

Lijie Yao 姚李捷 (she/her/they)

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About Me

Lijie Yao 姚李捷 is a postdoc in Visualization at [AVIZ Inria](#). She completed her Ph.D. thesis on “Situating Visualization in Motion” at AVIZ, supervised by Dr. [Petra Isenberg](#) and Prof. [Anastasia Bezerianos](#). Her work focuses on exploring the impact of motion factors on visualizations' perception and how to best design visualizations in motion in real application scenarios. Her work is related to perception, sports analytics, video games, and ubiquitous settings. Her thesis received the [2023 PhD Thesis Award from AFIHM](#). She got her M.Sc. degree in [Computer Science](#) from [University Paris-Saclay](#) in 2020 and her M.Eng. degree in [Electrical and Computer Engineering](#) from [Polytech Lille](#) in 2019. She received her B.Eng. in [Electronic and Information Engineering](#) from [XIDIAN University](#) in 2018.

Education

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| 09/2020 – 12/2023 | University Paris-Saclay
Ph.D. - Computer Science (Human-computer Interaction) <ul style="list-style-type: none">Ph.D. Thesis: Situating visualization in motionSupervisors: Dr. Petra Isenberg and Dr. Anastasia Bezerianos | Gif-sur-Yvette, France
 |
| 09/2019 – 09/2020 | University Paris-Saclay
M.Sc. - Computer Science (Human-computer Interaction) <ul style="list-style-type: none">Master Thesis: Situating visualization in motionSupervisor: Dr. Petra Isenberg | Gif-sur-Yvette, France
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| 09/2017 – 09/2019 | Polytech Lille
M.Eng - Electrical and Computer Engineering <ul style="list-style-type: none">Master Thesis: Drone Control based on ROS *Supervisor: Dr. Komi Midzodzi Pekpe | Lille, France
 |
| 08/2014 – 06/2018 | XIDIAN University
B.Eng - Electronic and Information Engineering <ul style="list-style-type: none">Bachelor Thesis: Wearable Device for Real-time Health Monitoring *Supervisors: Dr. Xavier Redon and Dr. Alexandre Boé | Xi'an, China

<small>西安电子科技大学
XIDIAN UNIVERSITY</small> |

Peer-reviewed Publications

- Lijie Yao**, Romain Vuillemot, Anastasia Bezerianos, Petra Isenberg. Designing for Visualization in Motion: Embedding Visualizations in Swimming Videos. *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, 2024, 30(3), pp. 1821-1836, [\(10.1109/tvcg.2023.3341990\)](#), [\(hal-04364838\)](#).
- Lijie Yao**, Anastasia Bezerianos, Romain Vuillemot, Petra Isenberg. Visualization in Motion: A Research Agenda and Two Evaluations. *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, 2022, 28(10), pp. 3546-3562, [\(10.1109/TVCG.2022.3184993\)](#), [\(hal-03698837\)](#).
- Yvonne Jansen, Federica Bucchieri, Pierre Dragicevic, Martin Hachet, Morgane Koval, Léana Petiot, Arnaud Prouzeau, Dieter Schmalstieg, **Lijie Yao**, Petra Isenberg. Envisioning Situated Visualizations of Environmental Footprints in an Urban Environment. *In Proceeding of the IEEE conference on Visualization (IEEE VIS), Visualization for Social Good*, October 2022, Oklahoma, United States. [\(hal-03770857\)](#).
- Alaul Islam*, **Lijie Yao**†*, Anastasia Bezerianos, Tanja Blascheck, Tingying He, Bongshin Lee, Romain Vuillemot, Petra Isenberg. Reflections on Visualization in Motion for Fitness Trackers. *In Proceeding of the*

All content with [underline](#) is clickable.

* Given links are in French, please refer to the on-campus project experience for more information in English.

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Supervision

03/2022 - 08/2022 [Federica Bucchieri](#), master student at University Paris-Saclay, co-supervised with Petra. Her thesis is "Situated Visualization in Motion for Video Games", for which she received 18/20.

Service

Reviewing	Student Volunteer
2024: CHI , EuroVis , TVCG , ETRA , alt.chi , IMX , HRI , TSMCS , SAIS , ISS , MobileHCI 2023: CHI , VIS , EuroVis 2022: VIS , SIGGRAPH Asia	2022: VIS , EuroVis 2021: VIS

Languages

Chinese	English	French
Native speaker	Professional working proficiency (Level C1)	Professional working proficiency (Level C1)

THE FOLLOWING CONTENT IS FROM MY BACHELOR'S AND MASTERS' PERIODS.

On-campus Project Experience

- 12/2019 – 02/2020 **AR Game Development base on Unity** Gif-sur-Yvette, France
- Project type: Course project - Personal project
 - Introduction: This was a course project, based on Unity, implemented by C#, through Vuforia library to develop an AR game applied for mobile devices.
- 02/2019 – 10/2020 **Posture Interaction base on AlphaPose** Gif-sur-Yvette, France
- Project type: Course project - Work by two
 - Introduction: This course project was based on an open-source object detection library -- AlphaPose. The back end was implemented by Python, while the front end was realized by web techniques, including H5/JS/CSS/Ajax/Django. We provide the possibilities to interact with webpages by different postures in real-time. For instance, scroll a page up and down by nodding, zoom a figure in and out by stretching your thumb and index, swipe a page left and right by turning your body, and go to the next page by waving your hands.
 - My work: I implemented the back end, front end and the server.
- 02/2019 – 10/2020 **Drone Control based on ROS** Lille, France
- Project type: Graduation-level project - Work by two
 - Introduction: This graduation-level project is based on ROS Kinetic, a specific robot operating system. We used the drone's camera and sensors to capture videos and images. We conducted image processing to detect the target object. We realized the smooth flying/pausing of the drone when tracking an object by automated closed-loop feedback.
 - My work: I established the working space of ROS, configured the camera and sensors and the communication between them, processed images based on standard computer vision, and implemented the user interface.
- 02/2018 – 04/2018 **Wearable Device for Real-time Health Monitoring** Lille, France
- Project type: Under graduation-level project - Work by two
 - Introduction: This project was based on a microcontroller ATmega328p, a temperature sensor TLC5947, a heart rate sensor, a self-design and self-soldered PCB, and individual LED lights. We realized a wearable electrical necklace with functionality to monitor the wearer's heart rate and temperature variance. When the wearer's heart rate and/or

temperature was out of the normal range, the LED lights on the necklace would switch their colors to alarm.

- My work: I designed and soldered the PCB, configured the communications between interfaces, and programmed the main functionality.

11/2015 – 10/2017 **A Virtual Machine Service based on Cloud Computing**

Xian, China

- Project type: Teamwork – 5 team members
- Introduction: We realized a campus-based cloud computing platform. Our platform provided virtual machine service to students and faculty members through online access. Our platform provided the accessibility to a virtual machine 24/24 hours and 7/7 days from different client devices (both PC and mobile ends) and through different operating systems (windows, Linux, Android, and iOS). Our platform also provided storage and computing functions.
- My work: I was the project leader. I established a private cloud based on ZStack and implemented the front-end interface.
- Award: This work was awarded to the Provincial Excellent Project in College Students Innovation and Entrepreneurship Training Program of Shaanxi.

09/2015 – 10/2015 **Tangible Interaction based on Arduino**

Xian, China

- Project type: Teamwork – 3 team members
- Introduction: We proposed interactions with computers through fruits. We connected fruits with computers with Arduino and cables. We modified the software-based music's tone and melody by different touch forces and touch positions on fruits.
- My work: I was the project leader. I took care of the configuration of communication between interfaces.
- Award: This work was awarded to the Second Prize of the 27th XingHuo Cup of XIDIAN University.

Awards

06/2018	"Excellent Undergraduate" award, XIDIAN University
12/2017	"Inspirational Award" scholarship, XIDIAN University
12/2017	"Diligence Award" scholarship, XIDIAN University
2015 – 2017	"Outstanding Student Cadre" award, XIDIAN University
07/2017	Provincial Excellent Project in College Students Innovation and Entrepreneurship Training Program, Shaanxi Province
06/2016	Second-class scholarship, XIDIAN University
07/2015	"Huashan Outstanding Student Cadre", XIDIAN University
07/2015	"Huashan Moral Model", XIDIAN University
07/2015	"Huashan Vitality Star", XIDIAN University
12/2015	Second prize of the 27th Xinghuo Cup, XIDIAN University
06/2015	Third-class scholarship, XIDIAN University
05/2015	"Excellent Volunteer" of the 2nd International Cultural Festival, XIDIAN University