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认知神经科学博士，研究员

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研究方向

神经影像方法学

脑发展和儿童青少年精神病学

教育背景

- 2005–2007 访问学生，美国 **Emory** 大学，生物医学工程专业，导师：Xiaoping P. Hu 教授.
- 2003–2008 硕博连读研究生，中国科学院心理研究所，认知神经科学专业，导师：翁旭初研究员.
- 1999–2003 本科，清华大学，生物医学工程专业.

工作经历

- 2018–至今 特聘研究员，博士生导师，教授委员会成员，上海交通大学心理与行为研究院.
- 2018–至今 执行主任，上海市精神卫生中心神经影像平台.
- 2017–至今 研究员，博士生导师，心理健康与神经影像研究组主任，上海市精神卫生中心，上海交通大学医学院.
- 2015–2018 岗位教授，中国科学院大学.
- 2012–2017 副研究员，博士生导师，中国科学院心理研究所.
- 2012–2014 博士后，美国国家精神卫生研究所，合作导师：Peter A. Bandettini 研究员.
- 2008–2012 助理研究员，中国科学院心理研究所.

研究项目

- 2020-2023 国家自然科学基金面上项目, 基于跨疾病神经影像数据库的精神障碍个体化辅助诊断研究 (81971682), 负责人, 66 万元.
- 2016-2019 国家自然科学基金面上项目, 利用自然刺激下的神经影像探测精神分裂症的脑功能损伤亚型 (81571756), 负责人, 67.2 万元.
- 2013-2016 国家自然科学基金面上项目, 精神障碍的神经影像标志的特异性研究 (81270023), 负责人, 70 万元.
- 2010-2012 国家自然科学基金青年项目, 数据驱动的精神障碍分类神经影像标志研究 (30900366), 负责人, 21 万元.
- 2020-2023 上海市自然科学基金原创探索项目, 青少年味知觉与焦虑水平的关系和脑机制研究 (20ZR1472800), 负责人, 50 万元.
- 2015-2017 北京市科技新星科研项目, 精神疾病的神经影像标志: 大数据时代的方法学 (2015079B), 负责人, 35 万元.
- 2017-2020 上海市教委高峰高原项目, 精神分裂症的神经影像标志研究 (20171929), 负责人, 100 万元.
- 2018-2021 上海市卫健委优秀学科带头人培养计划, 儿童青少年社交焦虑障碍的脑发育异常 (2018BR17), 负责人, 90 万元.
- 2015-2019 中国科学院青年创新促进会研究项目, 负责人, 40 万元.
- 2014-2019 中国科学院心理研究所杰出青年研究者项目, 基于脑网络的群体检测方法学研究, 负责人, 40 万元.

发表论文

Zhang H, Li J, Su X, Hu Y, Liu T, Ni S, Li H, Zuo X-N, Fu J*, Yuan T-F*, **Yang Z*** (2022): Growth charts of brain morphometry for preschool children. *NeuroImage* 255: 119178. DOI: 10.1016/j.neuroimage.2022.119178

Zhang Q, Li B, Jin S, Liu W, Liu J, Xie S, Zhang L, Kang Y, Ding Y, Zhang X, Cheng W*, **Yang Z*** (2022): Comparing the Effectiveness of Brain Structural Imaging, Resting-state fMRI, and Naturalistic fMRI in Recognizing Social Anxiety Disorder in Children and Adolescents. *Psychiatry Research: Neuroimaging* 111485. DOI: 10.1016/j.psychresns.2022.111485

Ding Y, Liu J, Zhang X, **Yang Z*** (2022): Dynamic Tracking of State Anxiety via Multi-Modal Data and Machine Learning. *Frontiers in Psychiatry* 13: 757961. DOI: 10.3389/fpsyt.2022.757961

Hu Y, **Yang Z*** (2021). Impact of inter-individual variability on the estimation of default mode network in temporal concatenation group ICA. *Neuroimage*. 234: 118114. DOI: 10.1016/j.neuroimage.2021.118114

Xie S, Zhang X*, Cheng W, **Yang Z** (2021): Adolescent anxiety disorders and the developing brain: comparing neuroimaging findings in adolescents and adults. *General Psychiatry* 34: e100411. DOI: 10.1136/gpsych-2020-100411

Li Q, Jiang L, Qiao K, Hu Y, Chen B, Zhang X, Ding Y, **Yang Z***, Li C. (2021): INCloud: integrated neuroimaging cloud for data collection, management, analysis and clinical translations. *General Psychiatry* 34: e100651. DOI: 10.1136/gpsych-2021-100651

Jiang L, Cui H, Zhang C, Cao X, Gu N, Zhu Y, Wang J, **Yang Z**, Li C. (2021): Repetitive Transcranial Magnetic Stimulation for Improving Cognitive Function in Patients With Mild Cognitive Impairment: A Systematic Review. *Frontiers in Aging Neuroscience* 12: 593000. DOI: 10.3389/fnagi.2020.593000. eCollection 2020

Zeng Y, Tao F, Cui Z, Wu L, Xu J, Dong W, Liu C, **Yang Z**, Qin S*. (2021): Dynamic integration and segregation of amygdala subregional functional circuits linking to physiological arousal. *NeuroImage* 238: 118224. DOI: 10.1016/j.neuroimage.2021.118224

Xu Z, Zhang X, Chang H, Kong Y, Ni Y, Liu R, Zhang X, Hu Y, **Yang Z**, Hou M, Mao R, Liu W-T, Du Y, Yu S, Wang Z, Ji M*, Zhou Z*. (2021): Rescue of maternal immune activation-induced behavioral abnormalities in adult mouse offspring by pathogen-activated maternal Treg cells. *Nature Neuroscience* 24(6): 818–830. DOI: 10.1038/s41593-021-00837-1

Gao J, Chen G, Wu J, Wang Y, Hu Y, Xu T, Zuo X-N*, **Yang Z*** (2020). Reliability map of individual differences reflected in inter-subject correlation in naturalistic imaging. *Neuroimage* 223: 117277. DOI: 10.1016/j.neuroimage.2020.117277

Liu Z, Hu Y, Zhang Y, Liu W, Zhang L, Wang Y, Yang H, Wu J, Cheng W*, **Yang Z*** (2020). Altered gray matter volume and structural co-variance in adolescents with social anxiety disorder: evidence for a delayed and unsynchronized development of the fronto-limbic system. *Psychological Medicine* 51(10): 1742-1751. DOI: 10.1017/S0033291720000495

Guo Q, Hu Y, Zeng B, Tang Y, Li G, Zhang T, Wang J, Northoff G, Li C, Goff D, Wang J*, **Yang Z*** (2020). Parietal memory network and default mode network in first-episode drug-naïve schizophrenia: Associations with auditory hallucination. *Human Brain Mapping* 41(8): 1973-1984. DOI: 10.1002/hbm.24923

Zhang Y, Liu W, Lebowitz ER, Zhang F, Hu Y, Liu Z, Yang H, Wu J, Wang Y, Silverman WK, **Yang Z***, Cheng W* (2020). Abnormal asymmetry of thalamic volume moderates stress from parents and anxiety symptoms in children and adolescents with social anxiety disorder. *Neuropharmacology* 180: 108301. DOI: 10.1016/j.neuropharm.2020.108301

Yang Z*, Wu J, Xu L, Deng Z, Tang Y, Gao J, Hu Y, Zhang Y, Qin S*, Li C, Wang J* (2020). Individualized psychiatric imaging based on inter-subject neural synchronization in movie watching. *Neuroimage*: 116227. DOI:10.1016/j.neuroimage.2019.116227

Cui H, Zhang B, Li W, Li H, Pang J, Hu Q, Zhang L, Tang Y, **Yang Z**, Wang J, Li C*. (2020): Insula shows abnormal task-evoked and resting-state activity in first-episode drug-naïve generalized anxiety disorder. *Depression and Anxiety* 37: 632–644. DOI: 10.1002/da.23009

Deng Z, Wu J, Gao J, Hu Y, Zhang Y, Wang Y, Dong H, **Yang Z***, Zuo, X-N (2019). Segregated precuneus network and default mode network in naturalistic imaging. *Brain Structure and Function* 224(9): 3133-3144. DOI: 10.1007/s00429-019-01953-2.

Zhang Y, Xu Li, Hu Y, Wu J, Li C, Wang J*, **Yang Z*** (2019). Functional connectivity between sensory-motor sub-networks reflects the duration of untreated psychosis and predicts treatment outcome of first-episode drug-naïve schizophrenia. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*. 4(8): 697-705

- Jiang L, Cao X, Jiang J, Li T, Wang J, **Yang Z***, Li C* (2019). Atrophy of hippocampal subfield CA2/3 in healthy elderly men is related to educational attainment. *Neurobiology of Aging* 80: 21-28
- Hu Y, Du W, Zhang Y, Li N, Han Y*, **Yang Z*** (2019). Loss of parietal memory network integrity in Alzheimer's disease. *Frontiers in Aging Neuroscience* 11: 67
- Zhao Q, Xu T, Wang Y, Chen D, Liu Q, **Yang Z***, Wang Z*. (2019). Limbic cortico-striato-thalamo-cortical functional connectivity in drug-naïve patients of obsessive-compulsive disorder. *Psychological Medicine* 49: 1156-1165. DOI: 10.1017/S0033291719002988
- Wang J, Hu Y, Li H, Ge L, Li J, Cheng L, **Yang Z***, Zuo XN, Xu Y* (2018). Connecting openness and the resting-state brain network: A discover-validate approach. *Frontiers in Neuroscience* 12: 762.
- Yang Z**, Zuo XN*, McMahon KL, Craddock RC, Kelly C, de Zubicaray GI, Hickie I, Bandettini PA, Castellanos FX, Milham MP*, Wright MJ (2016). Genetic and environmental contributions to functional connectivity architecture of the human brain. *Cerebral Cortex* 26: 2341-2352
- Yang Z***, Qiu J, Wang P, Liu R, Zuo X* (2016). Brain structure-function associations identified in large-scale neuroimaging data. *Brain Structure & Function* 221: 4459-4474
- Hu Y, Wang J, Li C, Wang Y-S, **Yang Z***, Zuo X-N (2016). Segregation between the parietal memory network and the default mode network: effects of spatial smoothing and model order in ICA. *Science Bulletin*. 61 (24): 1844-1854
- Yang Z***, Huang Z, Gonzalez-Castillo J, Dai R, Northoff G, Bandettini P (2014). Using fMRI to decode true thoughts independent of intention to conceal. *NeuroImage* 99: 80-92
- Yang Z***, Chang C, Xu T, Jiang L, Handwerker D, Castellanos F, Milham M, Bandettini P, Zuo X* (2014). Connectivity trajectory across lifespan differentiates the precuneus from the default network. *NeuroImage* 89: 45-56

- Yang Z***, Zuo X, Wang P, Li Z, Laconte S, Bandettini PA, Hu X (2012). Generalized RAICAR: Discover homogeneous subject (sub)groups by reproducibility of their intrinsic connectivity networks. *NeuroImage* 63: 403-414
- Yang Z**, Xu Y*, Xu T, Hoy C, Handwerker D, Chen G, Northoff G, Zuo X*, Bandettini P (2014). Brain network informed subject community detection in early-onset schizophrenia. *Scientific Reports* 4: 5549
- Yang Z**, LaConte S, Weng X, Hu X* (2008). Ranking and averaging independent component analysis by reproducibility (RAICAR). *Human Brain Mapping* 29: 711-725
- Xu T, **Yang Z (co-first author)**, Jiang L, Xing XX, Zuo XN* (2015). A connectome computation system for discovery science of brain. *Science Bulletin* 60: 86-95
- Yang Z***, Fang F, Weng X (2012). Recent developments in multivariate pattern analysis for functional MRI. *Neuroscience Bulletin* 28: 399-408
- Yang Z***, Wu P, Weng X, Bandettini P (2014). Cerebellum engages in automation of verb-generation skill. *Journal of Integrative Neuroscience* 13: 1-17
- Liu C, Li F, Li S, Wang Y, Tie C, Wu H, Zhou Z, Zhang D, Dong J, **Yang Z***, Wang C* (2012). Abnormal baseline brain activity in bipolar depression: A resting-state functional magnetic resonance imaging study. *Psychiatry Research: Neuroimaging* 203: 175-179
- Tang L, Liu C, Jing B, Ma X, Li H, Zhang Y, Li F, Wang Y, **Yang Z***, Wang C* (2014). Voxel-based morphometry study of the insular cortex in bipolar depression. *Psychiatry Research: Neuroimaging* 224: 89-95
- Liu C, Ma X*, Wu X, Zhang Y, Zhou F, Li F, Tie C, Dong J, Wang Y, **Yang Z***, Wang C (2013). Regional homogeneity of resting-state brain abnormalities in bipolar and unipolar depression. *Progress in Neuro-Psychopharmacology & Biological Psychiatry* 41: 52-59
- Yang Z**, Zhao J, Jiang Y*, Li C, Wang J, Weng X*, Northoff G (2011). Altered negative Unconscious processing in major depressive disorder: An exploratory neuropsychological study. *PLoS One* 6: e21881

Li W, Cui H, Zhu Z, Kong L, Guo Q, Zhu Y, Hu Q, Zhang L, Li H, Li Q, Jiang J, Meyers J, Li J, Wang J*, **Yang Z***, Li C* (2016). Aberrant functional connectivity between the amygdala and the temporal pole in drug-free generalized anxiety disorder. *Frontiers in Human Neuroscience* 10: 549

Sun L, Xu H, Zhang J, Li W, Nie J, Qiu Q, Liu Y, Fang Y, **Yang Z***, Li X* and Xiao S* (2018). Alcohol consumption and subclinical findings on cognitive function, biochemical indexes, and cortical anatomy in cognitively normal aging Han Chinese population. *Frontiers in Aging Neuroscience* 10: 182

Xu G, Jiang Y, Ma L, **Yang Z***, Weng X* (2012). Similar spatial patterns of neural coding of category selectivity in FFA and VWFA under different attention conditions. *Neuropsychologia* 50: 862-868

Huang Z, Zhang X, **Yang Z***, Dong G, Wu J, Chan A, Weng X (2010). Verbal memory retrieval engages visual cortex in musicians. *Neuroscience* 168: 179-189

其他著作

- 2017 **脑科学与课堂：以脑为导向的教学模式**, 玛丽亚·哈迪曼著, **杨志**、王培培等译, 华东师范大学出版社.
- 2019 **给孩子的脑科学实验室**, 埃里克·H·查德勒著, **杨志** 译, 华东师范大学出版社.

教学经验

- 2018-2020 **普通心理学 (本科生)**, 12 学时/学年, 上海交通大学/上海交通大学医学院.
- 2018-2020 **心理学研究方法 (研究生)**, 6 学时/学年, 上海交通大学/上海交通大学医学院.
- 2018-2020 **心理学与神经科学 (研究生)**, 3 学时/学年, 上海交通大学/上海交通大学医学院.
- 2019-2020 **科研伦理与写作 (研究生)**, 3 学时/学年, 上海交通大学/上海交通大学医学院.
- 2015-2016 **认知心理学 (研究生)**, 6 学时/学年, 中国科学院大学.

- 2012-2018 高级统计和机器学习 (研究生), 60 学时/学期, 中国科学院心理研究所.
2008-2018 心理统计学 (研究生), 60 学时/学期, 中国科学院心理研究所.
2008-2018 脑发育和学习 (研究生), 16 学时/学期, 中国科学院心理研究所.
2008-2010 认知神经科学 (研究生), 16 学时/学期, 中国科学院心理研究所.

学术任职

- 2021-至今 兼职研究员, 上海科技大学.
2020-至今 兼职教授, 北京邮电大学.
2020-至今 校外研究生导师, 首都师范大学.
2020-至今 校外研究生导师, 复旦大学.
2019-至今 特聘研究员, 上海陈天桥国际脑疾病研究所.
2019-至今 委员, 中国康复医学会脑功能检测与调控专业委员会脑功能检测与康复学组.
2018-至今 副主任委员, 吴阶平医学基金会认知障碍多学科诊疗专家委员会.
2018-至今 委员, 中国心理学会体育运动心理专业委员会运动认知神经科学学组.
2020-至今 Associate Editor, *Brain Informatics*.
2018-至今 Associate Editor, *Frontiers in Neuroscience: Brain Imaging Methods*.
2018-至今 编委, 心理学通讯.

获奖和荣誉

- 2018 入选上海市卫健委“优秀学科带头人培养计划”
2017 获北京市科技进步二等奖 (第二完成人)
2017 入选上海交通大学“晨光优秀学者奖励计划”
2017 入选上海交通大学医学院“双百人计划”
2016 入选中国科学院青年创新促进会
2015 获教育部科技进步一等奖 (第八完成人)
2015 入选北京市“科技新星计划”
2014 获中国科学院心理研究所“杰出青年研究者”奖
2009-2011 中国科学院心理研究所“优秀助理研究员”