HAOYU LUO

Southeast University, Nanjing, Jiangsu, China, 210096
(+86) 13865666656 | hyluo1@outlook.com

Education

Southeast University China (SEU) **Nanjing, China**
Bachelor of Engineering in Electronic Science and Technology Sep 2021 - Jun 2025
Average Score: 85.29/100 | **GPA**: 3.32/4.0

Publications

Haoyu Luo, Nan Li, Mengjia Wang, Stephen D. Tse, Hongxuan Guo, Zhen Zhu, Litao Sun, Jie Guo, and Hua Hong,*. "Preparation and Properties of Graphene–Reinforced Polylactic Acid Bioelectronic Nanocomposites with Tissue Regenerative Functions" (In Submission)

Research Experience

Synthesis and Processing of Carbon Nanomaterial Sensor **Nanjing, China**
Research Assitant, Key Laboratory of MEMS of Ministry of Education, China, Supervisor: Prof. Hua Hong
Jan 2022 - Present

Innovation: The fabrication and research of an implantable spinal support object with carbon nanotubes and its integrated sensor based on nano-carbon materials were realized, and proposed a new shearing method for treating specific polymers using graphene and graphene oxide of sensor.

- A new VACNT molecular material was produced and tested
- In-depth research on the anisotropy and distribution regulation control of carbon nanotubes
- an essay will be published soon

Preparation and Properties of Graphene–Reinforced Polylactic Acid Bioelectronic Nanocomposites with Tissue Regenerative Functions **Wuxi, China**
Research Assistant, SEU-FEI Nano-Pico Center, Supervisor: Prof. Hua Hong
Nov 2023 - Present

Innovation: An in-situ polymer-solution-processing approach which enables the efficient production of graphene-reinforced polylactic acid (G-PLA) nanocomposites with notable tissue regenerative properties is conducted and tested, with the biomedical interface tested by using HUVECs and BSMCs.

- A novel in-situ G-PLA polymer-solution-processing approach invented
- In-depth research on the mechanical and chemical property
- The property of the material-tissue interface is considered and tested when it used as implantable devices interface by using a series of huma cell.
- the essay will be published in this 2 months

Portable Micro MEMS Wind Speed Sensor **Nanjing, China**
Research Assistant, Key Laboratory of MEMS of Ministry of Education, China;Supervisor: Prof. Zhenxiang Yi
Sept 2022 - Oct 2023

Innovation: Designed a new architecture to build portable device in measuring wind direction and speed by heat

- Improve the precision of the device when measuring wind's speed and direction
- Minimized the volume of the device compared to previous production and increase the power time when using battery
- Lower the power consumption by 72.7% and increase the system robustness

Professional Experience

National University Electronic Design Project **Nanjing, China**
Power supply team July 2023 - August 2023

- build a complete system in presuming the standard of the request

- develop the system robustness when high current cross the system
- Lower the cost of the device by removing useless module (independent ADC, sensor and etc.) and replacing the ST-stm 32 with a kind of low power cost MCU TI-msp 430

Huawei Elite Class **Nanjing, China**
School organizer July 2022 - July 2023

- Training in developing cooperation skills and participate in production management.
- Issue reproduction, symptom capture, and hands-on debugging for coexistence testing

Projects

Carbon-polymer Nanomaterial Reaserch Project **Nanjing, China**
Underguaduate Project, Supervisor: Prof. Hua Hong March 2023 - Present

- The growth of degradable graphene oxide polymer materials through in-situ liquid phase shear, the development of new polymer materials with novel nanostructures
- An application of these materials in sensors, particularly in-vivo sensors
- improve property of a series of polymer by using canbon nanotube and other 2-D nanomaterial

Micro Machanic MEMS Wind Speed and Direction Sensor **Nanjing, China**
Project Leader,University Innovation Project Dec 2022 - Oct 2023

- A variety of coupling hardware sensing techniques are employed to enhance the accuracy and stability of MEMS sensors.
- Improved sensor core component structure and reduces error

Data-Analysis for information about China economic development **Nanjing, China**
Student Research Training Project, Supervisor: Prof. X.J. Xia Feb 2022 - June 2022

- Build an easy application for P.R.China Minister of Development by Python
- Developed a visual model to analyse the difference between provinces and the trend in time
- Accelerated the model analysing speed when dealing with big scale model

Digitalization and intelligence of intangible cultural heritage(Chinese Chizhou Nuo Drama) **Anhui, China**
Team leader,National Student Practice Project Nov 2021 - Apr 2022

- Collect Chinese Chizhou Nuo Drama samples through artificial intelligence to form an intelligent drama image
- Nationwide promotion of digital intelligence Chinese Chizhou Nuo Drama
- Produced an innovative design digital themed Chinese Chizhou Nuo Drama game

Functional Departments Experience

ECE Department of Organization **Nanjing, China**
Team Leader June 2022 - August 2023

- Contact with China Ministry of Organization
- Distribute tasks and activity to each institude below

Honors & Awards

- SEU Outstanding Student (only 2 in the department)
- 2021 Greatest Student Scholarship(only 1 in the department)
- PLD competition, Winner Prize (top 3%);
- SEU Social Influence Group, NO.1 Prize (leader, top 0.3%);
- 2021&2022 Merit Student for two consecutive years
- Sustainable&innovation Design Group (top 1%)
- SEU Physics Thesis Competition, NO.3 Prize (top 10%);
- SEU Outstanding Individual, (top 0.4%)
- Embedded System Design Competition,Winner (top 10%)
- 2021/2022/2023 Merit Student for 3 years

Skills & Interests

Programming Languages: Python, C/C++, MATLAB , Verilog HDL
Tools & Frameworks: Git, LaTeX, Pytorch, Solidworks, Flask, Comsol ,CFD, CSS, Keil,
Platform: Linux (Ubuntu, CentOS), macOS, Windows
Languages: Mandarin (Native), English (Proficient), French (beginner)
Interests: Badminton, Swimming, Hiking, Dancing