Zhenye Luo

Email: luozy2021@mail.bnu.edu.cn
Phone: 86-18810243357
Address: No.19, Xinjiekouwai St, Haidian District, Beijing, 100875, P.R.China

EDUCATION & EXPERIENCES

Beijing Normal University (BNU), Beijing, BJ, China 09/2021 – 07/2024
Master of Science in Telecommunications and Information Systems **GPA: 3.6/4.0 Advisor: Prof. Li Yao**

Beijing University of Chemical Technology (BUCT), Beijing, BJ, China 09/2017 – 07/2021
Bachelor of Automation **GPA: 3.44/4.33**

PUBLICATIONS & MANUSCRIPTS (*corresponding authors)

[1] **Luo Z**, Ren M, Hu X*, et al. Popdg: Popular 3d dance generation with popdanceset[C]//Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR). 2024: 26984-26993.

RESEARCH EXPERIENCE

State Key Laboratory of Cognitive Neuroscience and Learning, BNU Advisor: Prof. Li Yao
Graduation Thesis 09/2022 – 07/2024

3D Dance Generation Driven by Music Data Based on Improved-DDPM

- Developed a dance popularity function using multivariate linear regression based on a year-long dataset of dance videos.
- Constructed the music-dance dataset PopDanceSet, utilizing monocular 3D pose estimation techniques.
- Designed a generation framework for music-driven dance generation using the improved-DDPM (iDDPM).
- Innovated the Space Augmentation Algorithm and Alignment Module to enhance spatial relationships between human joints, improving the match between generated dances and music.
- Proposed the new Physical Body Contact (PBC) metric as an innovative evaluation metric.

Intelligent Vision Computing Research Center (BNU-IVC), BNU Advisor: Prof. Yongzhen Huang
Research Assistant 03/2022 – 09/2022

Research on Gait Recognition from a Drone's Perspective

- Collected pedestrian gait data using drones to construct a high-altitude gait dataset.
- Utilized ST-GCN to build a basic model, achieving baseline results on the dataset.

State Key Laboratory of Cognitive Neuroscience and Learning, BNU Advisor: Prof. Li Yao
Graduation Thesis 11/2020 – 06/2021

Classification of Psychological Scales Based on Neural Networks

- Pioneered the application of artificial neural networks for classifying psychological crisis levels in psychological scales, initiating a preliminary attempt at intelligent discrimination.
- Innovated and compared different neural network architectures, including deep feedforward, Conv1D, and LSTM networks, significantly enhancing the accuracy and effectiveness in intelligent discrimination of psychological crises within psychological scales.

Microfluidic Chip Biomedical Engineering Research Center, BUCT Advisor: Prof. Xianbo Qiu
Undergraduate Research Assistant 11/2019 – 11/2020

Centrifugal Microfluidic Chip Technology and Its Applications

- Conducted fluid physics force analysis during high-speed rotation to derive optimal dimensions (radius, width, depth) for microfluidic chip channels.
- Designed comprehensive 3D models of microfluidic chips using SolidWorks software.
- Fabricated centrifugal microfluidic chips on PMMA (Polymethylmethacrylate) using laser cutting and CNC milling techniques.

SKILLS & EXPERTISE

Mathematical and Control Theory Proficiency: Solid foundation in mathematics and physics, skilled in both classical and modern control theories.

Programming and Simulation: Proficient in Python, PyTorch, and MATLAB, familiar with C++, and adept at building simulation models using SIMULINK.

AI Research: Proficient in using Ubuntu, comfortable with command-line operations, and have a deep understanding of deep learning models in computer vision and AIGC domains.

Mechanical Design and Experimental Operation: Skilled in using mechanical drawing and simulation software such as SolidWorks, and experienced in operating CNC milling machines and laser cutters.

English Expertise： IELTS: Overall: 7.5, Listening: 8.5, Reading: 9.0, Writing: 7.0, Speaking: 6.0.

HONORS & AWARDS

Excellent Graduate of Beijing (**Top 4 %**) 2024

Excellent Graduate of Beijing Normal University (**Top 10 %**) 2024

First Class Academic Scholarship (Academic Master's Degree), *BNU* 2022 and 2023

Outstanding Undergraduate Teaching Assistant for the 2022-2023 Academic Year, *BNU* 2023

Bronze Medalist in the 19th Graduate Football League, Beijing Normal University, *BNU* 2023

Eighth Place in The 3rd International Competition on Human Identification at a Distance 2022 2022

First Prize in the 11th Humanities Knowledge Competition, *BNU* 2022

Finalist in the American Mathematical Contest in Modeling (**Globally Top 1.3 %**) 2020

First Prize in the 10th Beijing College Student Humanities Knowledge Competition (Team), third place in Beijing 2019

Third Prize in the 11th National College Student Mathematics Competition (Non-math Major) 2019

Second Prize in the 10th Beijing College Student Humanities Knowledge Competition (Individual) 2019

Second Prize in Beijing Division, Group A, National College Student Mathematical Modeling Contest 2018

Second Prize in the Zhongkong Scholarship, *BUCT* 2018

Outstanding Student of BUCT, *BUCT* 2018

Excellent Student of BUCT, *BUCT* 2017

EXTRACURRICULAR ACTIVITIES

Undergraduate Teaching Assistant for C++ Class, Spring Semester 2022-2023, BNU 02/2023 – 07/2023

- Facilitated learning and provided support to undergraduates in the C++ programming class (79 students).

Academic Affairs Director, Graduate Student Union, School of Artificial Intelligence, BNU 10/2021 – 10/2022

- Led the organization and planning of academic salons and doctoral forums, including inviting speakers and hosting events, contributing to the Student Union being recognized as outstanding for the academic year.

Volunteer for the "Siemens Cup" China Intelligent Manufacturing Challenge 07/2018

- Supported the organization and execution of the competition as a volunteer.

Debater for the College of Information Science and Technology, BUCT 10/2017 – 10/2018

- Served as a debater for the college's debate team, engaging in intellectual and competitive debates.

Organizer of Encyclopedia Contest at BUCT 06/2018

- Encouraged students to learn all sorts of knowledge through games and discussions.