (acceptance rate <28%)

36. **Shen, D.** *Zhu, H.T.* MWPCR: Multiscale Weighted Principal Component Regression for High-dimensional Prediction. *Information Processing in Medical Imaging (IPMI)* 2015. (acceptance rate <28%)

37. **Huang, C.,** Niethammer, M., **Liang, S.,** *Zhu, H.T.* Segmentation of longitudinal knee MRI data. *Information Processing in Medical Imaging (IPMI)* 2013. (acceptance rate <32%)

38. **Yuan, Y.,** Gilmore, J., Geng, X. J., Styner, M., Chen, K. H., Wang, J. L., and

Zhu, H.T. A longitudinal functional analysis framework for analysis of white matter tract statistics. *Information Processing in Medical Imaging (IPMI)* 2013. (acceptance rate <32%)

39. Y. Wang, G. Li, **M. Ahn,** J. Nie, H. Zhu, D. Shen, L. Guo. Mapping longitudinal cerebral cortex development using diffusion tensor imaging. *SPIE Medical Imaging, 2013.* Oral presentation.

40. A. R. Verde, J.B. Berger, A. Gupta, M. Farzinfar, A. Kaiser, V. W. Chanon, C. A. Boettiger, C. Goodlett, Y. Shi, G. Gerig, S. Gouttard, C. Vachet, H. Zhu, M.A. Styner, The UNC-Utah NA-MIC DTI framework: atlas based fiber tract analysis with application to a study of nicotine smoking addiction. *SPIE Medical Imaging, 2013.* Oral presentation.

41. A.E. Lyall, B. Paniagua, **Z. Lu,** H. Zhu, F. Shi, W. Lin, D. Shen, J. H. Gilmore and M. Styner. Longitudinal lateral ventricle morphometry related to prenatal measures as a biomarker of normal development, *MICCAI workshop on Pediatric and Perinatal Imaging (PaPI)* 2012, Nice, France, Oct. 1, 2012.

42. **J. Wang,** *H. Zhu*, J.Q. Fan, K. Giovanello,, and Lin, W. L. Multiscale Adaptive Smoothing Model for the Hemodynamic Response Function in fMRI, *MICCAI,* LNCS 6892, 269-276, *2011.* (acceptance rate <30%)

43. **Li, YM**, J. Gilmore, **J.P. Wang,** M. Styner, W. Lin, and *Zhu, HT*. Two-stage spatial adaptive analysis of twin neuroimaging data. *Multimodal Brain Image Analysis.* Lecture Notes in Computer Science, 2011, Volume 7012/2011, 102-109.

44. *Zhu, H.T*., Styner, M., **Li, Y.M.**, Kong, L. N., Shi, W., Lin, W., Coe, C., and J. H. Gilmore. Multivariate Varying Coefficient Models for DTI Tract Statistics. *MICCAI,* 690-697, *2010.* (acceptance rate <32%)

45. **Gao, W**., Zhu, H.T., Giovanello, K. S., and Lin, W. Multivariate network-level approach to detect interactions between large-scale functional systems. *MICCAI,* 298-295, *2010.* (acceptance rate <32%)

46. Chen, Y.S., Ji, S., Wu, X., An, H.Y. Zhu, H.T., Shen, D. G., and Lin, W. Simulation of brain mass effect with an arbitrary lagrangian and eulerian FEM. *MICCAI,* 274-281, *2010.* (acceptance rate <32%)

47. *Zhu, H.T.,* **Li, Y. M.**, Ibrahim, J. G., Lin, W., Shen, D. MARM: multiscale adapative regression for neuroimaging data. *Information Processing in Medical Imaging (IPMI),* 314-325, 2009. (acceptance rate <32%)

48. **Shi, X.**, Styner, M., Liberman J., Ibrahim, J. G., Lin, W., and *Zhu, H.T.* Intrinsic regression models for manifold-value data. *International Conference on Medical Imaging Computing and Computer Assisted Intervention (MICCAI),*192-199, *2009.* (acceptance rate <32%)

49. **Yap, P.T.**, Wu, G.R, Zhu HT, Lin W, Shen DG. Fast Tensor Image Morphing for Elastic Registration, *MICCAI,* 721-729, 2009. (acceptance rate <32%)

50. **Chen, Y. S.**, Zhu, H.T., Shen, D.G., An, H.Y., Gilmore, J., Lin, W.L. Mapping growth patterns and genetic influences on early brain development in twins. *MICCAI,* 232-239, *2009*. (acceptance rate <32%)

51. Z. Liu, Zhu, H.T., B.L. Marks, L.M. Katz, C.B. Goodlett, G.Gerig, M. Styner, Voxel-wise group analysis of DTI, Proceedings of the 6th IEEE International

Symposium on Biomedical Imaging ISBI: From Nano to Macro 2009; 807-810. (50% acceptance rate).

52. Tang, S. Y, Fan, Y., <u>Zhu, HT,</u> Shen, D. Regularization of Diffusion Tensor Field Using Coupled Robust Anisotropic Diffusion Filters. *Mathematical Methods in Biomedical Image Analysis (MMBIA) 2009.*

53. **Yap, P. T.**, Wu, G.R., <u>Zhu, HT.,</u> Lin, W.L., Shen, DG.. TIMER: Tensor Image Morphing for Elastic Registration. *MMBIA 2009.*

54. **Liu Z**, <u>Zhu HT</u>, Marks BL, Katz LM, Goodlett CB., Gerig G, Styner M. Voxel-wise group analysis of DTI. *ISBI 2009.*

55. <u>***Zhu HT,***</u> Hao X, Xu DR, Amir R, and Peterson BS. Theoretical analysis of the effects of noise on isotropic diffusion tensors. *MMBIA 2006.*

56. Chen, Y.S., Shen, D. G., <u>Zhu, H. T.</u>, An, H. Y., Gilmore, J. H., Lin, W. Hierarchical unbiased group-wise registration for atlas construction and population comparison. *SPIE 2009 on Medical Imaging.*

57. **Li, Y.M.,** <u>***Zhu, H.T.,***</u> Chen, Y.S., An, H.Y., Gilmore, J. H., Lin, W., Shen, D. Longitudinal analysis of neuroimaging data. *SPIE 2009 on Medical Imaging.*

58. **Li, Y.M.,** <u>***Zhu, H.T.,***</u> Chen, Y.S., Ibrahim, J. G., An, H.Y., Lin, W., Shen, D. Regression analysis of diffusion tensor. *SPIE 2009 on Medical Imaging.*

Peer-reviewed Books and Chapters

1. **Qin, T., Tang, X., Li, Q., Zhu, H., and Ye, J. (2024). *Reinforcement Learning in the Ridesharing Marketplace*, Springer.**

2. Cheng, J. and Zhu HT. (2016). Diffusion Magnetic Resonance Imaging (dMRI). In *Handbook of Neuroimaging Data analysis.* Edited by Ombao, H., Lindquist, M., Thompson,W. and Aston, J. Chapman & Hall/CRC, 65-107.

3. <u>Zhu HT</u>, Joseph G. Ibrahim, Hyunsoon Cho, and Niansheng Tang (2010). Bayesian Influence Methods. In *Frontiers of Statistical Decision Making and Bayesian Analysis* (eds. M.-H., Chen, D.K. Dey, P. Muller, D. Sun, and K. Ye). New York: Springer. pp.219-236.

4. Bansal, R., …., <u>Zhu HT</u> (in alphabetic order). Neuroimaging methods in the study of childhood psychiatric disorders. *Lewis's Child and Adolescent Psychiatry: A Comprehensive Textbook, Fourth Edition,* Edited by Melvin Lewis, 30 pages, Philadelphia, Lippincott Williams & Wilkins, pp. 214-233, 2007.

5. <u>Zhu HT</u>, Liang FM, Gu MG, and Peterson B. Stochastic approximation algorithms for estimation of spatial mixed models. Edited by Sik-Yum, Lee. *Handbook of Computing and Statistics with Application,* Elsevier Science, pp. 399-421, 2007.

6. <u>Zhu HT</u> and Zhang HP. Structure mixture regression models. In *Development of Modern Statistics and Related Topics*, H.P.Zhang and J.Huang (ed.), World Scientific Publisher, New Jersey, pp. 272-287, 2003.

7. Wei BC, Wang F, and <u>Zhu HT</u>. Translate *Bates, D. and Watts, D. (1988). Nonlinear Regression Analysis and its Applications. John Wiley and Sons, Inc., New York*, into Chinese version. Statistics Publisher, Beijing, P.R.China, pp.1-409, 1998.

Refereed papers/articles (Students and post-doctors are highlighted in red) (*Zhu serving as the corresponding author is highlighted in blue).

Peer-reviewed Papers In Press and Appeared in Journals

Statistical Journals (Annals of Statistics, Journal of American Statistical Association, Biometrika, and Journal of Royal Statistical Society Series B are the top four statistical journals; Journal of Machine Learning Research is the top ML journals; Biometrics and Annals of Applied Statistics are the very best applied statistical journals.)

8. Wang, Y., Ibrahim, J., Wang, X., and Zhu HT. Residual-based alternative partial least squares for generalized functional linear models. *Statistica Sinica*., 2025.
9. D. Yang, Shao, J., Shen, H., and Zhu HT. Optimal Functional Bilinear Regression with Two-dimensional Functional Covariates via Reproducing Kernel Hilbert Space. *Journal of Machine Learning Research*. 2025, in press.
10. L Kong, **X Luo**, J Xie, L Zhu, and ***Zhu HT.*** A functional nonlinear mixed effects modeling framework for longitudinal functional responses. *Electronic Journal of Statistics* 18 (1), 1355-1393, 2024.
11. B Zhao, S Zheng, *H Zhu*. On blockwise and reference panel-based estimators for genetic data prediction in high dimensions. *The Annals of Statistics* 52 (3), 948-965, 2024.
12. Y Shan, C Huang, Y Li, ***Zhu HT.*** Merging or ensembling: integrative analysis in multiple neuroimaging studies. *Biometrics,* in press, 2024.
13. **T Li, Y Yang**, S Marron, and ***Zhu HT.*** A Partially Functional Linear Regression Framework for Integrating Genetic, Imaging, and Clinical Data. *Annals of Applied Statistics*. Vol. 18, No. 1, 704–728, 2024.
14. Zhengwu Zhang, Yuexuan Wu, Di Xiong, Joseph G. Ibrahim, Anuj Srivastava & ***Hongtu Zhu***. LESA: Longitudinal Elastic Shape Analysis of Brain Subcortical Structures (with discussion). *Journal of the American Statistical Association, ACS*, Volume 118, Issue 541, pp. 3 - 17, 2023.
15. **Li, T.**, Zhu, H.C., Li, T. and ***Zhu HT.*** Asynchronous functional linear regression models for longitudinal data in reproducing kernel Hilbert space. *Biometrics*, 2023;79:1880–1895.
16. **Huang, C**.* and ***Zhu HT.*** Functional Hybrid Factor Regression Model for Handling Heterogeneity in Imaging Studies. *Biometrika*, Volume 109, Issue 4, pp. 1133 - 1148, 2022.
17. **D. Xiong**, Ying, Y., and ***Zhu HT.*** Intrinsic partially linear models for Manifold-valued Data. *Information Processing and Management,* Volume 59, Issue 4, p. 102954, 2022.
18. Xingcai Zhou, Dehan Kong, A. B. Kashlak, Linglong Kong, R. Karunamuni and Hongtu Zhu. Functional Response Quantile Regression Model. *Statistica Sinica*, in press, 2022.
19. Meiling Hao, Lianqiang Qu, **Dehan Kong,** Liuquan Sun, and Hongtu Zhu. Optimal Minimax Variable Selection for Large-Scale Matrix Linear

Regression Model. *Journal of Machine Learning Research,* 22(147):1−39, 2021.

20. Wang, X., **Leo Liu, Y.F.** *, and ***Zhu HT.*** Functional finite mixture regression models. *Statistica Sinica*, in press, 2021.

21. Pietrosanu, Matthew; Shu, Haoxu; Jiang, Bei; Kong, Linglong; Heo, Giseon; He, Qianchuan; Gilmore, John; Zhu, Hongtu. Estimation for the bivariate quantile varying coefficient model with application to diffusion tensor imaging data analysis. *Biostatistics*, Volume 24, Issue 2, pp. 465–480, 2021.

22. Tingting Zou, Shurong Zheng, Zhidong Bai, Jianfeng Yao, and Hongtu Zhu. CLT for linear spectral statistics of large dimensional sample covariance matrices with dependent data, *Statistical Paper*, 63, pp. 605–664, 2021.

23. **Yang, H.** *, Zhu, H., **Ahn, M.,** and Ibrahim, J.G . Weighted functional linear Cox regression model. *Statistical Methods in Medical Research*, Volume 30, Issue 8, pp. 1917 - 1931, 2021.

24. **Zhang, Z.W.,** Wang, X., Kong, L., and Zhu, H. T. High-Dimensional Spatial Quantile Function-on-Scalar Regression. *Journal of American Statistical Association,* Volume 117, Issue 539, pp. 1563 - 1578, 2021.

25. **Liu, R.J.,** and ***Zhu HT.*** . Statistical disease mapping for heterogeneous neuroimaging studies (with discussion). *The Canadian Journal of Statistics*, Volume 49, Issue 1, pp. 10 - 34, 2021.

26. **Feng, X., Li, T.,** Song, X. and ***Zhu HT.*** Bayesian Scalar on Image Regression with Non-ignorable Non-response. *Journal of American Statistical Association,* 115:532, 1574-1597, 2020.

27. **Li, T., Li, T.F.,** Zhu, Z.Y., and Zhu, H.T. Regression Analysis of Asynchronous Longitudinal Functional and Scalar Data, *Journal of American Statistical Association*, 117:539, 1228-1242, 2020.

28. Xiaoqing Wang, Xinyuan Song, and Hongtu Zhu. Bayesian Latent Factor on Image Regression with Nonignorable Missing Data. *Statistics in Medicine*, Volume 40, Issue 4, pp. 920 - 932, 2020.

29. **Kim, J.,** Zhu, H., Wang, X. and Do, K. Scalable network estimation with L0 penalty. *Statistical Analysis and Data Mining,* Volume 14, Issue 1, pp. 18 - 30, 2020. **Best Paper.**

30. **Pan, W.,** Wang, X., Zhang, H., Zhu, H., and Zhu, J. Ball Covariance: A Generic Measure of Dependence in Banach Space. *Journal of American Statistical Association, Volume 115, Issue 529, pp. 307 - 317*, 2020.

31. **Wang，J.,** Ibrahim, J. G., and ***Zhu HT.*** Partial least squares for functional joint models with applications to the Alzheimer's disease neuroimaging initiative study. *Biometrics* 76 (4), 1109-1119, 2020.

32. **Kong，D. H.**, An, B. G., Zhang, J. W., and ***Zhu HT.*** L2RM: Low-rank Linear Regression Models for High-dimensional Matrix Responses. *Journal of American Statistical Association,* Volume 115, Issue 529, pp. 403 - 424, 2020.

33. **Shu, H.**, Wang, X. and ***Zhu HT.*** D-CCA: A Decomposition-based Canonical Correlation Analysis for High-Dimensional Datasets. *Journal of American Statistical Association, Volume 115, Issue 529, pp. 292 - 306*, 2020.

34. **Liu，Y.F.,** Liu, Y. F., and ***Zhu HT.*** MCNN: Masked Convolutional Neural Network for Supervised Learning Problems. *Stat*. 2020, 9;e290.

35. KY Bak, KR Kim, PT Kim, JY Koo, C Park, H Zhu. Nonparametric matrix regression function estimation over symmetric positive definite matrices. *Journal of the Korean Statistical Society*, 1-23, 2020.

36. **Zhao, P. Y.,** Tang, N. S., and Zhu, H.T. Generalized Empirical Likelihood Inferences for Nonsmooth Moment Functions With Nonignorable Missing Values. *Statistica Sinica*, 30，217-249，2020.

37. S. R. Zheng, G. Chen, J. Guo, and *H. Zhu*. Test Statistics for High Dimensional Correlation Matrices. *Annals of Statistics,* 47, 2887-2921，2019.

38. **Chen, Z. Q., Gao, Q. B.,** Fu, B. and *Zhu HT.* Monotone Nonparametric Regression for Functional/Longitudinal Data. *Statistica Sinica*, **29**，2229-2249，2019.

39. **Kang，K.,** Song, X. Y., Hu, X. J., and Zhu, H.T. Bayesian adaptive group lasso for semiparametric hidden Markov models. *Statistics in Medicine*, 38，1634-1650，2019.

40. **Pan, W.,** Wang, X.Q., Xiao,W. and *Zhu, H.T.* A Generic Sure Independence Screening Procedure. *Journal of American Statistical Association,* 114，928-937，2019.

41. H. Ma, **T. Li,** H. Zhu, and Z. Zhu. Quantile regression for functional partially linear models in high dimensions. *Computational Statistics and Data Analysis*, In press, 129，135-146，2019.

42. **Luo, S.,** Song, R., Gilmore, J., Stynder, M., and *Zhu, H.T.* FSEM: Functional Structural Equation Models for Twin Functional Data. *Journal of American Statistical Association,* 114, 344-357, 2019.

43. **Sun, Q.**, *Zhu HT,* Ibrahim, J.G. Hard Thresholding Regression, *Scandinavian Journal of Statistics*, 46, 314-328, 2019.

44. *Zhu, H.T.,* Chen, **Luo, X., Yuan, Y.**, and Wang, J. L. FMEM: Functional Mixed Processes Models for Longitudinal Functional Responses. *Statistica Sinica,* 29, 2007-2033, 2019.

45. **Tengfei Li, Fengchang Xie, Xiangnan Feng,** Joseph G. Ibrahim, *Hongtu Zhu* Functional linear regression models for non-ignorable missing scalar responses. *Statistica Sinica,* 28，1867-1886，2018.

46. **H. Yang,** *H. Zhu*, and J.G. Ibrahim. MILFM: multiple index latent factor model based on high-dimensional features. *Biometrics*, 74，834-844，2018.

47. **Miranda, M. F.,** *Zhu, H.T.,* and Ibrahim, J.G. TPRM: Tensor partition regression models with applications in imaging biomarker detection. *Annals of Applied Statistics*, 29，1422-1450, 2018.

48. **D. Kong**, Ibrahim, J. G., **Lee, E.J**. and *Zhu HT.* FLCRM: Functional Linear Cox Regression Model. *Biometrics*, 74，109-117，2018.

49. Tang, M. L. Tang, N.S., **Zhao, P.Y.** and *Zhu, H.T.* Imputation Methods and Efficient Estimation for Linear Models with Missing Responses. *Scandinavian Journal of Statistics,* 45，366-381，2018.

50. Tang, A.M., Tang, N.S., and Zhu, H.T. Influence analysis for skew-normal semiparametric joint models of multivariate longitudinal and multivariate survival data. *Statistics in Medicine*, 36，1476-1490，2017.

51. ***Zhu, HT.,* Shen, D.**, Peng, X. W. and Leo Liu YF. MWPCR: Multiscale weighted principal component regression for high-dimensional prediction. *Journal of American Statistical Association,* 112, 1009-1021, 2017.

52. **C. Bryant**, ***Zhu, H.T.,* Mihye Ahn**, Joseph G Ibrahim. LCN: A Random Graph Mixture Model for Community Detection in Functional Brain Networks. *Statistics and Its Interface*, 10, 369-378, 2017.

53. **Lin, L., Thomas, B. S.,** Zhu, H.T. and Dunson, D. B. Extrinsic local regression on manifold-valued data. *Journal of American Statistical Association,* 112, 1156-1168, 2017.

54. Wang, X. and Zhu, H.T. Generalized scalar-on-image regression models via total variation. *Journal of American Statistical Association,* 112,1156-1168, 2017.

55. Song, X. Y, Xia, Y.M. and ***Zhu, H.T.*** Hidden markov latent variable models with multivariate longitudinal data. *Biometrics*, 73: 313-323, 2017.

56. Li, J. L., **Huang, C**. and ***Zhu, H.T.*** A Functional Varying-Coefficient Single Index Model for Functional Response Data. *Journal of American Statistical Association,* 112, 1169-1181, 2017.

57. **Cornea, E**., ***Zhu, H.T.,*** Kim, P. and Ibrahim, J. G. Intrinsic regression model for data in Riemannian symmetric space. *JRSS, Series B*, 79, 463-482, 2017.

58. **Luo, X.,** Zhu, L.X., and ***Zhu, H.T.*** Single-index Varying Coefficient Model for Functional Responses. *Biometrics*, 72, 1275-1284, 2016.

59. **Shen, D**., Shen, H., ***Zhu, H.T.,*** and Marron, J. The statistics and mathematics of high dimension low sample size asymptotics. *Statistica Sinica,* 26, 1747–1770, 2016.

60. **Rao, S.,** Ibrahim, J. G., Cheng, G. Yap, P.T., and ***Zhu, H.T.*** SR-HARDI: Spatially regularizing high angular resolution diffusion imaging. *Journal of Computational and Graphical Statistics*, 25, 1195-1211. 2016.

61. **Lee, E.J. *Zhu, H.T***., D. Kong, and Ibrahim, J. G. A Bayesian functional linear Cox regression model (BFLCRM) for predicting time to conversion to Alzheimer's disease. *Annals of Applied Statistics,* 9, 2153-2178, 2015.

62. Zhu, H, Chen, M.H., and Ibrahim, J.G. Diagnostic measures for the Cox regression model with missing covariates, *Biometrika,* 102, 907-923, 2015.

63. **Huang, C.,** Styner, M., and ***Zhu, H.T.*** Penalized mixtures of offset-normal shape factor analyzers with application in clustering high-dimensional shape data. *Journal of American Statistical Association,* 110, 946-961, 2015.

64. **Mihye, A.,** Shen, H.P., Lin, W. L., and ***Zhu, H.T.*** A sparse reduced rank framework for group analysis of functional neuroimaging data. *Statistica Sinica*, 25, 295-312, 2015.

65. **Gao, Q. B., Mihye, A.** and ***Zhu, H.T.*** Cook's distance measures for varying coefficient models with functional response. *Technometrics,* 57, 268-280, 2015.

66. **Guo, R.X., Ahn Mihye,** and ***Zhu, HT.*** Spatially weighted principal component analysis for imaging classification, *Journal of Computational and Graphical Statistics*, 24(1), 274-296, 2015.

67. **Sun, Q.**, ***Zhu, H.T.,*** Liu, Y. F., and Ibrahim, J.G. SPReM: Sparse Projection regression model for high-dimensional linear regression. *Journal of American Statistical Association,* 110, 289-302, 2015.

68. Zhu, H.T., Chen, Q. X., and Ibrahim, J. G. Bayesian case-deletion model complexity and information criterion. *Statistics and Its Interface*, 4, 531-542, 2014.

69. *Zhu, H.T.*, Fan, J.Q., and **Kong, L.L**. Spatially varying coefficient models with applications in neuroimaging data with jumping discontinuity. *Journal of American Statistical Association,* 109, 977-990, 2014.

70. Tang, N. S., **Zhao, P.Y.,** and *Zhu, H. T.* Empirical likelihood for estimating equations with nonignorably missing data. *Statistica Sinica,* 24,723-747, 2014.

71. Zhu, HT., Ibrahim, JG., and Tang, NS. Bayesian sensitivity analysis of statistical models with missing data. *Statistica Sinica*. 24, 871-896, 2014.

72. **Hua, Z.W**., Zhu, HT, and Dunson, D. Semiparametric Bayes local additive models for longitudinal data. *Statistics in Biosciences,* in press, 2013.

73. Zhou, H., Li, L.X., and Zhu, H.T. Tensor regression with applications in neuroimaging data analysis. *Journal of American Statistical Association,* 540-552, 2013.

74. Xu, P., Wang, T., *Zhu, H.T.,* and Zhu, L.X. Double penalized H-likelihood for selection of fixed and random effects in mixed effects models. *Statistics in Biosciences,* in press, 2013.

75. **Michelle F. Miranda**, *Zhu, H.T.* and Joseph G. Ibrahim**.** Bayesian Analysis of Spatial Transformation Models with Applications in Neuroimaging Data. *Biometrics,* 69(4):1074-83. 2013.

76. **Khondker, Z. S.,** *Zhu, H.T.,* Chu, H. T., Lin, W. L. and Ibrahim, J. G. The Bayesian Covariance Lasso, *Statistics and its Interface*, 6, 243-259, 2013.

77. **Yuan, Y.,** *Zhu, H.T.,* Styner, M., J. H. Gilmore., and Marron, J. S. Varying coefficient model for modeling diffusion tensors along white matter bundles. *Annals of Applied Statistics*, 7, 102-125, 2013.

78. **Wang, J**., *Zhu, H.T.,* Fan, J.Q., Giovanello, K. S., , and Lin, W. L. Multiscale adaptive smoothing models for the hemodynamic response function in fMRI. *Annals of Applied Statistics,* 7, 904-935, 2013.

79. **Shi, XY**, *Zhu, HT*, Ibrahim, J.G., F. Liang, Styner M. Intrinsic regression models for median representation of subcortical structures. *Journal of American Statistical Association,* 107, 12-23, 2012.

80. **Yuan, Y.,** *Zhu, H.T.,* Lin, W. L., and Marron, J. S. Local polynomial regression for symmetric positive definitive matrices. *JRSS, Series B*, 74, 697-719, 2012.

81. *Zhu, HT.,* Ibrahim JG, **Cho HS**. Perturbation and Scaled Cook's distance. *Annals of Statistics*, 40, 785-811, 2012.

82. *Zhu HT*. Li, R., and **Kong, L**. Multivariate varying coefficient model and its application in neuroimaging data. *Annals of Statistics,* 40, 2634-2666, 2012.

83. **Guo, RX.,** Zhu, HT., Chow, SM., Ibrahim, JG. Bayesian Lasso for semiparametric structural equation models using spline. *Biometrics,* 68, 567–577, 2012.

84. *Zhu HT*. Ibrahim, JG., and Tang, NS. Bayesian influence measures for joint models for longitudinal and survival data. *Biometrics*, 68, 954-64, 2012.

85. **Skup, M**., Zhu, H.T., and Zhang HP. Multiscale adaptive marginal analysis of longitudinal neuroimaging data with time-varying covariates. *Biometrics*,

68,1083-1092, 2012.

86. ***Zhu, HT***, _Ibrahim JG., **Cho HS**, and Tang, N.S. Bayesian case-deletion measures for statistical models with missing Data, *Journal of Computational and Graphical Statistics,* 21, 253-271, 2012.

87. **Wang, J.,** Shen, H. P., and Zhu, H.T. Discussion of "Clustering Random Curves Under Spatial Interdependence with Application to Service Accessibility" by Jiang and Serban. *Technometrics*, 54, 129-133, 2012.

88. **Li, YM,** ***Zhu HT***, Shen DG, Lin WL, Gilmore J, and Ibrahim JG. Multiscale adaptive regression models for neuroimaging data. *JRSS, Series B*, 73, 559-578, 2011.

89. ***Zhu, HT.,*** Ibrahim JG, Tang NS. Bayesian influence approach: a geometric approach. *Biometrika*, 98, 307-323, 2011.

90. **Shi, XY**, Ibrahim JG, Styner M., **Yimei Li**, and ***Zhu, HT***., Two-stage adjusted exponential tilted empirical likelihood for neuroimaging data. *Annals of Applied Statistics*, 5, 1132-1158, 2011.

91. Ibrahim, J. G., Zhu, H.T., **Garcia, R. I., Guo, R.X**. Fixed and random effects selection for generalized mixed effects models, *Biometrics,* 67, 495-503, 2011.

92. Ibrahim, J. G., Zhu, H.T., Tang, N. S. Bayesian local influence for survival models (with discussion). *Lifetime Data Analysis*, 17, 43-70, 2011.

93. Ibrahim, J. G., Zhu, H.T., Tang, N. S. Rejoinder to comments on "Bayesian local influence for survival models." *Lifetime Data Analysis*, 17, 76-79, 2011.

94. **Garcia, R. I.,** Ibrahim, J. G., Zhu, H.T. Variable selection for proportional hazard models with missing covariate data, *Biometrics,* 66, 97–104, 2010.

95. **Garcia, R. I.,** Ibrahim, J. G., and ***Zhu, H.T***. Variable selection for regression models with missing covariate data, *Statistics Sinica,* 20, 149-165, 2010.

96. **Clement-Spychala, M. E**., Couper, D., Zhu, H.T., and Muller, K. Approximating the Geisser greenhouse sphericity estimator and its applications to diffusion tensor imaging. *Statistics and Its Interface*, 3,81–90, 2010.

97. **Chen, F,** Zhu HT, Song XY, and Lee SY. Perturbation selection and local influence analysis for generalized linear mixed models. *Journal of Computational and Graphical Statistics,* 19, 826-842, 2010.

98. ***Zhu HT***, Cheng YS., Ibrahim JG, **Li YM**, Hall C, Lin WL. Intrinsic regression models for positive definitive matrices with applications in diffusion tensor images. *Journal of the American Statistical Association,* 104, 1203-1212, 2009.

99. ***Zhu HT,*** **Li YM**, Ibrahim, J. G., **Shi, X.Y**., …, Peterson BS. Rician regression models for magnetic resonance images. *Journal of the American Statistical Association,* 104, 623-637, 2009.

100. **Shi, X Y**., Zhu HT, Ibrahim, JG. Local influence for generalized linear models with missing covariates. *Biometrics,* 65, 1164-1174, 2009.

101. *****Zhu HT,*** Zhou HB, Chen JH, **Li YM**, Styner M, and Liberman J. Adjusted exponential tilted likelihoods with application to brain morphomotry, *Biometrics,* 65, 919-927, 2009.

102. ***Cho HS**, Ibrahim JG, Sinha and Zhu HT. Bayesian Case Influence Diagnostics for Survival Models, *Biometrics,* 65, 116-124, 2009.

103. **_Zhu HT,_** Ibrahim, JG., **Shi, X.Y**. Diagnostic measures for generalized linear models with missing covariates. *Scandivian Journal of Statistics,* 36, 686-712, 2009.

104. **_Zhu HT,_** Tang NS, Ibrahim JG, and Zhang HP. Diagnostic measures for empirical likelihood of general estimating equations. *Biometrika,* 95, 489-507, 2008.

105. Ibrahim, JG., Zhu HT, Tang NS. Model selection criterion for missing data problems via the EM algorithm. *Journal of the American Statistical Association,* 103, 1648-1658, 2008.

106. *__Zhu HT__, **Li YM**, Tang NS, Bansal R, Hao XJ, Weissman MM, and Peterson B. Statistical modelling of brain morphometric measures in general pedigree. *Statistica Sinica,* 18, 1554-1569, 2008.

107. *__Zhu HT,__ He FL, and Zhou J. Auto-multicategorical regression model for the distributions of vegetation types. *Statistics and Its Interface,* 1, 63-73, 2008.

108. **_Zhu HT,_** Zhang HP, Ibrahim JG, and Peterson BG. Statistical analysis of diffusion tensors in diffusion-weighted magnetic resonance image data (with discussion). *Journal of the American Statistical Association*, 102, 1081-1110, 2007.

109. **_Zhu HT._** Ibrahim, JG, Lee SY, and Zhang HP. Appropriate perturbation and influence measures in local influence. *Annals of Statistics*, 35, 2565-2588, 2007.

110. *__Zhu HT,__ Gu MG, and Peterson BG. Maximum likelihood from spatial random effects models via the stochastic approximation expectation maximization algorithm. *Statistics and Computing*, 15, 163-177, 2007.

111. Zhu HT and Zhang HP. Generalized score test of homogeneity for mixed effects models**.** *Annals of Statistics*, 34, 1545-1569, 2006.

112. *__Zhu HT__ and Zhang HP. Asymptotics for estimation and testing procedures under loss of identifiability. *Journal of Multivariate Analysis*, 97:19-45, 2006.

113. Zhu HT and Zhang HP. Hypothesis testing in a class of mixture regression models. *Journal of the Royal Statistical Society, Series B,* 66:3-16, 2004.

114. Zhu HT and Zhang HP. A diagnostic procedure based on local influence. *Biometrika*, 91:579-589, 2004.

115. Zhang HP, Yu CY, Zhu HT, and Shi J. Identification of linear directions in multivariate adaptive spline models. *Journal of American Statistical Association*, 98:369-376, 2003.

116. Zhang HP, Fui R, and Zhu HT. A latent variable model of segregation analysis for ordinal outcome. *Journal of American Statistical Association*, 98:1023-1034, 2003.

117. *He FL, Zhou JL, and Zhu HT. Autologistic regression model for the distribution of vegetation. *Journal of Agricultural, Biological and Environmental Statistics*, 8:205-222, 2003.

118. *Zhou JL and Zhu HT. Robust estimation and design procedures for random effect model. *Canadian Journal of Statistics*, 31:99-110, 2003.

119. *__Zhu HT__ and Lee SY. Local influence for generalized linear mixed models. *Canadian Journal of Statistics*, 31:293-309, 2003.

120. *<u>Zhu HT</u> and Lee SY. Maximizing generalized linear mixed models via a stochastic approximation algorithm with Markov chain Monte Carlo method. *Statistics and Computing*, 12:175-183, 2002.

121. Gu MG and <u>Zhu HT.</u> Maximum likelihood estimation for spatial models by Markov chain Monte Carlo stochastic approximation. *Journal of the Royal Statistical Society*, *Series B,* 63:339-355, 2001.

122. <u>Zhu HT</u> and Lee SY. Local influence for models with incomplete data. *Journal of the Royal Statistical Society, Series B*, 63:111-126, 2001.

123. <u>Zhu HT</u>, Lee SY, Wei BC, and Zhou JL. Case-deletion measures for models with incomplete data. *Biometrika*, 88:727-737, 2001.

124. *<u>***Zhu HT***</u>*. Relationship between two eigenmatrices of a (real) symmetric matrix-Solution. *Econometric Theory*, 16: 793-794, 2000.

125. *Cheung SH and <u>Zhu HT</u>. Simultaneous one-sided pairwise comparisons in a two-way design. *Biometrical Journal*, 40:613-625, 1998.

126. *<u>***Zhu HT***</u> and Wei BC. Some notes on preferred point alpha-geometry and alpha-divergence function. *Statistics & Probability Letters*, 33: 427-437, 1997.

127. *<u>***Zhu HT***</u> and Wei BC. Preferred point alpha-manifold and Amari's alpha connections. *Statistics & Probability Letters*, 36:219-229, 1997.

128. *Wei BC and <u>Zhu HT</u>. Some second order asymptotic in exponential family nonlinear regression models (A geometric approach). *Australian Journal of Statistics*, 39:129-148, 1997.

<u>ML Methods </u> (Journal of Machine Learning Research is the top ML journals)

129. Xinyu Gong, Jianli Zhang, Qi Gan, Yuxi Teng, Jixin Hou, Yanjun Lyu, Zhengliang Liu, Zihao Wu, Runpeng Dai, Yusong Zou, Xianqiao Wang, Dajiang Zhu, Hongtu Zhu, Tianming Liu, Yajun Yan, Advancing microbial production through artificial intelligence-aided biology, Volume 74, September 2024, 108399, *Biotechnology Advances,* 2024.

130. Y Fang, PT Yap, W Lin, H Zhu, M Liu. Source-free unsupervised domain adaptation: A survey. *Neural Networks*, 106230, 2024.

131. Hai Shu, Zhe Qu, and H. Zhu. D-GCCA: Decomposition-based Generalized Canonical Correlation Analysis for Multi-view High-dimensional data. *Journal of Machine Learning Research*, pp. 7615–7678, 2022.

Imaging Genetics (Science, Nature, Cell, Nature Genetics, and Nature Communication are the very best scientific journals).

132. **Q. Zhong**, X Song, and *H. Zhu*. Functional Joint Models for Imaging Genetic Data. *Statistica Sinica*. (2025), in press.

133. **Li, T., Yang, Y.,** Wang, X., Marron, S., and *H. Zhu.* Semi-nonparametric Varying Coefficients Models for imaging genetics. *Statistica Sinica*. (2025), in press.

134. B Zhao, **Y Li, Z Fan, Z Wu, J Shu**, X Yang, Y Yang, X Wang, B Li, X Wang, C Copana, Y Yang, J Lin, Y Li, J L Stein, J M O'Brien, T Li, *H Zhu*. Eye-brain connections revealed by multimodal retinal and brain imaging genetics. *Nature Communication.* (2024) 15:6064.

135. **Z. Jiang,** P.F. Sullivan, **T. Li, B. Zhao, X. Wang, T. Luo, S. Huang, P.Y. Guan, J. Chen, Y. Yang,** J. L. Stein, Yun Li, D. Liu, L. Sun, and *H Zhu*. The pivotal role of the X-chromosome in the genetic architecture of the human brain. *Science Advances,* 11 (4), eadq5360

136. **Bingxin Zhao**, Xiaochen Yang, Hongtu Zhu (2024). Estimating trans-ancestry genetic correlation with unbalanced data resources. *JASA A&CS*, 2024, VOL. 119, NO. 546, 839–85.

137. W Pan, Y Shan, C Li, S Huang, T Li, Y Li, *H Zhu*. FPLS-DC: Functional partial least squares through distance covariance for imaging genetics. *Bioinformatics*, btae173, 2024.

138. Lee, E., Ibrahim, J. G., and Zhu, H. Bayesian bi-level variable selection for genome-wide survival study. *Genomics Informatics*. 2023, 21. E28.

139. Wang, S., Li, T., Zhao, B., Dai, W., Yao, Y., Li, C., Li, T.F., Zhu, H. and Zhang, H. Supervariants reveal novel loci associated with human white matter microstructure. *Genome Research*, 2024 Feb 7;34(1):20-33.

140. Zhiwen Jiang, Haoyu Zhang, Thomas U Ahearn, Montserrat Garcia-Closas, Nilanjan Chatterjee, Hongtu Zhu, Xiang Zhan, Ni Zhao. The sequence kernel association test for multicategorical outcomes. *Genetics Epidemiology,* 2023 Sep;47(6):432-449.

141. Bingxin Zhao, Tengfei Li, Zirui Fan, Yue Yang, Juan Shu$_2$, Xiaochen Yang$_2$, Xifeng Wang, Tianyou Luo, Jiarui Tang, Di Xiong$_5$, Zhenyi Wu, Bingxuan Li, Jie Chen$_5$, Yue Shan, Chalmer Tomlinson, Ziliang Zhu, Yun Li, Jason L. Stein, and *Zhu HT*. Heart-brain connections: phenotypic and genetic insights from magnetic resonance images. *Science*, vol 380， Issue 6648, eabn6598, 2023.

142. Dengdeng Yu, Linbo Wang, Dehan Kong, and *Zhu HT*. Mapping the Genetic-Imaging-Clinical Pathway with Applications to Alzheimer's Disease. *Journal of American Statistical Association*. 117(540):1656-1668, 2022.

143. Jiawen Chen, Weifang Liu, Tianyou Luo, Zhentao Yu, Minzhi Jiang, Jia Wen, Gaorav, P. Gupta, Paola Giusti, Hongtu Zhu, Yuchen Yang, Yun Li. A comprehensive comparison on cell type composition inference for spatial transcriptomics data. *Briefings in Bioinformatics*. 23(4):bbac245, 2022.

144. Chen, T., Mandal, A., Zhu, H. and Liu, R. Imaging genetic based mediation analysis for human cognition. *Frontier Neuroscience*, Volume 16, p. 824069, 2022.

145. **B Zhao, T Li,** Stephen,M. Smith, **D Xiong, X Wang, Y Yang, T Luo, Z Zhu, Y Shan,** N Matoba, Q Sun, Y Yang, M. Hauberg, J Bendl, J.F. Fullard, P Roussos, W Lin, Y Li, J L. Stein, *H Zhu*. Common variants contribute to intrinsic human brain functional networks. *Nature Genetics,* Volume 54, Issue 4, pp. 508 - 517, 2022.

146. B Zhao, F Zou, and *Zhu HT*. Cross-trait prediction accuracy of summary statistics in genome-wide association studies. *Biometrics*, 2023 Jun;79:841-853.

147. **B. Zhao*, T. Li*, Y. Yang*, X. Wang*, T. Luo*, Y.Shan*, Z. Zhu, D. Xiong**, M. E. Hauberg, J. Bendl, J.F. Fullard, P. Roussos, Y. Li, J. L. Stein, and *Zhu*

HT. Common genetic variation influencing human white matter microstructure. *Science*, vol 372，Issue 6548，eabf3736, 2021.

148. **B. Zhao, Y. Shan, Y. Yang**, Z. Yu, **T. Li, X. Wang, T. Luo, Z. Zhu**, P. Sullivan, H. Zhao, Y. Li, and *Zhu HT*. Transcriptome-wide association analysis of 211 neuroimaging traits identifies new genes for brain structures and yields insights into gene-level pleiotropy with complex neuropsychiatric traits. *Nature Communication*, **12,** 2878 (2021). https://doi.org/10.1038/s41467-021-23130-y.

149. **B. Zhao** and *Zhu HT*. On genetic correlation estimation with summary statistics from genome-wide association studies. *Journal of American Statistical Association*, 2022;117(537):1-11.

150. **B. Zhao, J. Zhang,** J.G. Ibrahim, Y.Li, R.Knickmeyer, **T. Li, Y.Shan, Z. Zhu, F. Zhou, H. Liao**, T.Nichols, and *Zhu HT*. Large-scale neuroimaging and genetic study reveals genetic architecture of brain white matter microstructure. *Molecular Psychiatry*, 2021;26:3943-3955.

151. **Zhao, Y., Li, T.F.,** and *Zhu HT*. Bayesian sparse heritability analysis with high-dimensional neuroimaging phenotypes. *Biostatistics*，23, 2022, 467–484。

152. **Zhang, J**., Xia, K., **Ahn, M**., Jha, S.C., Blanchett, R., Crowley, J.J., Szatkiewicz, J.P., Zou, F., Zhu, H., Styner, M., Gilmore, J.H., Knickmeyer, R.C. Genome-Wide Association Analysis of Neonatal White Matter Microstructure. *Cerebral Cortex*, 31, 933–948, 2021.

153. **Zhou, F.,** Zhou, H.B., **Li, T.**, and *Zhu HT*. Analysis of Secondary Phenotypes in Multi-group Association Studies. *Biometrics*, 2020, 76, 606–618.

154. **Benjamin, R**. and Zhu, H.T. ACE of Space: Estimating Genetic Components of High-Dimensional Imaging Data. *Biostatistics*, in press，2020.

155. **Bingxin Zhao**, J.G. Ibrahim, Yun Li, **Tengfei Li, Yue Wang, Yue Shan, Ziliang Zhu, Fan Zhou, Jingwen Zhang, Chao Huang, Huiling Liao, Liuqing Yang,** Paul M. Thompson, *H. Zhu.* Heritability of regional brain volumes in large-scale neuroimaging and genetic studies. *Cerebra Cortex*，29，2904-2914, 2019.

156. **Bingxin Zhao, Tianyou Luo, Tengfei Li,** Yun Li, **Jingwen Zhang, Yue Shan, Xifeng Wang, Liuqing Yang, Fan Zhou, Ziliang Zhu, *Zhu HT*.** GWAS of 19,629 individuals identifies novel genetic variants for regional brain volumes and refines their genetic co-architecture with cognitive and mental health traits. **Featured on the cover of** *Nature Genetics*，51, 1637-1644, 2019.

157. **X**. Bi, L.Feng, S. Wang, Z. Lin, T. Li, B. Zhao, H. Zhu, H. Zhang. Common Genetic Variants Have Associations with Human Cortical Brain Regions and Risk of Schizophrenia。*Genetic Epidemiology*, 43, 548-558, 2019.

158. **Yize Zhao**, Hongtu Zhu, **Zhaohua Lu**, Rebecca Knickmeyer, and Fei Zou. Bayesian Hierarchical Variable Selection for Structured Genome-wide Association Studies。*Genetics,* 212, 397-415, 2019.

159. S.J. Lee, **J.W.Zhang** , M. C. Neale, M. Styner, H. Zhu, J.H. Gilmore. Quantitative tract-based white matter heritability in 1- and 2-year-old twins. *Human Brain Mapping*, 40, 1164-1173, 2019.

160. Farouk Nathoo, Linglong Kong, and Zhu, Hongtu. A Review of Statistical Methods in Imaging Genetics. *The Canadian Journal of Statistics*, 47, 108-131, 2019.

161. **Benjamin, R**. and Zhu, H.T. Note on bias from averaging repeated measurements in heritability studies. *Proceeding of National Academy of Science, USA*. 115, E122, 2018.

162. **Huang, C.**, Thompson, P., Wang, Y., **Yu, Y., Zhang, J., Kong, D.**, Colen, R., Knickmeyer, R., **Zhu, H.T.** "FGWAS: Functional genome wide association analysis." *NeuroImage*, 159, 107-121, 2017.

163. **Zhaohua Lu, Zakaria Khondker**, Joseph G Ibrahim, **Yue Wang**, and **H. Zhu.** Bayesian longitudinal low-rank regression models for imaging genetic data from longitudinal studies. *NeuroImage,* 149:305-322, 2017.

164. Rebecca Knickmeyer, Kai Xia, **Jingwen Zhang, Mihye Ahn**, Shaili Jha, James Crowley, Jin Szatkiewicz, **Tengfei Li,** Fei Zou, Hongtu Zhu, Derrek Hibar, Paul Thompson, Patrick Sullivan, Martin Styner, and John Gilmore. Genome-Wide Association Analysis Identifies Common Variants Influencing Infant Brain Volumes. *Translational Psychiatry*, 7, e1188, 2017.

165. X. Bi, **L. Yang, T. Li,** H. Zhu, and H. Zhang. Genome-Wide Mediation Analysis of Psychiatric and Cognitive Traits through Imaging Phenotypes. *Human Brain Mapping*, 38:4088-4097, 2017.

166. **Eunjee Lee**, Kelly S Giovanello, Andrew J Saykin, **Fengchang Xie, Dehan Kong, Yue Wang, Liuqing Yang**, Murali Doraiswamy, Joseph G Ibrahim; **Hongtu Zhu.** SNPs are associated with cognitive decline at AD conversion within MCI patients. *Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring.* 8, 86-95, 2017.

167. Zhu, W. S., **Y.Yuan, J. Zhang, F. Zhou,** R. C. Knickmeyer, and **H.Zhu.** Genome-wide Association Analysis of Secondary Imaging Phenotypes from the Alzheimer's Disease Neuroimaging Initiative Study. *NeuroImage,* 146:983-1002, 2016.

168. Allen, G. I., …, Zhu, H., Zhu, S. and ADNI. 2016. Crowd sourced estimation of cognitive decline and resilience in Alzheimer's disease. *Alzheimer's & Dementia.* 12:645-653, 2016.

169. **Lu, Z. H., Zhu, H.T.,** R.C. Knickmeyer, P.F. Sullivan, W.N. Stephanie, and Fei Zou, Multiple SNP-sets Analysis for Genome-wide Association Studies through Bayesian Latent Variable Selection. *Genetic Epidemiology*, 39, 664-677, 2015.

170. **D. Kong**, K. S. Giovanello, Y.L. Wang, W. Lin, E. Lee, Y. Fan, P. M. Doraiswamy, and **Hongtu Zhu**, ADNI (2015). Predicting Alzheimer's disease using combined imaging-whole genome SNP data. *Journal of Alzheimer's Disease,* 46: 695-702.

171. M.Huang, T.Nichols, C.Huang, Y.Yang, Z. Lu, Q. Feng, R.C. Knickmeyer, **H.Zhu,** and for ADNI. (2015). FVGWAS: Fast Voxelwise Genome Wide Association Analysis of Large-scale Imaging Genetic Data. *NeuroImage*, 118, 613-627. **Winner of Best Paper award in ASA SI Session, 2015.**

172. Lin, J, *Zhu, H.T.,* Ahn, M., Sun, W, and Ibrahim, J. G. Functional mixed effects models for imaging genetic data. *Genetic Epidemiology,* 38, 680-691, 2014.

173. Kai Xia, **Yang Yu, Mihye Ahn,** H. Zhu, Fei Zou, John Gilmore, Rebecca Christine Knickmeyer. Environmental and genetic contributors to salivary testosterone levels in infants. *Frontiers in Endocrinology.* 2014.

174. **Zhu, H.T., Khondker, Z. S., Lu, Z.H.,** and Ibrahim, J. G. Bayesian generalized low rank regression models for neuroimaging phenotypes and genetic markers. *Journal of American Statistical Association,* 109, 1084-1098, 2014.

175. **Bryant, C.,** Giovanello, K. S., Ibrahim, J. G., Shen, D. G., Peterson, B. S., and *Zhu, H.T.* Mapping the heritability of regional brain volumes explained by all common SNPs from the ADNI study. *PLOS ONE,* in press, 2013.

176. **Lin, J**., *Zhu, H.T.,* Knickmeyer, R., Styner, M., Gilmore, J. and Ibrahim, J.G. Projection Regression Models for Multivariate Imaging Phenotype. *Genetic Epidemiology,* 36, 631-641, 2012.

177. *Zhu HT, Yu CY, and Zhang HP. Tree-based disease classification for the protein data. *Proteomics*, 3:1673-1677, 2003.

AI for two-sided Markets

178. **Luo, S.,** Yang, Y., C. Shi, F. Yao, J. Ye, and *Zhu, H.T.* Policy Evaluation for Temporal and/or Spatial Dependent Experiments. *Journal of Royal Statistical Society, Series B.*, 2024, 86, 623–649.

179. Wan, S., Luo, S. C. and *Zhu, H.T.* Causal Probabilistic Spatio-temporal Fusion Transformers in Two-sided Ride-Hailing Markets. *ACM Transactions on Spatial Algorithms and Systems,* 2024, in press.

180. **Li, T.,** Shi, C., Lu, Z., Li, Y., and *Zhu, H.T.* Evaluating Dynamic Conditional Quantile Treatment Effects with Applications in Ridesharing. *Journal of American Statistical Association,* 2024, 119, 1736–1750.

181. C Shi , **Jin Zhu,** Ye Shen, **Shikai Luo,** Hongtu Zhu, and Rui Song. Off-Policy Confidence Interval Estimation with Confounded Markov Decision Process. *Journal of American Statistical Association,* 2024, 119, 273–284.

182. C Shi, **Luo S**. Y Le, H Zhu, and R Song. Statistically efficient advantage learning for offline reinforcement learning in infinite horizons. *Journal of the American Statistical Association*, 2024, 119, 232–245.

183. **Shi, C.**, Wan, R., Song, G., Luo, S., Zhu, H. and Song, R. (2023). A Multi-Agent Reinforcement Learning Framework for Off-Policy Evaluation in Two-sided Markets, *Annals of Applied Statistics*, 17, 2701–2722.

184. Qin, Z., Zhu, H.T., and Jieping Ye. Reinforcement learning for ridesharing: an extended survey. *Transportation Research Part C: Emerging Technologies 2022,* 144, p. 103852.

185. Shi, C., **Luo, S.K.,** Zhu, H., and Song, R. An Online Sequential Test for Qualitative Treatment Effects. *Journal of Machine Learning Research,* 2021, 22, 13061-13111.

186. Shi, C., **Luo, S.K**., Zhu, H., Jieping Ye, and Song, R. Time Dependent Causal Effects Evaluation in A/B Testing with a Reinforcement Learning Framework. *Journal of American Statistical Association,* 2023,118, 2059–2071.

187. **Fan, Z., Luo, S.,** Qie, X., Ye, J., and ***Zhu HT.*** Graph-Based Equilibrium Metrics for Dynamic Supply-Demand Systems with Applications to Ride-sourcing Platforms。 *Journal of American Statistical Association,* 2021，116 (536), 1688-1699.

188. Xu, Z., Yin, Y., Chao, X., Zhu, H., & Ye, J. "A generalized fluid model of ride-hailing systems". *Transportation Research Part B,* 150, 2021, 587-605.

189. X Qin, H Yang, Y Wu, ***H Zhu.*** Multi-party ride-matching problem in the ride-hailing market with bundled option services. *Transportation Research Part C: Emerging Technologies* 131, 103287, 2021

190. Qin，Z., Tang, X., Jiao, Y., Zhang, F., Xu, Z., Zhu, H., Ye, J. Ride-Hailing Order Dispatching at DiDi via Reinforcement Learning。 *Informs Journal on Applied Analytics*. 2020, 50. 272-285.

191. Z Shou, X Di, J Ye, H Zhu, H Zhang, R Hampshire. Optimal passenger-seeking policies on E-hailing platforms using Markov decision process and imitation learning. *Transportation Research Part C: Emerging Technologies*，2019， 111, 91-113.

192. **Xiaoran Qin, Kaixian Yu, Hanqian Li** , Feng Dai, Haijiang Liu, Hai Yang, Jieping Ye, ***Zhu HT.*** Development of a one-day driving cycle for electric ride-hailing vehicles. *Transportation Research Part D: Transport and Environment.* 89, 2020, 102597.

Journals for Cancer Genetics/Genomics

193. Shaolong Cao, Jennifer R. Wang, Shuangxi Ji, Peng Yang, Yaoyi Dai, Shuai Guo, Matthew D. Montierth, John Paul Shen, Xiao Zhao, Jingxiao Chen, Jaewon James Lee, Paola A Guerrero, Nicholas Spetsieris, Nikolai Engedal, Sinja Taavitsainen, Kaixian Yu, Julie Livingstone, Vinayak Bhandari, Shawna M Hubert, Najat C. Daw, P. Andrew Futreal, Eleni Efstathiou, Bora Lim, Andrea Viale, Jianjun Zhang, Matti Nykter, Bogdan A Czerniak, Powel H. Brown, Charles Swanton, Pavlos Msaouel, Anirban Maitra, Scott Kopetz, Peter Campbell, Terence P. Speed, Paul C. Boutros, **Hongtu Zhu**, Alfonso Urbanucci, Jonas Demeulemeester, Peter Van Loo and Wenyi Wang. Estimating tumor cell total mRNA expression reveals the molecular and clinical phenotype of cancer. *Nature BioTechnology*, 40, 1624–1633, 2022.

194. S.C. Dentro, I. Leshchiner, K.Haase, M. Tarabichi, J. Wintersinger, A.G. Deshwar, **K. Yu,** Y. Rubanova, G. Macintyre, J. Demeulemeester, I. Vázquez-García, K. Kleinheinz, D. G. Livitz, S. Malikic, N. Donmez, S. Sengupta, P. Anur, C. Jolly, M. Cmero, D. Rosebrock, S.E. Schumacher, Y. Fan, M. Fittall, R.M. Drews, X. Yao, T. B. K. Watkins, J. Lee, M. Schlesner, **H. Zhu**, D.J. Adams, N. McGranahan, C. Swanton, G.Getz, P.C. Boutros, M. Imielinski, R. Beroukhim, S. C. Sahinalp, Y. Ji, M. Peifer, I. Martincorena, F. Markowetz, V. Mustonen, K. Yuan, M. Gerstung, P. T. Spellman, W. Wang, Q. D. Morris, D.C.

Wedge, P. Van Loo*, on behalf of the PCAWG Evolution and Heterogeneity Working Group and the PCAWG consortium. Characterizing genetic intra-tumor heterogeneity across 2,658 human cancer genomes. *Cell, 184(8), 2239–2254.e39*, 2021.

195. Gerstung M, Jolly C, Leshchiner I, Dentro SC, Gonzalez S, Mitchell TJ, Rubanova Y, Anur P, Rosebrock D, Yu K , Tarabichi M, Deshwar A, Wintersinger J, Kleinheinz K, Vazquez-Garcia I, Haase K, Sengupta S, Macintyre G, Malikic S, Donmez N, Livitz DG, Cmero M, Demeulemeester J, Schumacher S, Fan Y, Yao X, Lee J, Schlesner M, Boutros PC, Bowtell DD, **Zhu H,** Getz G, Imielinski M, Beroukhim R, Sahinalp SC, Ji Y, Peifer M, Markowetz F, Mustonen V, Yuan K, Wang W, Morris QD, Spellman PT, Wedge DC, Van Loo P for PCAWG Evolution and Heterogeneity Working Group, and PCAWG network. The evolutionary history of 2,658 cancers. *Nature*, 578(7793):122-128, 2020.

196. The ICGC/TCGA Pan-Cancer Analysis of Whole Genomes Consortium. Pan-cancer analysis of whole genomes. *Nature*, 578, 82-93, 2020.

197. Jian Wang, Rongjie Liu, Yu Zhao, Chonnipa Nantavithya, Hesham Elhalawani, Hongtu Zhu, Abdallah Sherif Radwan Mohamed, Clifton David Fuller, Danita Kannarunimit, Pei Yang, Hong Zhu。 A predictive model of radiation-related fibrosis based on the radiomic features of magnetic resonance imaging and computed tomography。 *Translational Cancer Research*，9，4726-4738，2020.

198. Li Wang, **Liuqing Yang**,Shichao Han, Jinming Zhu, Yuting Li, Zeming Wang, You Hong Fan, Eric Lin, Ruiping Zhang， Narayan Sahoo, Yupeng Li, Michael Gillin, Xiaodong Zhang, Xiaochun Wang, Tengfei Li, Xiaorong Ronald Zhu, **Hongtu Zhu**，John V. Heymach, Jeffrey N. Myers, Steven J. Frank. Patterns of protein expression in human head and neck cancer cell lines differ after proton versus photon radiotherapy。 *Head & Neck*， 42, 289-301， 2020。

199. Rongjie Liu, Hesham Elhalawani, Abdallah Sherif Radwan Mohamed, Baher Elgohari, Laurence Court, Hongtu Zhu, Clifton David Fuller。 Stability analysis of CT radiomic features with respect to segmentation variation in oropharyngeal cancer。 *Clinical and translational radiation oncology*，21， 11-18, 2020.

200. Cmero，M.,…, …, Macintyre, G. and PCAWG Consortium （including Zhu, H） Inferring structural variant cancer cell fraction. *Nature Communication*, 11, 730, 2020.

201. Salcedo, A. …, Boutros, P. C. and PCAWG Consortium (including Zhu, H.) A community effort to create standards for evaluating tumor subclonal reconstruction. *Nature Biotechnology* 38(1):97-107, 2020.

202. Rubanova, Y.,…, Morris, Q. and PCAWG Consortium (including Zhu, H.) Reconstructing evolutionary trajectories of mutation signature activities in cancer using TrackSig. *Nature Communications* 11(1):731, 2020.

203. Tarabichi, M., …, Peter Van Loo and PCAWG Consortium (including Zhu, H.). Neutral tumor evolution? *Nature Genetics,* 50, 1630-1633, 2018.

204. Kelly Flentie, Caleb Gonzalez, Brandon Kocher, Yue Wang, Hongtu Zhu, Jayne Marasa, and David Piwnica-Worms. Nucleoside Diphosphate Kinase-3

(NME3) Enhances TLR5-Induced NF-κB Activation. *Molecular Cancer Research*. 2018, 16, 986-999, 2018.

Quantitative Psychology Journals

205. **Kang, K.**, Cai, J., Song, X. and Zhu, H. Bayesian Hidden Markov Models for Delineating the Pathology of Alzheimer's Disease. *Statistical Methods in Medical Research*. 28, 2112-2124, 2019.
206. Tang, N.S., Chow, S. M., Ibrahim, J.G., ***Zhu HT.*** Bayesian Sensitivity Analysis of Dynamic Factor Analysis Models with Nonparametric Prior and Possible Nonignorable Missingness, *Psychometrika*, 82, 875–903, 2017.
207. S.A. Maisto, **F.C.Xie**, K.Witkiewitz, C.K.Ewart, G.J. Connors, H. Zhu, G.Elder, M.Ditmar, S.M. Chow. How chronic self-regulatory stress, poor anger regulation, and momentary affect undermine treatment for alcohol use disorder: integrating social action theory with the dynamic model of relapse. *Journal of Social and Clinical Psychology,* 36, 238-263, 2017.
208. Chow, S. M., **Lu, Z.H.,** Sherwood, ***Zhu, HT.*** Fitting nonlinear ordinary differential equation models with random effects using the stochastic approximation expectation-maximization (SAEM) algorithm. *Psychometrika,* 81, 102-134, 2016.
209. **Lu, Z.H.,** Chow, S. M., Sherwood, A. and ***Zhu, H.T***. Bayesian analysis of nonlinear latent stochastic differential equations with application to human dynamics. *Annals of Applied Statistics,* 9, 1601-1620, 2015.
210. Chow, SM., Tang, NS, **Yuan, Y**., Song, X.Y., and Zhu HT. Semiparametric nonlinear dynamic latent variable models. *British Journal of Mathematical and Statistical Psychology,* 64, 69–10, 2011.
211. **Chen, F,** Zhu HT, and Lee SY. Perturbation selection and local influence analysis for nonlinear structural equation model. *Psychometrika,* 493-516, 2009.
212. Lee SY and Zhu HT. Maximum likelihood estimation of nonlinear structural equation models. *Psychometrika*, 67:189-210, 2002.
213. Zhu HT and Lee SY. Bayesian analysis of finite mixtures in the LISREL model. *Psychometrika*, 66:133-152, 2001.
214. Song XY, Lee SY, and Zhu HT. Model selection in structural equation models with continuous and polytomous data.   *Structural Equation Modeling*, 8:378-396, 2001.
215. Lee SY and Zhu HT. Statistical Analysis of nonlinear structural equation models with continuous and polytomous data. *British Journal of Mathematical and Statistical Psychology*, 53:209-232, 2000.
216. Zhu HT and Lee SY. Statistical analysis of nonlinear factor analysis models. *British Journal of Mathematical and Statistical Psychology*, 52:225-242, 1999.

Medical Imaging/Neuroscience Journals
(NeuroImage, IEEE Transactions on Medical Imaging, Medical Image Analysis, and Human Brain Mapping are the very best neuroimaging and medical imaging journals; Cerebral Cortex, Nature Neuroscience, Journal of Neuroscience, and PNAS are the very best neuroscience journals.)

217. Wang, X.,Hu, M.C., and *Zhu, H.T.* Artificial Intelligence in Image-based Cardiovascular Disease Analysis: A Comprehensive Survey and Future Outlook. *Annual Review of Biomedical Data Science*, Volume 9, Issue 1, 2026.

218. Xiaochuan Wang, Yuqi Fang, Qianqian Wang, Pew-Thian Yap, Hongtu Zhu, and Mingxia Liu. Self-Supervised Graph Contrastive Learning with Diffusion Augmentation for Functional MRI Analysis and Brain Disorder Detection. *Medical Image Analysis*. 101: 103403, 2025.

219. Wu, M., Zhang, L., Yap, P. T., Zhu, H., & Liu, M. (2025). Disentangled latent energy-based style translation: An image-level structural MRI harmonization framework. *Neural Networks*, *184*, 107039.

220. Turkestani, N., Li, T., Bianchi, J., Gurgel, M., Prieto, J., Shah, H., Benavides, E., Soki, F. N., Mishina, Y., Fontana, M., Rao, A., Zhu, H., & Cevidanes, L. S. A Comprehensive Patient-Specific Prediction Model for Temporomandibular Joint Osteoarthritis Progression. *PNAS*, 2024;121:e2306132121.

221. Thistle, J. E., Liu, C. W., Rager, J. E., Singer, A. B., Chen, D., Manley, C. K., Piven, J., Gilmore, J. H., Keil, A. P., Starling, A. P., Zhu, H., Lin, W., Lu, K., Engel, S. M. (2024). Urinary metabolite concentrations of phthalate and plasticizers in infancy and childhood in the UNC baby connectome project. *Environmental Research*, 259, 119467.

222. Q Wang, W Wang, Y Fang, PT Yap, H Zhu, HJ Li, L Qiao, M Liu. Leveraging Brain Modularity Prior for Interpretable Representation Learning of fMRI. IEEE Transactions on Biomedical Engineering, 2024. 71, 2391-2401.

223. **J Chen, T Li, B Zhao**, H Chen, C Yuan, GA Garden, G Wu, *Zhu HT*. The interaction effects of age, *APOE* and common environmental risk factors on human brain structure. *Cerebral Cortex* 34 (1), bhad472, 2024.

224. *Zhu HT*, Tengfei Li, and Bingxin Zhao. Statistical learning methods in neuroimaging data analysis with applications. *Annual Review of Biomedical Data Science*, Volume 6, Issue 1, 2023.

225. Y Fang, GG Potter, D Wu, H Zhu, M Liu. Addressing multi-site functional MRI heterogeneity through dual-expert collaborative learning for brain disease identification. Human Brain Mapping 44 (11), 4256-4271, 2023.

226. Liangjun Chen, Ya Wang, Zhengwang Wu, Yue Shan, Tengfei Li, Sheng-Che Hung, Lei Xing, Hongtu Zhu, Li Wang, Weili Lin, Gang Li. Four-dimensional mapping of dynamic longitudinal brain subcortical development and early learning functions in infants. *Nature Communication*, 2023, 14:3727.

227. Wang, X., Rao, S., Cheng, J., Wu, Y., Yap, P.T., Ibrahim, J. G., and *Zhu HT*. Spatially Robust Adaptive Ensemble Average Propagator Reconstruction via Spherical Polar Fourier Imaging. *Statistics and its Interface,* in press, 2023.

228. Ya Wang, Liangjun Chen, Zhengwang Wu, Tengfei Li, Yue Sun, Jiale Cheng, Hongtu Zhu, Weili Lin, Li Wang, Wenhua Huang, Gang Li. Longitudinal development of the cerebellum in human infants during the first 800 days. *Cell Reports*, 2023, Volume 42, Issue 4, p. 112281.

229. Spann, Marisa N., Jessica L. Wisnowski, Banu Ahtam, Wei Gao, Hao Huang, Mary Beth Nebel, Elizabeth S. Norton et al. including Zhu, H. The art, science, and secrets of scanning young children. *Biological Psychiatry* (2022), Volume 93,

Issue 10, pp. 858 - 860.

230. **C. Huang*,** Zhenlin Xu, Zhengyang Shen, Tianyou Luo*, Tengfei Li, Daniel Nissman, Amanda Nelson, Yvonne Golightly, Marc Niethammer, *Zhu HT.* Dynamic abnormality detection and progression for longitudinal knee magnetic resonance images from the Osteoarthritis Initiative. *Medical Image Analysis*, Volume 77, p. 102343, 2022.

231. Yin, W., Li, T., Mucha, P.J., Cohen, J. R., Zhu, H., Zhu, Z. and Lin, W. Altered neural flexibility in children with attention-deficit/hyperactivity disorder. *Molecular Psychiatry*, Volume 27, Issue 11, pp. 4673 - 4679, 2022.

232. Li, T., Samuel, T. M., Zhu, Z., Howell, B., Cho, S., Baluyot, K., ... Zhu, H. & Lin, W. (2022). Joint analyses of human milk fatty acids, phospholipids, and choline in association with cognition and temperament traits during the first 6 months of life. *Frontier in Nutrition,* Volume 9, p. 919769.

233. W.Yin，**T. Li**，SC. Hung，H. Zhang，L. Wang，D. Shen，H. Zhu，P. J. Mucha，J. R. Cohen，Weili Lin. The Emergence of a Functionally Flexible Brain During Early Infancy. *PNAS,* 117, 38, 23904 - 23913, 2020.

234. Jonas Bianchi, Antônio Carlos de Oliveira Ruellas, João Roberto Gonçalves, Beatriz Paniagua, Juan Carlos Prieto, Martin Styner, Tengfei Li, Hongtu Zhu, James Sugai, William Giannobile, Erika Benavides, Fabiana Soki, Marilia Yatabe, Lawrence Ashman, David Walker, Reza Soroushmehr, Kayvan Najarian, Lucia Helena Soares Cevidanes. Osteoarthritis of the temporomandibular Joint can be diagnosed earlier using biomarkers and machine learning. *Scientific Reports*, Volume 10, Issue 1, p. 8012, 2020.

235. **Liming Zhong; Tengfei Li; Hai Shu; Chao Huang;** Jason Michael Johnson; Ho-Ling Liu; Donald F. Schomer; Qianjin Feng; Wei Yang，*Zhu HT.* (TS)2WM: Tumor Segmentation and Tract Statistics for Assessing White Matter Integrity with Applications to Glioblastoma Patients, *NeuroImage,* Volume 223, p. 117368, 2020.

236. **Zhengwu Zhang**, Genevera Allen; Hongtu Zhu; David Dunson, Tensor network factorizations: Relationships between brain structural connectomes and trait. *NeuroImage,* 197, 330-343, 2019.

237. B.R. Howell, **M. Ahn,** Y. Shi, J.R. Godfrey, X. Hu, H. Zhu, M.A Styner, M.M. Sanchez, Disentangling the Effects of Early Caregiving Experience and Heritable Factors on Brain White Matter Development in Rhesus Monkeys. *NeuroImage,* 197, 625-642, 2019.

238. C. W. Wang, Y.C. Lee, E.Calista, **F. Zhou,** H. Zhu, R.Suzuki, D. Komura, S.Ishikawa, S.P. Cheng (2018). A benchmark for comparing precision medicine methods in thyroid cancer diagnosis using tissue microarrays. *Bioinformatics,* 34, 1767-1773.

239. Kurt G Schilling, Vishwesh Nath, Colin Hansen, Prasanna Parvathaneni, Justin Blaber, Yurui Gao, Peter Neher, Dogu Baran Aydogan, Yonggang Shi, Mario Ocampo-Pineda, Simona Schiavi, Alessandro Daducci , Gabriel Girard, Muhamed Barakovic, Jonathan Rafael-Patino, David Romascano, Gaëtan Rensonnet, Marco Pizzolato, Alice Bates, Elda Fischi, Jean-Philippe Thiran, Erick J. Canales-Rodríguez, **Chao Huang**, **Hongtu Zhu**, **Liming Zhong**, Ryan Cabeen, Arthur W Toga, Francois Rheault, Guillaume Theaud, Jean-Christophe

Houde, Jasmeen Sidhu, Maxime Chamberland, Carl-Fredrik Westin, Tim B. Dyrby, Ragini Verma, Yogesh Rathi, M Okan Irfanoglu, Cibu Thomas, Carlo Pierpaoli, Maxime Descoteaux, Adam W Anderson, Bennett A Landman. "Limits to the anatomical accuracy of diffusion tractography using modern approaches". *NeuroImage*, 185, 1-11, 2018.

240. Brittany R. Howell, Martin A. Styner, Wei Gao, Pew-Thian Yap, Li Wang, Kristine Baluyot, Essa Yacoub, Geng Chen, Taylor Potts, Andrew Salzwedel, Gang Li, John H. Gilmore, Joseph Piven, J. Keith Smith, Dinggang Shen, Kamil Ugurbil, Hongtu Zhu, Weili Lin, Jed T. Elison (2018). The UNC/UMN Baby Connectome Project (BCP): An overview of the study design and protocol development. *NeuroImage*, 185, 891-905, 2018.

241. **L.Y. Liu,** Y. Liu, and ***Zhu HT.*** (2018). SMAC: Spatial Multi-category Angle-based Classifier for High-dimensional Neuroimaging Data. *NeuroImage,* 172, 130-145.

242. **Z. Zhang**, M. Descoteaux, **J. Zhang**, G. Girard, M. Chamberland, D. Dunson, A. Srivastava, and ***H. Zhu***. (2018). Mapping Population based Structural Connectomes. *NeuroImage*, 172，130-145.

243. Guinney, J. et al. including Zhu,H. "Prediction of overall survival for patients with metastatic castration-resistant prostate cancer: development of a prognostic model through a crowdsourced challenge with open clinical trial data." *The Lancet Oncology*, 18, 946-961, 2017.

244. **K. Yu, Y. Zhang, Y. Yu, C. Huang, R. Liu, T.Li, L.Yang,** J.S. Morris, V.Baladandayuthapania, and ***Zhu HT.*** (2017). Radiomic analysis in prediction of Human Papilloma Virus status. *Journal: Clinical and Translational Radiation Oncology.* 7, 49-54.

245. M. A. Broadwatera, S.H. Lee, **Y. Yu,** H. Zhu, F.T. Crews, D.L. Robinsona, and Y.Y. I. Shih。Adolescent alcohol exposure decreases frontostriatal resting state functional connectivity in adulthood. *Addition Biology*, 23，810-823，2018.

246. Tomasz, J. H., M. Caughey, Y.Wang, H. Zhu, B.Huang, E. Lee, C.Zamora, M.Farber, J.Fulton, P.Ford, W.Marston, R. Vallabhaneni, Ti. Nichols, and C. Gallippi. (2017). Performance of acoustic radiation force impulse ultrasound imaging for carotid plaque characterization with histological validation. *Journal of Vascular Surgery,* 66，1749-1757.

247. Smith, I. T., Townsend, L.B., **Huh, R.** H. Zhu, and Smith, S. L. (2017) Stream-dependent development of higher visual cortical areas. *Nature Neuroscience*, 20, 200–208.

248. H.C. Hazlett, H. Gu, B.C. Munsell, S.H.Kim, M.Styner, J.J. Wolff, J.T. Elison, M.R. Swanson, H.Zhu, K.N. Botteron, L. Collins, J.N. Constantino, S.R. Dager, A.M. Estes, A.C. Evans, V. Fonov, G.Gerig, P. Kostopoulos, R.C. McKinstry, J. Pandey, S. Paterson, J. R. Pruett, Jr., R.T. Schultz, D.W. Shaw, L.Zwaigenbaum, and J. Piven, for the IBIS Network. Early brain development in infants at high risk for autism spectrum disorder. *Nature*, 542, 348-351, 2017.

249. **Jin, Yan; Huang, Chao**; Daianu, Madelaine; Zhan, Liang; Dennis, Emily;

Reid, Robert; Jack, Clifford; Zhu, Hongtu; Thompson, Paul. 3-D Tract-Specific Local and Global Analysis of White Matter Integrity in Alzheimer's Disease. *Human Brain Mapping,* 38:1191-1207, 2017.

250. Rebecca Knickmeyer, Kai Xia, **Zhaohua Lu, Mihye Ahn**, Shaili Jha, Fei Zou, Hongtu Zhu, Martin Styner, John Gilmore. Impact of Demographic and Obstetric Factors on Infant Brain Volumes: A Population Neuroscience Study. *Cerebra Cortex*, 27，5616-5625，2017.

251. **J.W. Hyun, Y. Li, C. Huang,** M. Styner, W. Lin, and *H. Zhu.* STGP: Spatio-temporal Gaussian process models for longitudinal neuroimaging data. *NeuroImage*, 134, 550-562, 2017.

252. S. C. Jha, S. Meltzer-Brody, R. J. Steiner, **E. Cornea,** S. Woolson, **M. Ahn,** A. R. Verde, R. M. Hamer, H. Zhu, M. Styner, J. H. Gilmore, R. C. Knickmeyer. Antenatal Depression, Treatment with Selective Serotonin Reuptake Inhibitors, and Neonatal Brain Structure: A Propensity-Matched Cohort Study. *Psychiatry Research: Neuroimaging,* 253:43-53, 2016.

253. J.N. Kornegay, D.J. Bogan, J.R. Bogan, J.L. Dow, J. Wang, Z. Fan, N. Liu, L, Warsing, R. W. Grange, **M. Ahn,** C. J.Balog-Alvarez, S. W. Cotten, M.S. Willis, C. Brinkmeyer-Langford, H. Zhu, J. Palandra, C. A. Morris, M.A. Styner, K. R. Wagner. Dystrophin-Deficient Dogs with Reduced Myostatin have Unequal Muscle Growth and Greater Joint Contractures. *Skeletal Muscle,* 6，14，2016.

254. S. J. Lee, R.J. Steiner, **Y. Yu,** M.C. Neale, M. Styner, H. Zhu, and J.H. Gilmore. Common and heritable components of white matter microstructure predict cognitive function from birth to 2 years. *Proceedings of the National Academic Sciences, USA,* 114, 148-153, 2017.

255. Geng, X., Li, G., **Lu, Z.,** Wang, L., D. Shen, Zhu, H. and J. H. Gilmore. Structural and Maturational Covariance in Early Childhood Brain Development. *Cerebra Cortex*, 27，1795–1807，2017.

256. Gang Li, Li Wang, Feng Shi, Amanda E. Lyall, **Mihye Ahn**, Ziwen Peng, H. Zhu, Weili Lin, John H. Gilmore, Dinggang Shen. Cortical Thickness and Surface Area in Neonates at High Risk for Schizophrenia, *Brain Structure and Function*, 221, 447-461, 2016.

257. **Huang, C., Liang, S.,** Niethammer, M., *Zhu HT.* (2015). Disease Region Detection of Longitudinal Knee MRI data. *IEEE Transaction on Medical Imaging,* 34, 1914-1927. **Winner of Best Paper award in ASA SI Session, 2014.**

258. An H*, Ford AL*, Chen Y, Zhu H, Ponisio R, Kumar G, Modir-Shanechi A, Khoury N, Vo KD, Williams JA, Derdeyn CP, Diringer MN, Panagos P, Powers WJ, Lee JM†, Lin W†. Defining the Ischemic Penumbra using Magnetic Resonance Oxygen Metabolic Index. *Stroke*, 46, 982-988, 2015.

259. S.J. Lee, R. J. Steiner, S. Luo, M. C. Neale, M. Styner, H. Zhu, J.H. Gilmore. (2015). Quantitative tract-based white matter heritability in twin neonates. *NeuroImage*, 111, 123–135.

260. J.N Kornegay, J.M. Peterson, D.J. Bogan, W.Kline, J.R Bogan, J.L.Dow Z.Fan,

J.Wang, **Mihye Ahn,** H. Zhu, M. Styner and D.C. Guttridge. NBD delivery improves the disease phenotype of the golden retriever model of Duchenne muscular dystrophy. *Skeletal Muscle*. **4**:18, 2014.

261. Lucile Bompard, Shun Xu, ⌷Martin Styner, ⌷⌷Beatriz Paniagua, ⌷**Mihye Ahn, Ying Yuan**, Valerie Jewells, Wei Gao, Dinggang Shen, Hongtu Zhu, Weili Lin. Multivariate Longitudinal Shape Analysis of Human Lateral Ventricles during the First Twenty-Four Months of Life. *PLOS ONE,* 2014*.*

262. Wei Gao, Amanda Elton, Hongtu Zhu*,* Sarael Alcauter, J. Smith, John H Gilmore, and Weili Lin. Inter-subject Variability of and Genetic Effects on the Brain's Functional Connectivity during Infancy. *Journal of Neuroscience*, 34: 11288-11296, 2014.

263. Cevidanes LH, Walker D, Schilling J, Sugai J, Giannobile WV,Paniagua B, Benavides E*, Zhu H,* Marron JS, Jung B,Baranowski D, Rhodes J, Ludlow JB, Nackley A, Lim PF,Nguyen T, Goncalves J, Wolford L, Kapila S, Styner M. 3D Osteoarthritic Changes in TMJ Condylar Morphology Correlates with Specific Systemic and Local Biomarkers of Disease. *Osteoarthritis and Cartilage,* 221657-67, 2014.

264. J. W. Hyun, Li, Y. M., Gilmore, J., **Lu, Z.H.,** Styner, M., and *Zhu, H.T.* SGPP: Spatial Gaussian Predictive Process Models for Neuroimaging Data. *NeuroImage*, 89, 70–80, 2014.

265. Y. Tao, X. Zhang, M. Chopra, M.J. Kim, K. R. Buch, **D. Kong,** J. Jin, Y. Tang, H. Zhu, Valerie Jewells, and Silva Markovic-Plese. The Role of Endogenous IFNβ in the Regulation of Th17 Responses in Patients with Relapsing-Remitting Multiple Sclerosis, *Journal of Immunology*, 192:5610-5617, 2014.

266. Chen, Y. S., Zhu, H. T., An, H. Y., and Weili Lin. More insights into early brain development through statistical analyses of eigen-structural elements of diffusion tensor imaging using multivariate adaptive regression splines. *Brain Structure and Function*, 219(2):551-69, 2014.

267*.* Fan, Z., Wang, J. H., **Ahn, M.**, Shiloh-Malawsky, Y., Chahin, N., Elmore, S., Bagnell, R., Wilber, K., An, H. Y., Lin, W., Zhu, H.T., Styner, M., Kornegay, J. N. Characteristics of MRI biomarkers in a natural History study of golden retriever muscular dystrophy. *Neuromuscular Disorder*, 24(2):178-91, 2014.

268*.* Ford AL*, An H*, **Kong L**, Zhu H, Vo KD, Powers WJ, Lin W+, and Lee JM+. Clinically-relevant reperfusion in acute ischemic stroke: MTT performs better than Tmax and TTP. *Translational Stroke Research,* 5, 415-421, 2014.

269. R.C. Knickmeyer, **J.P. Wang,** H.T. Zhu, , X. Geng, S. Woolson, R.M. Hamer, T.Konneker, M.Styner, and J. H. Gilmore, M.D. Impact of Sex and Gonadal Steroids on Neonatal Brain Structure. *Cerebra Cortex,* 24:2721-31, 2014.

270. Knickmeyer, R. C., **Wang, J. P.,** Zhu, H.T., Geng, X., Woolson, S., Hamer, R. M., Konneker, T., Lin, W. L., Styner, M., and Gilmore, J. H. Common variants in psychiatric risk genes predict brain structure at birth. *Cerebra Cortex*. 24(5):1230-46, 2014.

271. Nguyen, T., Cevidanes, L., Paniagua, B., Zhu, H.T., de Paula, L. K., and De Clerck, H. Use of shape correspondence analysis to quantify skeletal changes associated with bone-anchored class III correction. *The Angle Orthodontist,* 84(2):329-36, 2014.

272. A. R. Verde, F. Budin, J.B. Berger, A. Gupta, M.Farzinfar, A. Kaiser, **M. Ahn**, H.J Johnson, J. Matsui, H.C. Hazlett, A. Sharma, C. Goodlett, Y. Shi, S. Gouttard, C. Vachet, J. Piven, *H. Zhu,* G. Gerig, M. A.Styner. UNC-Utah NA-MIC Framework for DTI Fiber Tract Analysis, *Frontiers in Neuroinformatics*, 7:51,2013.

273. **Yuan, Y.,** Gilmore, J., Geng, X. J., Styner, M., Chen, K. H., Wang, J. L., and *Zhu, H.T.* A longitudinal functional analysis framework for analysis of white matter tract statistics. *NeuroImage*, 23:220-31, 2013.

274. Zhang, X., Tao, Y., Chopra, M, Marcus, K. L., Choudhary, N., **Ahn, M.,** Zhu, H.T. and Markovic-Plese, S. Differential Reconstitution of T-Cell Subsets Following Immunodepleting Treatment with Alemtuzumab (αCD52 Mab) in Patients with Relapsing-remitting Multiple Sclerosis. *Journal of Immunology*, 191:5867-5874, 2013.

275. Nguyen, T., Cevidanes, L., Paniagua, B., Zhu, H., de Paula, L. K., and De Clerck, H. Use of shape correspondence analysis to quantify skeletal changes associated with bone-anchored class III correction. *The Angle Orthodontist*, 84:329-36, 2013.

276. Nguyen, T., Cevidanes, L., Zhu, H., LeCornu, M. and Larson, B. Three-dimensional treatment outcomes in class II patients treated using Herbst: pilot study. *American Journal of Orthodontics & Dentofacial Orthopedics*, 144(6):818-30, 2013.

277. B, Russell., C, Tomasz, **Wu, C.D,** N, Timothy; Zhu, H.T., Jonathon, H., Elizabeth, M. and Gallippi, C. Acoustic Radiation Force Beam Sequence Performance for Detection and Material Characterization of Atherosclerotic Plaques Part II: Preclinical, Ex Vivo Results. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, 60, 2471-2487, 2013.

278. **Li, YM**, Gilmore, J.H., Styner, M., Lin, W. L., Shen, D. G., and *Zhu, HT*. Spatial adaptive generalized estimating equations for longitudinal neuroimaging data. *Neuroimage,* 72, 91-105, 2013.

279. **W. Gao**, J. H Gilmore, D. Shen, J. K. Smith, Zhu HT, and Lin, W. The synchronization within and interaction between the default and dorsal attention networks in early infancy. *Cerebra Cortex.* 23: 594-603, 2013.

280. Shi, Y., Short, S.J., Knickmeyer, R. C., **Wang, J. P.**, Coe, C. L., Gilmore, H. J., Zhu, H.T., and Styner, M. A. Diffusion Tensor Imaging Based Characterization of Neurodevelopment in Primates. *Cerebral Cortex,* 23:36-48, 2013.

281. **Li, YM**, John Gilmore, **JP Wang,** M. Styner, Weili Lin, and *Zhu, HT*. Two-stage spatial adaptive analysis of twin neuroimaging data. *IEEE Transactions on Medical Imaging.* 31, 1100-12, 2012.

282. Z Liu, M Farzinfar, L. M. Katz, HT Zhu, C. B. Goodlett, G. Gerig, M. Styner, and B. L. Marks. Automated voxel-wise brain DTI analysis of fitness and aging. *The Open Medical Imaging Journal*, 6, 80-88, 2012.

283. **Hua, Z.W**., Dunson, D., Gilmore, J.H., Styner, M., and ***Zhu, HT***. Semiparametric Bayesian Local Functional Models for Diffusion Tensor Tract Statistics. *NeuroImage,* 63, 460-674, 2012.

284. John H. Gilmore, Feng Shi, Sandra Woolson, Rebecca C. Knickmeyer , Sarah J. Short , Weili Lin, Zhu, HT., Robert M. Hamer, Martin Styner, and Dinggang Shen. Longitudinal Development of Cortical and Subcortical Gray Matter from Birth to 2 Years. *Cerebral Cortex*, 22(11):2478-85, 2012.

285. ***Zhu, HT.,*** **Kong, L**., Li, R., Styner, M., Gerig, G., Lin, W. and Gilmore, J. H. FADTTS: Functional Analysis of Diffusion Tensor Tract Statistics, *NeuroImage,* 56, 1412-1425, 2011.

286. **M.R. Scola**, T.C. Nichols, H Zhu, M.C. Caughey, E.P. Merricks, R.A. Raymer, P. Margaritis, K.A. High, and C. M. Gallippi. ARFI Ultrasound Monitoring of Hemorrhage and Hemostasis *In Vivo* in Canine von Willebrand Disease and Hemophilia. *Ultrasound in Medicine and Biology*, 37,2126-32, 2011.

287. Wei Gao, John H Gilmore, Kelly S Giovanello, Jeffery Keith Smith, Dinggang Shen, Hongtu Zhu, and Weili Lin, "Temporal and Spatial Evolution of Brain Network Topology during the First Two Years of Life", *PLoS One,* 6(9): e25278. 2011.

288. Chen, Y.S, An, H.Y., Zhu, HT, Shen, D.G., Gilmore, J.H. and Lin, W. L. Longitudinal regression analysis of spatial-temporal growth patterns of geometrical diffusion measures in early postnatal population with diffusion tensor imaging, *NeuroImage,* 58, 993-1005, 2011.

289. **Skup, M**., ***Zhu, HT*.,** **Wang, YP**., Giovanello, K.S., **Lin, J.A**. Shen, D.G., **Shi, F**., **Wang, J.P**., **Gao, W.,** Lin, W., Fan, Y., Zhang, H. and ADNI. Sex Differences in Grey Matter Atrophy Patterns Among AD and aMCI patients: Results from ADNI. *NeuroImage,* 56, 890-906, 2011.

290. Paniagua, B., Cevidanes, L., Walker, D., Zhu, H., Guo, RX., Styner, M. Clinical application of SPHARM-PDM to qualify temporomandibular joint osteoarthritis. *Computerized Medical Imaging and Graphics*, 35, 345-352, 2011.

291. Paniagua, B., Cevidanes, L., Zhu, H.T., Styner, M. Surgical Outcome Quantification using SPHARM-PDM Toolbox in orthognathic surgery. *International Journal of Computer Assisted Radiology and Surgery,* 6, 617-626, 2011.

292. ***Zhu, H.T***., Styner, M., Tang, N.S., Liu, Z.X., Lin, W.L., Gilmore, J.H. FRATS: functional regression analysis of DTI tract statistics. *IEEE Transactions on Medical Imaging*, 29, 1039-1049, 2010.

293. **Yap PT**, Wu GR, Zhu HT, Lin W, Shen DG. Fast Tensor Image Morphing for Elastic Registration, *IEEE Transactions on Medical Imaging,* 29*,* 1192 - 1203, 2010.

294. **Cevidanes LHS, Hajati A-K, Paniagua B, Lim, PF, Walker DG, Palconet G, Nackley AG, Ludlow JB, Styner MA, Zhu H, Phillips C. Quantification of Condylar Resorption in TMJ Osteoarthritis.** *Oral Surg Oral Med Oral Pathol Oral Radiol Endod***, 110, 110-117, 2010. Winner of Best Paper award**

295. Grauer, D., Cevidanes, L., Styner, M., Heulfe, I., Harmon, E., Zhu, HT., Proffit, W. R.   Accuracy and landmark error calculation using CBCT generated cephalograms, *Angle Orthod, 80* 286-94, 2010.

296. **Gao W,** Zhu HT, Lin WL. DTI imaging parameters optimization using prior information of fiber orientation, *NeuroImage,* 44, 729-741, 2009.

297. **Gao, W.,** Zhu, HT., Giovanello, K. S., Smith, J. K., Shen, D. G., Gilmore, J. H., and   Lin, W.L. Emergence of the brain's default network: Evidence from two-week-old to four-year-old healthy pediatric subjects. *Proceedings of the National Academic Sciences, USA,* (PNAS Direct Submission) 106, 6790-6795, 2009.

298. Peterson BS, Warner V, Bansal R, Zhu HT, Hao X, Xu D, Liu J, Weissman MM. Right hemisphere cortical thinning in persons at risk for major depression. *Proceedings of the National Academic Sciences, USA,* (PNAS Direct Submission) 106, 6273-6278, 2009.

299. Posner, J., …, Zhu HT, Peterson BS. The neurophysiological bases of emotion: An fMRI study of the affective circumplex using emotion-denoting words. *Human Brain Mapping,*   30, 883-895, 2009.

300. Yap, P. T., Wu, G.R.,   Zhu, HT.,   Lin, W.L., Shen, DG.. TIMER: Tensor Image Morphing for Elastic Registration. *Neuroimage*, 47, 549-563, 2009.

301. Chen, Y.S., An, H. , Zhu, HT., Smith, K., Hall C, Robertson K., Robertson W, Gao, F., Bullit, E., Lin, W. L., Assessing white matter abnormalities in three clinical stages of HIV with diffusion tensor imaging. *Neuroimage,* 47,1154-1162, 2009.

302. **Behler, R. H.,** Scola, MR., Nichols, TC., Caughey, MC., Fisher, M.W., Zhu, H.T., Gallippi, CM.   ARFI Ultrasound for in vivo hemostasis assessment postcardic catheterization, Part II: pilot clinical results. *Ultrasonic Imaging*, 31, 159-171, 2009.

303. **Behler, R. H**., Nichols, T.C., Zhu, H.T., Merricks, E. P., Gallippi, C. M. ARFI Imaging for noninvasive material characterization of atherosclerosis part II: toward In vivo characterization. *Ultrasound in Medicine and Biology*, 35, 278-295, 2009.

304. **Yuan Y**, *Zhu HT,* Ibrahim J, Lin WL, and Peterson B.G.. A note on bootstrapping uncertainty of diffusion tensor parameters, *IEEE Transactions on Medical Imaging, 27,* 1506-1514, 2008.

305. Colibazzi, T., Zhu HT, Bansal, R., and Peterson, B. S. Exploratory and confirmatory factor analysis of cortical and subcortical gray matter volumes in healthy individuals. *Human Brain Mapping, 29,* 1302 - 1312, 2008.

306. **Mauldin, F. W**., Zhu HT, Behler, R. H., and Gallippi, C. M. Robust principal component analysis and clustering methods for automated ARFT segmentation. *Journal of Ultrasound in Medicine and Biology,* 34, 309-325, 2008.

307. Sowell ER, Peterson BG, Kan E, Woods RP, Yoshii J, Bansal R, Xu DR, Zhu HT, Thompson PM, and Toga AW. Sex differences in cortical thickness mapped in 176 healthy individuals between 7 and 87 years of age. *Cerebral Cortex*, 17, 1550-1560, 2007.

308. Bansal R, Staib LH, Xu DR, <u>Zhu HT</u>, and Peterson B. Statistical analyses of brain surfaces using Gaussian random fields on manifolds. *IEEE Trans Med Imaging*, 26, 46-57, 2007.

309. ***Zhu HT**,* Ibrahim JG, Tang NS, Hao XJ, Bansal R, and Peterson BG. A wild bootstrap method for statistical analysis of brain morphometric measures. *IEEE Trans Med Imaging,* 26, 954-967, 2007.

310. Rachel, M., <u>Zhu, HT.</u>, Quackenbush, G., Royal. J., Skudlarski P, and Peterson BG. A developmental fMRI study of self-regulatory control. *Human Brain Mapping*, 27, 848-863, 2006.

311. ***Zhu HT***, Xu DR, Amir R, Hao XJ, Zhang HP, Alayar K, Bansal R, and Peterson BG. A statistical framework for the classification of tensor morphology in diffusion tensor images. *Magnetic Resonance Imaging*, 24, 569-582, 2006.

Psychiatry Journals
(Biological Psychiatry, Archives of General Psychiatry and American Journal of Psychiatry are among the best five journals in psychiatry)

312. Styner, M., **Shi, X.,** …, and <u>Zhu, HT</u>. Localized differences in caudate and hippocampal shape are associated with schizophrenia but not antipsychotic type. *Psychiatric Research: Neuroimaging,* 211(1):1-10, 2013.

313. Raz, A., Schweizer, H.R., <u>Zhu, H.T.,</u> and Bowles, E. N. Hypnotic dreams as a lens into hypnotic dynamics. *International Journal of Clinical and Experimental Hypnosis*, 58, 69-81, 2010.

314. Miller, A., Bansal, R., Hao, X., Sanchez-Pena, J.P., Miller, L.J., Liu, J, Xu, D. R., <u>Zhu, H.T</u>., Chakravarty, M. M., Durkin, K, Ivanov I., Plessen, K.J., Kellendonk,C.B., Peterson, B. S. Enlargement of thalamic nuclei in persons with Tourette Syndrome. *Archives of General Psychiatry,* 67,955-964, 2010.

315. **Yeh PH**, <u>Zhu HT</u>, Nicoletti MA, Hatch JP, Soares JC. Structural equation modeling of gray matter volumes in major depressive and bipolar disorders: differences in latent volumetric structure. *Psychiatric Research: Neuroimaging,* 184, 177-185, 2010.

316. Colibazzi, T., …, <u>Zhu, HT</u>.,…, Peterson, B. Neural systems subserving valence and arousal during the experience of induced emotions. *Emotion*, 10, 377-289, 2010.

317. Iliyan Ivanov, Ravi Bansal, Xuejun Hao, <u>Zhu HT</u>, …, Bradley S. Peterson. Morphological abnormalities of the thalamus in youth with ADHD. *American Journal of Psychiatry,* 167:397‒408, 2010.

318. Peterson BS, Potenza, M.N., Wang, Z., <u>Zhu HT</u>, Martin A., Marsh R, Plessen KJ., Yu, S. A functional MRI study of the effects of psychostimulants on default-mode processing during performance of the word-color stroop task in youth with ADHD. *American Journal of Psychiatry*, 166, 1286-1299, 2009.

319. Raz, A., Packard, M.G., Alexander, G. M., Buhle, J.T., <u>Zhu, HT</u>., Yu, S. and Peterson, B. A slice of □: An exploratory neuroimaging study of digit encoding and retrieval in a superior memorist. *Neurocase*, 15, 361-372, 2009.

320. Lewis, M., Smith**,** A., Styner, M., Gu, H., Poole, R., <u>Zhu, H.</u>, Li, Y., et al., Huang, X. Asymmetrical lateral ventricular enlargement in Parkinsons disease. *European Journal of Neurology*, 16, 475-481, 2009.

321. Raz A, <u>Zhu HT</u>, …, Peterson BS. Neural substrates of self-regulatory control in children and adults with Tourette Syndrome. *Can J Psychiatry*, 54, 579-588, 2009.

322. Gerber AJ, ..., <u>Zhu HT</u>, Russell J, Peterson BS. An affective circumplex model of neural systems subserving valence, arousal, & cognitive overlay during the appraisal of emotional faces. *Neuropsychologia*, 46, 2129–2139, 2008.

323. Peterson, B., Choi, H.A., Hao, X.J., Amat, J., <u>Zhu HT,</u> Whiteman, R., Liu, J., Xu, D.R., and Bansal, R. Morphology the amygdale and hippocampus in children and adults with tourette syndrome, *Archives of General Psychiatry*, 64, 1281-1291, 2007.

324. Rachel M., <u>Zhu HT</u>, Wang ZS, Skudiarski P., and Peterson, BG. A developmental fMRI study of self-regulatory control in tourette syndrome. *American Journal of Psychiatry*, 164, 955-966, 2007.

325. Raz, A, Moreno-Iñiguez M, Martin L, and <u>Zhu HT</u>. Deautomatizing an automatic process: suggestion and the stroop effect. *Consciousness and Cognition*, 16, 331-338, 2007.

326. Wiedenmayer, C.P., Bansal, R., Anderson, G.M., <u>Zhu, H.T.</u>, Amat, J., Whiteman, R, and Peterson, B.G. Cortisol levels and hippocampus volumes in healthy preadolescent children. *Biological Psychiatry*, 60, 856-861, 2006.

327. Gorman D, <u>Zhu HT</u>, Anderson G, Davies M, and Peterson BG. Peripheral iron indices in Tourette's syndrome and their association with basal ganglia and regional cortical volumes. *American Journal of Psychiatry*, 163, 1264-72, 2006.

328. Amat J, Bronen R, Saluja, S., Sato, N., <u>Zhu HT</u>, Gorman, D.A., Royal, J. and Peterson BG. Increased number of subcortical hyperintensities on MRI in children and adolescents with Tourette's syndrome, obsessive-compulsive disorder, and attention deficit hyperactivity disorder. *American Journal of Psychiatry*, 163, 1106-1108, 2006.

329. Kerstin JP, Bansal R, <u>Zhu HT</u>, Whiteman R, Amat J, Quackenbusch G, Martin L, Durkin K, Blair C, Royal J, Hugdahl K, and Peterson BG. Hippocampus and Amydala morphology in attention-deficit/hyperactivity disorder. *Archives of General Psychiatry*, 63, 795-807, 2006.

330. Marsh R, Alexander GM, Packard MG, <u>Zhu HT</u>, and Peterson BG. Perceptual motor skill learning in tourette syndrome. *Neuropsychologia,* 43:1456-65, 2005.

331. Bloch MH, Leckman JF, <u>Zhu HT</u>, and Peterson BG. Caudate volumes in childhood predict the severity of tic and OCD symptoms in adulthood. *Neurology*, 65:1253-1258, 2005.

332. Marsh R, Alexander GM, Packard MG, <u>Zhu HT</u>, Wingard JC, Quackenbush G, Stein V, and Peterson BG. Impaired habit learning in children and adults with Tourette syndrome. *Archives of General Psychiatry,* 61:1259-1268, 2004.

333. R. Villarreal-Calderon, R. Torres-Jardón, J. Palacios-Moreno, N. Osnaya, B. Pérez-Guillé, R. R Maronpot, W. Reed, <u>H. Zhu</u>, L. C. Garcidueñas. Urban

air pollution targets the dorsal vagal complex and dark chocolate offers neuroprotection. *International Journal of Toxicology* , 2010, 604-615.

334. L. Calderón-Garcidueñas, A. Serrano-Sierra, R.Torres-Jardón, H. Zhu, **Y.Yuan,** D. Smith, R. Delgado-Chávez, J. V. Cross, H. Medina-Cortina, M. Kavanaugh, T. R. Guilarte. The impact of environmental metals in young urbanites' brains. *Experimental and Toxicologic Pathology*, 65:503-11, 2013.

335. O'Neill, S. S., Gordon, C.J., Guo, RX, Zhu, HT., McCudden, C.R. Multivariate analysis of clinical, demographic, and laboratory data for classification of patients with disorders of calcium homeostasis. *American Journal of Clinical Pathology*, 135:100-107, 2011.

336. Hongyu An, Andria L. Ford, Katie Vo, Cihat Eldeniz, Rosana Ponisio, Hongtu Zhu, **Yimei Li,** Yasheng Chen, William J. Powers, Jin-Moo Lee, and Weili Lin. Early changes of tissue perfusion after tPA in hyperacute ischemic. *Stroke*, 42:65-72, 2011.

337. L. Calderón-Garcidueñas, M. Kavanaugh, M. Block, A. D'Angiulli, R Delgado-Chávez, R. Torres-Jardón, A. González-Maciel, R. Reynoso-Robles, N. Osnaya, R. Villarreal-Calderon, **R. Guo, Z. Hua**, H. Zhu, G. Perry, Philippe Diaz. Neuroinflammation, Alzheimer's-associated pathology and down-regulation of the prion-related protein in air pollution exposed children and young adults. *Journal of Alzheimer Disease*, 2012, 93-107.

338. L Calderón-Garcidueñas, R Engle, A. Mora-Tiscareño, M. Styner, G. Gómez-Garza, H.T. Zhu, V. Jewells, R. Torres-Jardón, L. Romero, M. E. Monroy-Acosta, **C. Bryant,** L. O. González-González, and H. Medina-Cortina. Exposure to severe urban air pollution influences cognitive outcomes, brain volume and systemic inflammation in clinically healthy children. *Brain and Cognition*, 2011, 345-55.

339. L. Calderón-Garcidueñas, A. Mora-Tiscareño, M. Styner, H. Zhu, R.Torres-Jardón, E. Carlos, E. Solorio-López, H. Medina-Cortina, M. Kavanaugh, A. D'Angiulli. White matter hyperintensities, systemic inflammation, brain growth and cognitive functions in children exposed to air pollution, *Journal of Alzheimer's Disease,* 2012, 183-91.

340. Villarreal-Calderon R, Dale G, Delgado-Chávez R, Torres-Jardón R, Zhu H, Herritt L, Gónzalez-Maciel A, Reynoso-Robles R, **Yuan Y, Wang J,** Solorio-López E, Medina-Cortina H, Calderón-Garcidueñas L. Intra-city Differences in Cardiac Expression of Inflammatory Genes and Inflammasomes in Young Urbanites: A Pilot Study. *J Toxicol Pathol.* 2012 Jun;25(2):163-73.

341. Rodolfo Villarreal-Calderon, Maricela Franco-Lira, Angélica González-Maciel, Rafael Reynoso-Robles, Lou Harritt, Beatriz Pérez-Guillé, Lara Ferreira-Azevedo, Dan Drecktrah, Hongtu Zhu, Qiang Sun, Ricardo Torres-Jardón, Philippe Diaz[9], Lilian Calderón-Garcidueñas. Up-regulation of ventricular cellular prion protein in air pollution highly exposed young urbanites: Endoplasmic reticulum stress and the impact of nano size particles. *J Mol Sciences*, 14, 23471-23491,2013.

342. Lilian Calderón-Garcidueñas, Antonieta Mora-Tiscareño, Maricela Franco-Lira, Janet V. Cross, Randall Engle, Gilberto Gómez-Garza, Valerie Jewells, Humberto Medina-Cortina, Edelmira Solorio, Chih-kai Chao, Hongtu Zhu,

Partha Sarathi Mukherjee, Lara Ferreira-Azevedo, Ricardo Torres-Jardón, Amedeo D'Angiulli. Flavonol-rich dark cocoa significantly decreases plasma endothelin-1 and improves cognitive responses in urban children. *Frontiers in Pharmacology, 4:104,* 2013.

343. L. Calderón-Garcidueñas, A. Mora-Tiscareño, R. Torres-Jardón, B. Peña-Cruz, C. Palacios-López, <u>H. Zhu</u>**, L. Kong**, N. Mendoza-Mendoza, H. Montesinos-Correa, L. Romero, G. Valencia-Salazar, M. Kavanaugh, H. Medina-Cortina, S. Frenk. Exposure to urban air pollution and bone health in clinically healthy 6y old children. <u>Arh Hig Rada Toksikol.</u> 64(1):23-34, 2013.

344. Rodolfo Villarreal-Calderon, Arturo Luévano-González, Mariana Aragón-Flores, Hongtu Zhu, Ying Yuan, Qun Xiang, Benjamin Yan, Kathryn Anne Stoll, Janet V. Cross, Kenneth A. Iczkowski, Alexander Craig Mackinnon Jr. Antral atrophy, intestinal metaplasia, and pre-neoplastic markers in Mexican children with Helicobacter pylori-positive and negative gastritis. *Annals of Diagnostic Pathology,* 18(3):129-35, 2014.