Dr. Jingwen Dai

CONTACT INFORMATION

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SUMMARY

- Over 15 years of experience in research and development in the field of computer vision, with a focus on its applications in human-computer interaction and virtual/augmented reality.
- Strong team leadership skills and experience in effective product planning, task oversight, and rapid technology transfer.
- Worked in multicultural and multinational environments, with experience in the United States, Singapore, Hong Kong, and Mainland China.

WORKING EXPERIENCE

Guangdong Virtual Reality Technology Co., Ltd. (aka. Ximmerse), Shenzhen, China

Co-Founder & CTO **08/2015 - present**

- As a board member, lead the entire R&D and engineering team, which consists of over 100 scientists and engineers in the areas of algorithm, hardware, embedded software, OS, SDK, testing, and engineering.
- *Products Highlights*

2023 **(MR)** Xing Kong: A full-stack development toolkit (including algorithm, hardware, system and software) for fusing real world with virtual world.

2022 **(MR)** Rhino X 2.0: A novel stand-alone mixed reality headset with multimodal interaction capability.

2021 **(MR)** Rhino X Pro: A brand-new stand-alone mixed reality headset with Qualcomm Snapdragon XR2 platform.

2021 **(MR)** Rhino XH: A tethered mixed reality headset with HiSilicon platform.

2019 **(MR)** HoloWorld: A mixed reality location-based entertainment (LBE) solution.

2019 **(MR)** Blaster: A mixed reality PvP shooting experience with NetEase Games.

2019 **(MR)** LENOVO & DISNEY MIRAGE 1.5 with Marvel Dimension of Heros.
https://www.lenovo.com/us/en/mirage-ar/

2019 **(MR)** Rhino X: An all-new mixed reality system is made up of the Rhino X stand-alone headset and X-Tag based inputs.
https://www.ximmerse.com/rhinox

2018 **(MR)** Slide-in AR headset with ultra wide FOV and unique computer vision based tracking and interaction technology, enabling 6-DoF headset tracking and 6-DoF peripherals tracking.

2018 **(AR)** Visor X: a brand new headset, designed for hands-free fun, play and work. Turn the small phone screen into a big screen.
https://www.ximmerse.com/visor-x

2017 **(MR)** LENOVO & DISNEY MIRAGE 1.0 with Star Wars: Jedi Challenges.
http://www3.lenovo.com/us/en/jedichallenges/

2017 **(AR)** 3-DoF controller product for MIRA.
https://www.mirareality.com

2017 **(VR)** 6-DoF outside-in VR controller product for HTC LINK.
https://www.htc.com/jp/virtual-reality/link/

2017 **(VR)** 3-DoF VR controller product for ZEISS VR ONE CONNECT.
https://www.zeiss.com/virtual-reality/vr-one-connect.html

2017 **(VR)** 3-DoF VR controller product for OCCIPITAL BRIDGE.
https://bridge.occipital.com

2017 **(VR)** 3-DoF controller in QUALCOMM HMD Accelerator Program (HAP).
`https://www.qualcomm.com/news/onq/2017/06/27/shift-mobile-vr-now`

2016 **(VR)** 6-DoF VR controller in SAMSUNG Accessary Partership Program (SMAPP).

2016 **(VR)** 3-DoF VR controller solution for XIAOMI MiVR.
`http://www.mi.com/mivr/`

Lenovo Research & Technology, Hong Kong

Manager & Advisory Researcher, Image & Visual Computing Lab **04/2015 - 07/2015**

- Lead of 3D vision group (6 researchers & 4 engineers), contributing total 3D vision solution to Lenovo Mobile BU, depth-based applications such as refocus, magic cut-out, and 3D gadget were launched in Lenovo VIBE S1 in June 2015.

Staff Researcher, Image & Visual Computing Lab **01/2014 - 03/2015**

- Technical lead of Super Camera group (3 researchers & 6 engineers), delivering intelligent photography solution to Lenovo Mobile BU, real-time smart composition guide feature was launched in Lenovo VIBE Shot in May 2015.
- Lead of immersive communication group, prototyping next generation video conference system and tele-presence system.
- Key member of FunnyFace project and push face beautification features (the world first successful case in real-time video call) to Lenovo's video call software *YouYue* in March 2014.
- Principal contributor of Lenovo first gaze correction technology for home video conferencing.

The University of North Carolina *at* Chapel Hill, NC, USA

Postdoctoral Research Associate, Department of Computer Science **11/2012 - 12/2013**

- Research staff in BeingThere Center UNC. Involved in project of mobile animatronics tele-presence system and room-size tele-presence system.

Nanyang Technological University, Singapore

UNC Key Researcher **01/2013 - 12/2013**

- Collaborated with researchers from ETH Zurich and NTU Singapore to develop prototypes of the next generation of tele-presence systems.

HJTech, Shanghai, China

Senior Research Engineer **04/2010 - 10/2012**

- Led the architecture and algorithm design for a face identification-based immigration clearance system that was implemented in Shanghai Yangshan Port.
- Involved in the transplantation of the algorithm to embedded systems (DaVinci and ARM platforms) and the simplification and optimization of the algorithm.

Co-Founder & CTO **03/2009 - 07/2009**

- Co-founded a technology startup that focuses on face recognition-related products. The core technology of the company was based on my master's research work.
- Led the R&D team to optimize face recognition algorithms and developing application software.
- The face identification-based products have been applied in many areas: Attendance checking in office buildings and schools in Shanghai; Access control in residences in Shanghai and Jiangsu and prison security in Jiangsu, Guangdong and Jiangxi.

The Chinese University of Hong Kong, Hong Kong

Research Assistant, Computer Vision Lab **08/2009 - 08/2012**

- Involved in several research projects partially sponsored by the Hong Kong Research Grants Council, Qualcomm, and the CUHK MoE-Microsoft Key Laboratory of Human-Centric Computing and Interface Technologies.
- Research area focused on human-computer interaction in projector-camera systems.
- Developed a real-time 6-DOF human head pose estimation system under normal illumination embedded with imperceptible structured codes.
- Developed a natural user interface that makes any tabletop surface into a touch-sensitive computer screen, just by using a video projector and camera.

Project Supervisor, Computer Vision Lab **03/2010 - 08/2012**

In charge of several projects collaborated with companies, short-time RAs and students.

- ASTRI (R&D Company founded by HK Government): "Real-time 3D scanner".
- Matt Fisher (Exchange Student from UC Berkeley): "User-Friendly ProCam Calibration".
- Tiffany Yip (Short Time RA): "Automatic Facial Feature Points Detection".
- Tao Lin (M.S. Student of CUHK): "Fusing Kinect Depth Map".
- Guijin Zou (Exchange Student from Peking Univ.): "3D Reconstruction from one shot".

Shanghai Jiaotong University, Shanghai, China

Research Assistant, Research Center of Intelligent Robotics **09/2006 - 02/2009**

- Involved in computer vision group, which is partially sponsored by National Natural Foundation of China and Program for New Century Excellent Talents of Ministry of Education, China.
- Research area focused on face detection, face tracking and face recognition.
- Developed a real-time face recognition system independently, which is the foundation for HJTech products.

Education

The Chinese University of Hong Kong (CUHK), Hong Kong **08/2009 - 09/2012**

Ph.D. in Computer Vision, Department of Mechanical and Automation Engineering

Shanghai Jiaotong University (SJTU), Shanghai, China **09/2006 - 03/2009**

M.E. in Robotics, Department of Automation

Publications

Thesis

- J. Dai, Use of Projector-Camera System for Human-Computer Interaction, *PhD Thesis*, The Chinese University of Hong Kong, September 2012.
- J. Dai, The Fundamental Research of Practical Face Recognition System, *Master Thesis (in Chinese)*, Shanghai Jiao Tong University, January 2009.

Journal Paper (5)

- Z. Zhang, Y. Hu, G. Yu and J. Dai, DeepTag: A General Framework for Fiducial Marker Design, *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 45(3):2931-2944, 2023.
- G. Yu, Y. Hu and J. Dai, TopoTag: A Robust and Scalable Topological Fiducial Marker System, *IEEE Transactions on Visualization and Computer Graphics*, 27(9):3769-3780, 2021.
- J. Dai and R. Chung, Touchscreen Everywhere: On Transferring a Normal Planar Surface to a Touch-Sensitive Display, *IEEE Transactions on System, Man and Cybernetics, Part B*, 44(8):1383-1396, 2014.
- J. Dai and R. Chung, Embedding Invisible Codes into Normal Video Projection: Principle, Evaluation and Applications, *IEEE Transactions on Circuit and System for Video Technology*, 23(12):2054-2066, 2013.
- J. Dai, D. Liu and J. Su, The Method of Rapid Eye Localization Based on Projection Peak, *Pattern Recognition and Artificial Intelligence (in Chinese, Indexed by EI)*, 22(4):605-609, 2009.

Conference Paper (12)

- J. Dai, G. Welch and H. Fuchs, Encumbrance-free Shader Lamps Avatars for Tele-presence, *In Preparation.*
- Z. Lu, Y. Hu, and J. Dai, WatchAR: 6-DoF Tracked Watch for AR Interaction, *In Proc. of IEEE International Symposium on Mixed and Augmented Reality - Demo (ISMAR'19)*, 2019.
- Y. Hu, J. Ren, J. Dai, C. Yuan, L. Xu and W. Wang, Deep Multimodal Speaker Naming, *In Proc. of The 23rd Annual ACM International Conference on Multimedia (MM'15)*, 2015.
- J. Dai and R. Chung, Sensitivity Evaluation of Embedded Code Detection in Imperceptible Structured Light Sensing, *In Proc. of IEEE Winter Vision Meetings - Workshop on Robot Vision (WoRV'13)*, pages 34-39, 2013.
- J. Dai and R. Chung, Making Any Planar Surface into a Touch-sensitive Display by a Mere Projector and Camera, *In Proc. of 25th IEEE Conference on Computer Vision and Pattern Recognition (CVPR'12) - Workshop (PROCAMS'12)*, pages 35-42, 2012.
- J. Dai and R. Chung, On Making Projector both a Display Device and a 3D Sensor, *In Proc. of The 8th International Symposium on Visual Computing (ISVC'12)*, pages 654-664, 2012.
- J. Dai and R. Chung, Combining Contrast Saliency and Region Discontinuity for Precise Hand Segmentation in Projector-Camera System, *In Proc. of The 21st International Conference on*

Pattern Recognition (ICPR'12), pages 2161-2164, 2012.

- J. Dai and R. Chung, Embedding Imperceptible Codes into Video Projection and Applications in Robotics, *In Proc. of IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS'12)*, pages 4399-4404, 2012.
- J. Dai and R. Chung, Head pose estimation by imperceptible structured light sensing, *In Proc. of IEEE International Conference on Robotics and Automation(ICRA'11)*, pages 1646-1651, 2011.
- J. Dai, D. Liu and J. Su, Projection Peak Analysis for Rapid Eye Localization, *In Proc. of The International Conference on Computer Vision Theory and Applications(VISAPP'09)*, pages 315-320, 2009.
- F. Yang, J. Dai and D. Liu, A novel eye localization method based on spectral residual model, *In Proc. of The 7th World Congress on Intelligent Control and Automation(WCICA'08)*, pages 6773-6777, 2008.
- F. Yang, J. Su and J. Dai, Fast Quality Assessment of Face Images for Face Recognition, *In Proc. of The 27th Chinese Control Conference(CCC'08)*, pages 531-535, 2008.

PATENTS

US & Intl. (21)

- J. Dai, J. He, Interactive method and interactive system, *US Patent No. 11,436,818*, granted on September 6, 2022.
- G. Wang, J. Dai, J. He, Y. Wu and L. Cai, Communication connection method, terminal device and wireless communication system, *US Patent No. 11,375,559*, granted on June 28, 2022.
- S. Huang, J. Dai and J. He, Three-dimensional display method, terminal device, and storage medium, *US Patent No. 11,380,063*, granted on July 5, 2022.
- Y. Hu, J. Dai and J. He, Method and device for aligning coordinate of position device with coordinate of imu, *US Patent No. 11,248,911*, granted on February 15, 2022.
- J. Dai and J. He, Augmented reality method, system and terminal device of displaying and controlling virtual content via interaction device, *US Patent No. 11,244,511*, granted on February 8, 2022.
- Y. Hu, G. Yu and J. Dai, Method of device tracking, terminal device, and storage medium, *US Patent No. 11,127,156*, granted on September 21, 2021.
- J. Dai and J. He, System, method, and terminal device for controlling virtual image by selecting user interface element, *US Patent No. 11,100,723*, granted on August 24, 2021.
- J. Dai and J. He, Augmented reality method for displaying virtual object and terminal device therefor, *US Patent No. 11,087,545*, granted on August 10, 2021.
- Y. Hu, S. Huang, J. Dai and J. He, Interactive method and augmented reality system, *US Patent No. 10,977,869*, granted on April 13, 2021.
- Y. Yin, J. Dai and J. He, System for sharing virtual content and method for displaying virtual content, *US Patent No. 10,922,042*, granted on February 16, 2021.
- Y. Hu, J. Dai and J. He, Method, device and system for identifying light spot, *US Patent No. 10,922,846*, granted on February 16, 2021.
- Y. Hu, J. Dai and J. He, Method and device for identifying light source, *US Patent No. 10,916,020*, granted on February 9, 2021.
- J. He, J. Dai, C. Wan and Y. Hu, Method and device for searching stripe set, *US Patent No. 10,915,750*, granted on February 9, 2021.
- Y. Hu, J. Dai and J. He, Method and device for identifying flashing light source, *US Patent No. 10,895,799*, granted on January 19, 2021.
- S. Huang, J. Dai and J. He, Method and device for aligning coordinate of controller or headset with coordinate of binocular system, *US Patent No. 10,802,606*, granted on October 13, 2020.
- J. He, J. Dai, C. Wan and Y. Hu, Method, device and terminal for determining effectiveness of stripe set, *US Patent No. 10,795,456*, granted on October 6, 2020.
- G. Wang, J. Dai and J. He, Method, device and system for establishing communication connection, *US Patent No. 10,785,812*, granted on September 22, 2020.
- J. He, J. Dai, T. Zhu and C. Wan, Apparatus, methods, and systems for tracking an optical object, *US Patent No. 10,709,967*, granted on July 14, 2020.
- J. He, J. Dai, C. Wan and Y. Hu, Image processing apparatuses and methods, *US Patent No. 10,402,988*, granted on September 3, 2019.
- J. Dai, Y. Hu and J. He, Electronic tracking device, electronic tracking system and electronic tracking method, *US Patent No. 10,347,002*, granted on July 9, 2019.
- J. Dai, Y. Hu and J. He, Methods, devices, and systems for identifying and tracking an object with multiple cameras, *US Patent No. 10,319,100*, granted on June 11, 2019.

CN (57)

- G. Yu, Y. Hu, G. Wang, J. Dai and J. He, Positioning tracking method, device, terminal equipment and computer readable storage medium, *CN Patent No. ZL 2019 1 0642093.0*, granted on May 23, 2023.
- Y. Hu, J. Dai and J. He, Method, device, terminal equipment and storage medium for tracking interaction equipment, *CN Patent No. ZL 2019 1 0082155.7*, granted on May 16, 2023.
- Z. Lu, J. Dai and J. He, Virtual content processing method and device, terminal equipment and storage medium, *CN Patent No. ZL 2019 1 0290641.8*, granted on May 16, 2023.
- Z. Lu, J. Dai and J. He, Virtual content control method, device, terminal equipment and storage medium, *CN Patent No. ZL 2019 1 1137088.0*, granted on May 16, 2023.
- Y. Hu, J. Dai and J. He, Image processing method, device and test system, *CN Patent No. ZL 2017 1 1260864.7*, granted on May 16, 2023.
- Y. Wu, L. Cai, J. Dai and J. He, Virtual content display method and device, terminal equipment and storage medium, *CN Patent No. ZL 2018 1 1368606.5*, granted on May 16, 2023.
- Y. Hu, J. Dai and J. He, Method and device for identifying flicker light source, *CN Patent No. ZL 2016 8 0009166.7*, granted on April 28, 2023.
- Z. Lu, J. Dai and J. He, Interaction device, virtual content processing method and device and terminal equipment, *CN Patent No. ZL 2019 1 0353640.3*, granted on March 28, 2023.
- S. Huang, J. Dai and J. He, Calibration method for inertia measurement unit, *CN Patent No. ZL 2017 1 1175800.7*, granted on March 28, 2023.
- Y. Hu, G. Yu, J. Dai and J. He, Virtual picture control method and device, terminal equipment and storage medium, *CN Patent No. ZL 2019 1 1073067.7*, granted on March 10, 2023.
- Z. Lu, J. Dai and J. He, Virtual content control method, device, system, terminal device and storage medium, *CN Patent No. ZL 2019 1 0382171.8*, granted on March 3, 2023.
- J. Lai, Y. Hu and J. Dai, Image recognition method, electronic device, and storage medium, *CN Patent No. ZL 2019 1 1233317.9*, granted on February 28, 2023.
- J. He and J. Dai, Generation method, device, electronic equipment and the storage medium of virtual scene, *CN Patent No. ZL 2019 1 0578450.1*, granted on January 6, 2023.
- Y. Hu, J. Dai and J. He, Positioning method, positioning device, terminal equipment and storage medium, *CN Patent No. ZL 2019 1 0822716.2*, granted on November 22, 2022.
- Y. Huang, S. Huang, J. Dai and J. He, Virtual content display method and device, terminal equipment and storage medium, *CN Patent No. ZL 2018 1 1652926.3*, granted on November 22, 2022.
- Y. Wu, L. Cai, J. Dai and J. He, Image processing method and device, electronic equipment and visual interaction system, *CN Patent No. ZL 2018 1 0942716.1*, granted on November 15, 2022.
- Y. Hu, J. Dai and J. He, Marker identification method and device, terminal equipment and storage medium, *CN Patent No. ZL 2018 1 0911024.0*, granted on August 12, 2022.
- Y. Yin, J. Dai and J. He, Display method, display device, terminal equipment and storage medium, *CN Patent No. ZL 2018 1 0910950.6*, granted on August 12, 2022.
- Y. Hu, J. Dai and J. He, Marker, marker identification method and device, terminal device and storage medium, *CN Patent No. ZL 2019 1 0822453.5*, granted on August 12, 2022.
- B. Wu, J. Dai and J. He, Device control method and device, display device and storage medium, *CN Patent No. ZL 2018 1 1226340.0*, granted on July 29, 2022.
- Y. Hu, J. Dai and J. He, Light spot identification method, device and system, *CN Patent No. ZL 2017 8 0007690.5*, granted on May. 31, 2022
- G. Wang, J. Dai and J. He, Communication connection method, device, terminal equipment and wireless communication system, *CN Patent No. ZL 2018 1 1021765.8*, granted on May 31, 2022.
- Y. Hu, J. Dai and J. He, Display method and device, vehicle-mounted head-up display equipment and storage medium, *CN Patent No. ZL 2018 1 1221773.7*, granted on May 31, 2022.
- J. Dai and J. He, Virtual content interaction method and device, terminal equipment and storage medium, *CN Patent No. ZL 2019 1 0005562.8*, granted on May 31, 2022.
- J. Dai and J. He, Method and system for operating a device through augmented reality, *CN Patent No. ZL 2017 8 0005530.7*, granted on April 1, 2022.
- W. Li, B. Rao, J. Dai and J. He, Handheld controller, tracking and positioning method and system, *CN Patent No. ZL 2017 8 0007656.8*, granted on April 1, 2022.
- J. He and J. Dai, Virtual content interaction method, device, system, terminal equipment and storage medium, *CN Patent No. ZL 2018 1 1641778.5*, granted on April 1, 2022.
- Y. Hu, J. Dai and J. He, Light source identification method and device, *CN Patent No. ZL 2017 8 0003631.0*, granted on February 22, 2022.
- Y. Wu, J. He and J. Dai, Shooting training method and device, terminal equipment and storage medium, *CN Patent No. ZL 2019 1 1412888.9*, granted on January 28, 2022.

- Y. Hu, J. Dai and J. He, Calibration method and device based on binocular camera, terminal equipment and storage medium, *CN Patent No. ZL 2019 1 0656422.7*, granted on January 28, 2022.
- Z. Lu, J. Dai and J. He, Virtual content interaction method, device, system, terminal equipment and storage medium, *CN Patent No. ZL 2019 1 0377227.0*, granted on January 28, 2022.
- J. He and J. Dai, Image processing method, device, system, terminal device and storage medium, *CN Patent No. ZL 2019 1 0295517.0*, granted on January 28, 2022.
- J. He and J. Dai, Virtual picture processing method, device and system, electronic equipment and storage medium, *CN Patent No. ZL 2019 1 0578502.5*, granted on December 21, 2021.
- S. Huang, J. Dai and J. He, Optical distortion correction method and device, terminal equipment and storage medium, *CN Patent No. ZL 2018 1 1020965.1*, granted on December 21, 2021.
- Y. Qiao, J. Dai and J. He, Display method, display device, terminal equipment and storage medium, *CN Patent No. ZL 2018 1 0924523.3*, granted on December 21, 2021.
- Z. Lu, J. Dai and J. He, Virtual content control method, device, system, terminal device and storage medium, *CN Patent No. ZL 2019 1 1066795.5*, granted on December 3, 2021.
- Y. Hu, J. Dai and J. He, Virtual content display method and device, terminal equipment and storage medium, *CN Patent No. ZL 2019 1 0005848.6*, granted on November 5, 2021.
- Z. Lu, J. Dai and J. He, Electronic system and method for text input in virtual environment, *CN Patent No. ZL 2017 8 0005510.X*, granted on November 5, 2021.
- J. He and J. Dai, Virtual scene processing method and device, electronic equipment and storage medium, *CN Patent No. ZL 2019 1 0578517.1*, granted on September 14, 2021.
- Y. Hu, J. Dai and J. He, Display method, display device, terminal equipment and storage medium, *CN Patent No. ZL 2018 1 1468491.7*, granted on September 14, 2021.
- S. Huang, J. Dai and J. He, Content display method and device, terminal equipment and content display system, *CN Patent No. ZL 2018 1 1023511.X*, granted on September 14, 2021.
- J. Dai, Y. Hu and J. He, Method, apparatus and system for identifying and tracking objects using multiple cameras, *CN Patent No. ZL 2017 8 0006174.0*, granted on June 29, 2021.
- Y. Wu, L. Cai, J. Dai and J. He, Information prompting method and device, terminal equipment and computer readable storage medium, *CN Patent No. ZL 2018 1 1368617.3*, granted on June 22, 2021.
- Y. Hu, J. Dai and J. He, Positioning tracking method, device, terminal equipment and computer readable storage medium, *CN Patent No. ZL 2018 1 0891134.5*, granted on June 8, 2021.
- Y. Hu, J. Dai and J. He, Interactive display method, device, terminal equipment and storage medium, *CN Patent No. ZL 2018 1 0804421.8*, granted on May 11, 2021.
- W. Li and J. Dai, Controller, control system and control method thereof, *CN Patent No. ZL 2017 1 1445571.6*, granted on April 20, 2021.
- Y. Yin, J. Dai and J. He, Virtual object display method and device, terminal equipment and storage medium, *CN Patent No. ZL 2018 1 0632329.8*, granted on March 26, 2021.
- J. Dai and J. He, Interaction method, equipment and system, *CN Patent No. ZL 2017 1 0294577.1*, granted on January 12, 2021.
- J. He, J. Dai, C. Wan and Y. Hu, Stripe set search method, device, and system, *CN Patent No. ZL 2016 8 0003226.4*, granted on January 5, 2021.
- J. He, J. Dai, C. Wan and Y. Hu, Stripe set search method, device, and system, *CN Patent No. ZL 2016 8 0003225.X*, granted on November 27, 2020.
- J. He, J. Dai, T. Zhu and C. Wan, Track the device of optical object, method and system, *CN Patent No. ZL 2015 8 0076323.1*, granted on November 27, 2020.
- S. Huang, J. Dai and J. He, Coordinate alignment method and system and virtual reality system, *CN Patent No. ZL 2017 1 0278094.2*, granted on October 30, 2020.
- S. Huang, J. Dai and J. He, Coordinate alignment method and system and virtual reality system, *CN Patent No. ZL 2017 1 0278094.2*, granted on October 30, 2020.
- G. Wang, J. Dai and J. He, Communication connection method, equipment and system, *CN Patent No. ZL 2017 1 0271885.2*, granted on April 21, 2020.
- X. Bu, J. Dai and J. He, Data processing method and related equipment, *CN Patent No. ZL 2017 1 0273573.5*, granted on February 7, 2020.
- J. He and J. Dai, A kind of action collection and feedback method and system based on stereoscopic vision, *CN Patent No. ZL 2015 1 0442677.5*, granted on August 3, 2018.
- J. Dai and J. He, A kind of gesture controller and a kind of virtual reality system, *CN Patent No. ZL 2014 1 0329067.X*, granted on November 10, 2017.

Invited Talks

2023

- The New Generation of Mixed Reality: Starting a New Era of HD Interaction in the XR (in

Chinese), *World UHD Video Industrial Conference, Guangzhou, China*, May 2023.
- Revisiting "What's Real about Virtual Reality?", *Plenary Panel, IEEE Conference on Virtual Reality and 3D User Interfaces, (VR'23), Shanghai, China*, March 2023.

2022
- Metaverse: From Interaction Perspective (in Chinese), *Cloud-Device Immersive Computing Forum, China National Computer Congress, Guiyang, China*, December 2022.
- Mixed Reality: Connecting the Physical and Digital Worlds (in Chinese), *Tencent Cloud Heterogeneous Computing Workshop, Shenzhen, China*, December 2022.
- Metaverse: From Interaction Perspective (in Chinese), *The 2022 World Conference on Display Industry, Chengdu, China*, December 2022.
- Virtual Reality Application for Training and Emergency Response (in Chinese), *Huatai Securities Workshop, Shenzhen, China*, November 2022.
- Mixed Reality: Connecting the Physical and Digital Worlds (in Chinese), *Sealand Securities Annual Strategy Meeting, Ningbo, China*, September 2022.
- The Metaverse and the Chinese Labor Problem (in Chinese) *The 2nd Shanghai Forum on Chinese Political Economy Research, Shanghai, China*, September 2022.
- 5G+XR: Starting a New Era of Virtual and Real Fusion Applications (in Chinese), *Glodon Technology Workshop, Guangzhou, China*, May 2022.
- Mixed Reality: Connecting the Physical and Digital Worlds (in Chinese), *Qualcomm IoT Technical Open Day, Beijing, China*, March 2022.
- Metaverse: Open a New World of Virtual and Real Symbiosis (in Chinese), *Hongtai Bole Forum, Guangzhou, China*, March 2022.

2021
- Mixed Reality: Technology Innovation in Industrial Application (in Chinese), *APSARA, Alibaba Group, Hangzhou, China*, October 2021.
- Mixed Reality: Technology Innovation in Industrial Application (in Chinese), *Aliyun Workshop of Visual Computing, Guangzhou, China*, September 2021.
- Ximmerse Rhino X with Nvidia CloudXR, Extending the Boundary of Mixed Reality Simulation Training (in Chinese), *Nvidia Joint Webinar with Local Partners*, May 2021.

2020
- Mixed Reality: Starting from Spatial Interaction (in Chinese), *Shanghai Jiao Tong University, Shanghai, China*, November 2020.
- Mixed Reality: Starting from Spatial Interaction (in Chinese), *Sichuan University, Chendu, China*, October 2020.
- Mixed Reality: Creating a New World by Spatial Interaction (in Chinese), *China International Optoelectronic Conference, Shenzhen, China*, August 2020.
- Mixed Reality Interaction: Leading the New Trend of Off-line Entertainment, *World Conference on VR Industry, Nanchang, China*, October 2020.

2019
- Augmented Reality: From Interaction Perspective, *ARUP Workshop, Hong Kong, China*, September 2019.
- Augmented Reality: From Interaction Perspective (in Chinese), *China International Optoelectronic Conference, Shenzhen, China*, September 2019.
- Augmented Reality: Connecting Everything (in Chinese), *Bluetooth Asia, Shenzhen, China*, May 2019.
- Augmented Reality: Interaction and Connection, *School of Software, Shanghai Jiao Tong University, Shanghai, China*, April 2019.
- Augmented Reality: Interaction and Connection, *Department of Computer Science, University of North Carolina at Chapel Hill, NC, USA*, January 2019.

2018
- Augmented Reality: Interaction and Connection (in Chinese), *OmniVision Technologies New Products Global Launch, Shanghai, China*, October 2018.
- Augmented Reality: From Gaming Perspective (in Chinese), *The 15th Game Development and Operations Conference (GDOC'18), Tencent Interactive Entertainment Group (IEG), Shenzhen, China*, June 2018.
- Augmented Reality: Interaction and Connection, *Flex Shanghai Design and Innovation Center Opening Ceremony, Shanghai, China*, June 2018.
- Augmented Reality: Interaction and Connection (in Chinese), *Bluetooth Asia, Shenzhen, China*, May 2018.

2017

- New Era of Augmented Reality, *OmniVision Technologies New Products Global Launch, Shanghai, China*, October 2017.

2016

- Mobile VR Input Platform, *Samsung Research America, Mountain View, CA, USA*, June 2016.
- Virtual Reality: From Input Perspective, *Clear Water Bay Forum, Hong Kong University of Science and Technology, Hong Kong, China*, June 2016.

2015

- VR Interaction and Development Trends, *Future Information Technology International Forum for Young Scholars (SIFYS), Shanghai Jiao Tong University, Shanghai, China*, October 2015.
- VR Development From Input Perspective, *School of Computer Science and Engineering, Nanjing University of Science and Technology, Nanjing, China*, October 2015.

Honors & Awards

Peacock Plan (Level C) of Shenzhen **2016**

FY14/15 Excellent Performance Employee of Lenovo R&T **2015**

FY14/15 Outstanding Team Award(Super Camera) of Lenovo R&T **2015**

FY14/15 1H Excellent Performance Employee of Lenovo R&T **2014**

FY14/15 1H Excellent Project Team (Super Camera) of Lenovo R&T **2014**

Individual Instant Award of Lenovo R&T **2014**

Postgraduate Fellowship of The Chinese University of Hong Kong **2009-2012**

Excellent Student of Shanghai Jiaotong University **2008**

Kwang-Hua Scholarship of Shanghai Jiaotong University **2008**

Excellent League Member of Shanghai Jiaotong University **2007**

JIDIAN Electronics Technology Scholarship of Shanghai Jiaotong University **2007**

Full Tuition Scholarship of Shanghai Jiaotong University **2006-2009**