



潘亚峰

PhD in Psychological Science and Education

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工作经历

2019.10 – 今 瑞典卡罗林斯卡医学院 (Karolinska Institutet) 博士后研究员
PI: Andreas Olsson 教授
项目: Mechanisms of observational learning: Dual-brain investigations

学习经历

2017.09 – 2019.06 比利时布鲁塞尔自由大学 (Université Libre de Bruxelles) 心理科学与教育 (双博士)
导师: Philippe Peigneux 教授
毕业论文: Instructor-learner brain synchronization tracks interactive learning: Identification, modulation, and causation

2014.09 – 2019.06 华东师范大学 教育心理学 (硕博连读)
导师: 胡谊 教授
毕业论文: 师生间脑同步追踪互动学习: 识别、调节和因果

2014.07 – 2014.08 北京大学 访问学生
导师: 周晓林 教授
项目: ERPs and oscillations during encoding predict retrieval of digit memory in superior mnemonists

2010.09 – 2014.06 浙江师范大学 应用心理学 (理学学士)
导师: 李锋盈 副教授
毕业论文: 成就目标启动对学习时间分配的影响

主要研究领域

- 主要研究社会互动的 (人际) 神经机制。致力于探索个体间脑-脑同步如何追踪合作、决策、学习及其他高水平社会认知过程。擅长使用行为、生理 (眼动、皮肤电等)、脑成像 (脑电图、近红外光谱、脑磁图等) 以及脑刺激 (经颅交流电刺激), 结合同步神经成像 (即, “超扫描”) 的技术, 来研究人类社会行为的认知与神经过程。开创性工作包括, 首次在真实的教学情境中, 实现师生间非言语同步信息的自动化分析 (基于视频的像素变化); 应用机器学习的方法, 使用师生间脑同步成功预测教学行为; 与伦敦大学学院 Giacomo Novembre 博士共同开发 “双脑经颅交流电刺激系统”, 研究脑-脑同步在社会学习中的因果作用等。

重要获奖情况

- 博士研究生国家奖学金 (连续两年, 2017~2018)
- 上海市优秀博士毕业生, 2019
- 华东师范大学优秀学生 (连续两年, 2017~2018)
- 华东师范大学心理与认知科学学院年度科研人物, 2018
- 华东师范大学智慧奖学金, 2014~2015
- 浙江师范大学优秀毕业生, 2014
- 浙江师范大学一等奖学金 (连续三年, 2011~2013)

论文发表

- **Pan, Y.**, Dikker, S., Goldstein, P., Zhu, Y., Yang, C., & Hu, Y. (2020). Instructor-learner brain coupling discriminates between instructional approaches and predicts learning. *NeuroImage*, 211, 116657.
- Hou, Y., Song, B., Hu, Y. Y., **Pan, Y.***, & Hu, Y.* (2020). The averaged inter-brain coherence between the audience and a violinist predicts the popularity of violin performance. *NeuroImage*, 211, 116655. *通讯作者
- **Pan, Y.**, Novembre, G., Song, B., Zhu, Y., & Hu, Y. (in press). Dual brain stimulation enhances interpersonal learning through spontaneous movement synchrony. *Social Cognitive and Affective Neuroscience*.
- **Pan, Y.**, & Cheng, X. (2020). Two-person approaches to studying social interaction in psychiatry: Uses and clinical relevance. *Frontiers in Psychiatry*, 11, 301.
- **Pan, Y.**, Borragán, G., & Peigneux, P. (2019). Applications of functional near-infrared spectroscopy in fatigue, sleep deprivation, and social cognition. *Brain Topography*, 32, 998-1012.
- Zhu, Y., **Pan, Y.***, & Hu, Y.* (2019). Learning desire is predicted by similar neural processing of naturalistic educational materials. *eNeuro*, 6(5), 0083-19.2019. *通讯作者
- **Pan, Y.**, Novembre, G., Song, B., Li, X., & Hu, Y. (2018). Interpersonal synchronization of inferior frontal cortices tracks social interactive learning of a song. *NeuroImage*, 183, 280-290.
- Hu, Y.*, **Pan, Y.***, Shi, X., Cai, Q., Li, X., & Cheng, X. (2018). Inter-brain synchrony and cooperation context in interactive decision making. *Biological Psychology*, 133, 54-62. *通讯作者
- Zhang, Y., Meng, T., Hou, Y., **Pan, Y.***, & Hu, Y.* (2018). Interpersonal brain synchronization associated with working alliance during psychological counseling. *Psychiatry Research: Neuroimaging*, 282, 103-109. *通讯作者
- **Pan, Y.**, Cheng, X., Zhang, Z., Li, X., & Hu, Y. (2017). Cooperation in lovers: An fNIRS - based hyperscanning study. *Human Brain Mapping*, 38(2), 831-841.
- **Pan, Y.**, Li, X., Chen, X., Ku, Y., Dong, Y., Dou, Z., He, L., Hu, Y., Li, W., & Zhou, X. (2017). ERPs and oscillations during encoding predict retrieval of digit memory in superior mnemonists. *Brain and Cognition*, 117, 17-25.
- **Pan, Y.**, Olsson, A., & Golkar, A. (2020). Shared safety abolishes the recovery of learned threat. *BioRxiv*. doi: 10.1101/2020.05.01.072827
- **Pan, Y.**, Guyon, C., Borragán, G., Hu, Y., & Philippe, P. (2020). Interpersonal brain synchronization with instructor compensates for learner's sleep deprivation in interactive learning. *BioRxiv*. doi: 10.1101/2020.04.03.022954.
- Cheng, X., **Pan, Y.**, Hu, Y., & Hu, Y. (2019). Coordination elicits synchronous brain activity between co-actors: Frequency ratio matters. *Frontiers in Neuroscience*, 13, 1071.
- Hu, Y., Hu, Y., Li, X., **Pan, Y.**, & Cheng, X. (2017). Brain-to-brain synchronization across two persons predicts mutual prosociality. *Social Cognitive and Affective Neuroscience*, 12(12), 1835-1844.
- Ericsson, K. A., Cheng, X., **Pan, Y.**, Ku, Y., Ge, Y., & Hu, Y. (2017). Memory skills mediating superior memory in a world-class memorist. *Memory*, 25(9), 1294-1302.
- Li, X., Cheng, X., Li, J., **Pan, Y.**, Hu, Y., & Ku, Y. (2015). Examination of mechanisms underlying enhanced memory performance in action video game players: A pilot study. *Frontiers in Psychology*, 6, 843.
- 潘亚峰, 胡谊. (2018). 记忆术及其训练. 见吴庆麟, 胡谊(编). 当代中国心理科学文库·教育心理学(pp.19-38). 上海: 华东师范大学出版社.

会议报告

- 潘亚峰, 宋蓓, 胡谊 (2019). 音乐教学活动中师生脑间同步特征研究. (大会特邀报告, 中国心理学会音乐心理学专业委员会第二届学术年会, 2019.9.20-22, 重庆北碚, 中国)
- Pan, Y., Guyon, C., Borragán, G., Hu, Y., & Peigneux, P. (2019). Interpersonal brain synchronization with instructor compensates for students' sleep deprivation. (Poster, OHBM Annual Meeting, 10-13 June 2019, Rome, Italy)
- Pan, Y., Guyon, C., Borragán, G., Hu, Y., & Peigneux, P. (2019). Interpersonal brain synchronization with instructor compensates for students' sleep deprivation. (Poster, Annual Meeting of the Belgian Association for Psychological Sciences, 14-15 May 2019, Liège, Belgium)
- Zhao, N., Pan, Y., & Hu, Y. (2019). Interpersonal neural synchronization tracks real-world dynamically competitive interaction. (Poster, Cognitive Neuroscience Society, 26 March 2019, San Francisco, USA)
- Pan, Y. (2018). An analysis pipeline for EEG hyperscanning. (Oral talk, 3rd Symposium on Inter-Brain Cognition, 16 September 2018, Shanghai, China)
- Pan, Y., Hao, N., Liu, N., Li, X., Zhao, Y., Cheng, X., Ku, Y., & Hu, Y. (2018). Mnemonic training reorganizes neural dynamics to support superior memory in children. (Poster, Symposium "Windows on Brain Plasticity", 7 May 2018, Brussels, Belgium)
- Pan, Y., Novembre, G., Song, P., Li, X., & Hu, Y. (2017). Interpersonal brain synchronization tracks social interactive learning. (Oral talk, 4th Annual Meeting of the French Community of Functional NIRS, 14 October 2017, Lille, France)
- Pan, Y. (2017). Interpersonal brain synchronization tracks social interactive learning of a music song. (Oral presentation, ULB-VUB joint PhD day, 7 November, Brussels, Belgium)
- Pan, Y. (2017). Inter-brain synchrony marks the acquisition of a song. (Oral talk, 2nd Symposium on Inter-Brain Cognition, 29 April 2017, Shanghai, China)
- Pan, Y., Hao, N., Liu, N., Li, X., Zhao, Y., Cheng, X., Ku, Y., & Hu, Y. (2016). Neural patterns during encoding as a source for the effectiveness of mnemonic training. Special issue of International Journal of Psychology, 51, 872-889. (Oral talk, 31st International Congress of Psychology, 24-29 July 2016, Yokohama, Japan)
- Pan, Y. (2016). Human cooperation through interpersonal brain synchronization: The role of empathy. (Oral talk, 1st Symposium on Inter-Brain Cognition, 2-3 July 2016, Shanghai, China)

专利

- 发明专利: 一种脑间同步的分析方法、装置及存储 (CN109522873A) 第一发明人 专利申请公布阶段

研究项目基金

- 2017-2018 中国留学基金委公派出国项目 (No. 201706140082), EUR 14,400 主要负责人
- 2016-2019 华东师范大学优秀博士论文培育行动计划 (No. YB2016011), CNY 18,000 主要负责人
- 2019-2022 国家自然科学基金面上项目 (No. 31872783), CNY 600,000 主要参与人
- 2019-2024 Consolidator Grant (No. 2018-00877; "Learning of social values in threatening and safe environments"), Funded by Swedish Research Council, SEK 12,000,000 项目主要成员

审稿经历

- NeuroImage / Human Brain Mapping / The Neuroscientist / Brain Structure and Function / Social Cognitive and Affective Neuroscience / Frontiers in Psychology / Frontiers in Human Neuroscience / Journal of Visualized Experiment / PLoS One

教学指导

- 2020 – 今 指导本科生 Andreas Henriksson, Anton Toftgard 和 Ludvig Smedstad (KI)完成项目《Mechanisms of observational learning》
- 2019 – 今 指导博士生研究项目《Elaborating feedback with examples promotes the transfer of learning via instructor-learner brain synchronization》(朱怡, ECNU)
- 2019 – 今 指导硕士生研究项目《Modality threat mitigates interpersonal competition》(周霄宇, ECNU)
- 2018 – 2019 指导硕士毕业论文《Working alliance in the first psychological counseling: An interpersonal brain synchronization based study》(蒙恬, ECNU)
- 2017 – 2019 指导硕士毕业论文《Statistical learning of regularities: An elementary association of stream segmentation using frequency-tagged responses》(Kalia Lofitou, ULB)
- 2017 – 2019 指导硕士生研究项目《Interpersonal neural synchronization tracks real-world dynamically competitive interaction》(赵楠, ECNU)
- 2017 – 2018 指导硕士生研究项目《Learning desire is predicted by similar neural processing of naturalistic educational materials》(朱怡, ECNU)
- 2017 – 2018 指导实习生《Sleep deprivation modulates instructor-learner brain coupling during interactive learning》(Camille Guyon, ULB)
- 2016 – 2017 指导本科毕业论文《Inter-brain synchrony and cooperation context in interactive decision making》(史欣唯, ECNU)
- 2016 – 2017 华东师范大学网络教育学院 论文指导老师
- 2016.12 华东师范大学心理与认知科学学院 近红外成像原理与数据分析方法主题培训 (3D定位仪的操作流程、实施规范、上机操作等)

学术组织及受邀演讲

- 2020.7 第二届工业认知工效学与工程心理学国际会议 (2nd International Conference on Industrial Cognitive Ergonomics and Engineering Psychology, Virtual Conference, USA) 科学顾问委员会 (Scientific Advisory Board) 委员
- 2020.6 Neurosync 2020 线上国际研讨会 (华东师范大学心理与认知科学学院主办) 组委会成员
- 2019.3 近红外光学脑成像技术研讨会暨超扫描与高级社会认知活动工作坊 (上海) 组织者、工作坊主讲嘉宾 (脑间同步性数据可视化)
- 2018.9 第三届脑际认知研讨会 (上海) 组织者、工作坊主讲嘉宾 (脑电双人同步性数据分析、脑间同步性数据可视化)
- 2017.4 第二届脑际认知研讨会 (上海) 组织者、工作坊主讲嘉宾 (Inter-brain synchrony marks the acquisition of a song)
- 2016.7 第一届脑际认知研讨会 (上海) 组织者、博士生论坛主讲嘉宾 (Human cooperation through interpersonal brain synchronization)

媒体

- Scientific American “Music Synchronizes the Brains of Performers and Their Audience” (feature on Hou et al., 2020)
- 科技日报 “华东师范大学近红外超扫描研究团队获新进展” (feature on Pan et al., 2020)
- 上海科技报 “在线教育的脑科学研究 华东师大近红外超扫描研究获新进展” (feature on Pan et al., 2020)
- Neuroscience News “Engaging educational videos elicit similar brain activity in students” (feature on Zhu, Pan*, & Hu*, 2019)
- 新民晚报 (头版) “华东师大专家揭秘: 恋人间的默契是男性 “依附” 女性” (feature on Pan et al., 2017)
- 钱江晚报 “是不是最强大脑 找浙师大学霸测一测” (本科毕业设计)

推荐人

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