余舒凡

主页: https://shufanyu.github.io/

性别：男　　**出生年月**：1993年11月

民族：汉族　　**政治面貌**：党员

籍贯：江苏 张家港　　**学　　历**：博士

电话: +86 18015698790　　**电子邮箱**: yushufan1993@gmail.com

教育经历

2024- **博士后，脑、语言计算实验室。 导师：李平**

香港理工大学，九龙，香港

2019 – 2023 **教育技术学，理学博士，虚拟学习实验室。导师: 刘清堂**

华中师范大学，武汉

2021 – 2022 **具身游戏实验室，联合培养。导师：Mina C. Johnson-Glenberg**

亚利桑那州立大学，坦佩，美国

2016 – 2019 **教育技术学，理学硕士，虚拟学习实验室。导师: 刘清堂**

华中师范大学，武汉

2012-2016 **数字媒体技术，工学学士**

盐城师范学院，盐城

研究经历

研究方向

- AR/VR 学习、游戏化学习
- 具身认知
- 神经科学 (神经耦合)
- 教学代理

研究项目

2022-2023 **探究式虚实融合实验电路构建技术及应用研究** (华中师范大学优秀博士学位论文培育计划资助项目; 项目编号: 2022YBZZ025)

项目负责人: 基于前述研究，构建虚实融合电路典型模块、集成系统，并通过实证研究探讨其应用效果

2020-2021 **虚实融合实验环境构建关键技术研究** (华中师范大学优秀博士学位论文培育计划资助项目; 项目编号: 2020YBZZ037)

项目负责人:探究可组装、可推理的增强现实电路实验的构建的关键技术

2019-2020 **面向中学物理的虚实融合实验系统的研发及应用**(华中师范大学研究生教育创新资助

项目; 项目编号: 2019CXZZ038)

项目负责人: 突破基于增强现实技术的虚实融合磁场实验的关键技术，构建虚实融合磁场实验，通过准实验研究去验证实验效果

2018-2020 **多模态自然交互的虚实融合实验教学环境关键技术研究** (中央高校基本科研业务费项目; 项目编号: CCNU18JCXK03)

主要参与人员: 设计开发测评基于AR/VR的教学虚拟实验

2016-2019 **土家器乐知识组织和智能服务关键技术研究** (国家科技支撑项目；项目编号: 2015BAK03B03)

主要参与人员: 设计开发基于体感技术的土家族摆手舞教学系统、土家撒叶儿嗬舞蹈展示系统、拍摄土家族摆手舞、傩戏纪录片

期刊论文

1. Gong, X., **Yu, S.**, et al. (2025) Learners' interaction patterns in collaborative programming: An integration of the social epistemic interactions. *Educational Technology & Society* **(接收，中科院SSCI Q2，通讯作者)**

2. Ma, J., Liu, Q., **Yu, S.**, Liu, J., Li, X., & Wang, C. (2025). What factors influence scientific concept learning? A study based on the fuzzy-set qualitative comparative analysis. *British Journal of Educational Technology*, 56(1), 250–275. https://doi.org/10.1111/bjet.13499 **(中科院SSCI Q1)**

3. Ma, J., Liu, Q., **Yu, S.**, Li, X., & Liu, J. (2025). Prompting scientific concept learning in augmented reality: impact of the concept map strategy on mental models and cognitive load. *Educational Technology Research and Development*, 0123456789. https://doi.org/10.1007/s11423-025-10470-5 **(中科院SSCI Q3)**

4. Chen, F., Zhang, S., Liu, Q., **Yu, S**., Li, X., & Zheng, X. (2025). Supporting learning performance improvement: Role of online group assessment. *Education and Information Technologies*, 30(1), 1239–1264. https://doi.org/10.1007/s10639-024-12907-5 **(中科院SSCI Q2)**

5. Gong, X., Xu, W., **Yu, S.,** Ma, J., & Qiao, A. (2025). Enhancing computational thinking and spatial reasoning skills in gamification programming learning: A comparative study of tangible, block and paper-and-pencil tools. *British Journal of Educational Technology*, 56(1), 80–102. https://doi.org/10.1111/bjet.13482 **(中科院SSCI Q1)**

6. **Yu, S.**, Liu, Q., Liu, J., Ma, J., & Yang, Y. (2023). Integrating augmented reality into acoustics learning and examining its effectiveness: a case study of Doppler effect. *Education and Information Technologies*. https://doi.org/10.1007/s10639-023-12091-y **(中科院SSCI Q3, 通讯作者)**

7. Liu, J., Liu, Q., **Yu, S.,** Ma, J., Liu, M., & Wu, L. (2023). How do autonomy and learner characteristics combine to influence learners' learning outcomes and cognitive load in virtual reality learning environments? A fuzzy-set qualitative comparative analysis approach. *Education and Information Technologies*, *0123456789*. https://doi.org/10.1007/s10639-023-12262-x **(中科院SSCI Q3)**

8. Gong, X., **Yu, S**., Xu, J., Qiao, A., & Han, H. (2023). The effect of PDCA cycle strategy on pupils' tangible programming skills and reflective thinking. *Education and Information Technologies*, *0123456789*. https://doi.org/10.1007/s10639-023-12037-4 **(中科院SSCI Q3, 通讯作者)**

9. Johnson-Glenberg, M. C., Yu, C. S. P., Liu, F., Amador, C., Bao, Y., **Yu, S**., & LiKamWa, R. (2023). Embodied mixed reality with passive haptics in STEM education: randomized control study with chemistry titration. *Frontiers in Virtual Reality*, *4*(July), 1–20. https://doi.org/10.3389/frvir.2023.1047833

10. **Yu, S**., Liu, Q., Johnson-Glenberg, M. C., Han, M., Ma, J., Ba, S., & Wu, L. (2023). Promoting musical instrument learning in virtual reality environment: Effects of embodiment and visual cues. *Computers & Education*, 198, 104764. **(中科院SSCI Q1)**

11. **Yu, S**., Liu, Q., Ma, J., Le, H., & Ba, S. (2022). Applying Augmented reality to enhance physics laboratory experience: does learning anxiety matter? *Interactive Learning Environments*, 1–16. **(中科院SSCI Q3)**

12. Wang, C., & **Yu, S**. (2021). Tablet-to-student ratio matters: Learning performance and mental experience of collaborative inquiry. *Journal of Research on Technology in Education*, 0(0), 1–17. **(中科院SSCI Q3, 通讯作者)**

13. Liu, Q., **Yu, S.**, Chen, W., Wang, Q., & Xu, S. (2021). The effects of an augmented reality based magnetic experimental tool on students' knowledge improvement and cognitive load. *Journal of Computer Assisted Learning*. **(中科院SSCI Q2, 通讯作者)**

14. Liu, Q., Ma, J., **Yu, S**., Wang, Q., & Xu, S. (2023). Effects of an Augmented Reality-Based Chemistry Experiential Application on Student Knowledge Gains, Learning Motivation, and Technology Perception. *Journal of Science Education and Technology*, *32*, 153–167. **(中科院 SSCI Q2)**

15. Yang, W., Qingtang, L., Haoyi, H., Hairu, Y., **Shufan, Y.**, Huixiao, L., & Yangyang, Y. (2018). Personal Active Choreographer: Improving the Performance of the Tujia Hand-Waving Dance. *IEEE Consumer Electronics Magazine*, 7(4), 15–25. **(中科院SCI Q2)**

会议论文

1. **Shufan, Y.**, Qingtang, L., Suxiao, X., Yuanyuan, Y., & Linjing, W. (2018). Design and Practice of Exploratory Virtual Experiment in Physics Discipline. *Proceedings of the 2018 IEEE International Conference on Teaching, Assessment, and Learning for Engineering (TALE)*, Wollongong, Australia. **(presentation)**

2. Liu, Q., **Yu, S**., Lin, L., Xu, S., & Wu, L. (2018). Design and Implementation of an Immersive Virtual Reality Biological Courseware—Miraculous Eyeball. *Proceedings of the 2018 International Conference on Blended Learning (ICBL),* Kansai, Japan. **(presentation)**

3. Liu, Q., **Yu, S.**, Wang, Y., Le, H., & Yuan, Y. (2017). A hand-waving dance teaching system based on kinect. *Proceedings of the 2017 International Conference on Blended Learning (ICBL),* Hongkong, China. **(presentation)**

4. Johnson-Glenberg, M. C., Kapadia, A., Liu, F., Likamwa, R., Yu, S., Bennett, A., Kosa, M., Bao, Y., Balanzat, D., & Yu, C. S. P. (2022). XR - Titration and Civil Engineering: Design Issues & Preliminary Results. Poster presented at the American Educational Research Association (AERA), San Diego, CA. April, 2022.

5. Liu, Q., Xu, S., **Yu, S.**, Yang, Y., Wu, L., & Ba, S. (2019). Design and implementation of an ar-based inquiry courseware - Magnetic field. *Proceedings of the 2019 International Symposium on Educational Technology (ISET),* Hradec Králové, Czech Republic.

6. Liu, J., Liu, Q., **Yu, S**., Ma, J., Liu, M., & Wu, L. (2022). Which Types of Learners Are

Suitable for the Virtual Reality Environment: A fsQCA Approach. *2022 8th International Conference of the Immersive Learning Research Network (ILRN)*, 1–5.

7. Liu, Q., Liu, M., **Yu, S**., Ma, J., Liu, J., & Jiang, Y. (2021). Design and Implementation of Virtual Museum Learning Environment from the Perspective of Multimedia Learning Theory. *2021 International Symposium on Educational Technology (ISET)*, 266–269.
8. Qingtang, L., Yuwei, J., Jindian, L., Miaomiao, H., Jingjing, M., & **Shufan, Y.** (2021). Design and Implementation of Virtual Sanxian Teaching System. *2021 IEEE International Conference on Engineering, Technology & Education (TALE)*, 938–943.
9. Zhai, X. M., Meng, N., & **Yu, S**. (2019). Investigating Using Behaviors of E-dictionary with Multiple Design: A Perspective from the Integration of Eye-Tracking Technique and Stimulated Recall. *Proceedings of the 2018 IEEE International Conference on Teaching, Assessment, and Learning for Engineering (TALE)*, Wollongong, Australia.
10. Yang, Y., Liu, Q., Wu, L., Xu, S., **Yu, S.**, & Zhang, N. (2019). Design and development of mobile augmented reality for mathematical experiments. *Proceedings of the 2019 International Symposium on Educational Technology (ISET),* Hradec Králové, Czech Republic.

专利（授权）

1. 刘清堂, **余舒凡**, 姜雨薇, 韩苗苗, 周姝言, 马晶晶, 吴林静. 一种可组装的虚实融合实验电路的计算方法及系统[P]. 湖北省: CN113570925A, 2021-10-29. (发明专利)
2. 刘清堂,**余舒凡**,马晶晶,徐苏晓,郑欣欣,杨炜钦,吴林静. 一种面向虚实融合实验的磁场可视化方法、系统及设备[P]. 湖北省：CN112528476B,2023-02-28. (发明专利)
3. 刘清堂,**余舒凡**,李云,张耀升,袁阳阳,王洋,黄景修,吴林静. 一种虚拟舞蹈教学方法及系统[P]. 湖北省：CN108777081B,2021-02-02. (发明专利)
4. 刘清堂,徐苏晓,杨园园,马晶晶,**余舒凡**,张翼恒,吴林静. 一种增强现实实验箱[P]. 湖北省：CN210091460U,2020-02-18. (实用新型专利)
5. 刘清堂,王洋,**余舒凡**,吴林静,黄景修,张耀升,常亚娜,袁阳阳. 一种虚拟舞蹈系统的动作评价方法[P]. 湖北省：CN107349594B,2019-03-19. (发明专利)

软件著作权

1. 基于leap motion体感技术的教育游戏-Leapcell （除导师外一作）
2. 基于Kinect体感技术的土家撒叶儿嗬舞蹈教学系统（除导师外一作）
3. 基于增强现实技术的光的偏振实验系统（除导师外一作）
4. 基于虚拟现实技术的三弦虚拟交互系统 （除导师外一作）
5. 基于探究式教学的磁场与磁感线虚实融合实验系统
6. 基于虚实融合的眼球结构学习系统（VR版本）
7. 基于Kinect体感技术的土家摆手舞教学系统
8. 基于增强现实技术的虚拟实验平台
9. 面向混合式学习的酸碱溶液判定虚拟实验系统

10. 基于增强现实的立方体三视图学习系统
11. 虚拟土家唢呐演奏系统
12. 基于增强现实的多谱勒效应系统
13. 基于Leap motion的虚拟唢呐演奏系统

荣誉及获奖

- 2019年Iteach全国大学生数字化教育应用创新创业大赛一等奖（第二作者）
- 2020年Iteach全国大学生数字化教育应用创新创业大赛三等奖（第二作者）
- 博士研究生国家奖学金 （2021）
- 硕士研究生国家奖学金（2018）

学术身份

- SSCI期刊Computers & Education, Journal of computer assisted learning, IEEE Transaction on learning technologies, Education and Information Technologies, Journal of Research on Technology in Education, Interactive Learning environments, Journal of educational computing research, Universal Access in the Information Society, International Journal of Human–Computer Interaction 审稿人
- 虚拟学习社区（immersive learning research network）会员

专业技能

软件: SPSS, Visual Studio, Photoshop, Premiere, 3DS max etc

数据分析：基本统计线性模型、多层线性模型、网络分析（ENA、ONA）、序列分析（LSA）

编程语言: C, C #, R, HTML, Jekyll

游戏开发引擎：UNITY

XR开发：Vuforia, VR_TK，STEAM VR