Chenyu Zhang

Apartment Building 13, Beihang University, Beijing, China
(+86) 136 8102 6015 | zhangcy_buaa@163.com | angelicaz.github.io

EDUCATION

School of Electronic Information Engineering, Beihang University (BUAA), Beijing, China
Bachelor of Engineering in Electronic Science and Technology Sept. 2016 – June 2020

- **GPA**: 3.67/4.0
- **Rank**: 2/35
- **Core Courses**: Calculus (96/100), C Language Design (96/100), Linear Algebra (99/100), Fundamental Physics (100/100), Complex Function (98/100), Analog Circuit, Digital Circuit, Digital Signal Processing, Stochastic Process Theory, Microwave Technology, Communication Theory, Information Theory

National University of Singapore (NUS), Singapore July – Sept. 2019
Department of Electrical and Computer Engineering

RESEARCH PUBLICATIONS

1) **Chenyu zhang**, Weiyi Zhang, Ting Wang, Tuo Xie, and Chun Zhang. "Application of Improved K-means Algorithm in Multi-track Clustering", submitted to *IEEE International conference on Image Processing* (ICIP 2020).
2) Tuo Xie, Hanjin Jiang, **Chenyu Zhang**, Ting Wang, Chun Zhang, and Zhihua Wang. "Model-based K-means Clustering for Lane Detection", submitted to *Electronic Letters*, Nov. 2019.
3) Zhonghan Zhang, Yancao Jiang, **Chenyu Zhang**, Chun Zhang, and Xiangyu Li. "The Optimization of Localization and Navigation for Vision-Based Robot", accepted for lecture presentation by *IEEE International Conference on Integrated Circuits, Technologies and Applications* (ICTA 2019), full paper in press.
4) **Chenyu Zhang**, Cunjun Ruan, "Investigation of W-band High Power TWT Amplifier with Broadband Output Window". accepted by *PhotonIcs & Electromagnetics Research Symposium* (PIERS 2019), full paper in press.
5) Renjie Li, Cunjun Ruan, Ayesha Fahad, **Chenyu Zhang**, and Shasha Li. "Broadband and High-power Terahertz Radiation Source Based on Extended Interaction Klystron", *Scientific Reports*, issue 9, no. 4584, Mar. 2019.

RESEARCH EXPERIENCES

Design of Scanning Sensor for Ground Flatness Measurement, NUS July – Sept. 2019
Research Assistant | Advisor: Prof. Loh Ai Poh

- Designed and built scanning sensor based on Lidar, which can calculate ground flatness based on distances and angles of returned signal
- Performed detailed analysis on Lidar sensing resolution by developing program in MATLAB
- Constructed experimental system consisting of Lidar connected with Raspberry Pi, performed hardware experiment, and processed collected data
- Successfully demonstrated feasibility of developed sensor and achieved agreement between experimental results and theoretical analysis

Application of Improved K-means Algorithm in Multi-track Image Recognition, Tsinghua University
Advisor: Professor Chun Zhang Mar. 2019 – Present

- Identified deficiencies of traditional K-means algorithm and proposed new clustering algorithm to solve multi-track image recognition problem
- Implemented proposed algorithm, performed experiment, and benchmarked its performance with state-of-the-art clustering algorithm
- Analyzed down-sampling performance of proposed algorithm thoroughly
- Broadened algorithm into clustering circles and curves; analyzed thoroughly the anti-noise performance, accuracy and efficiency of total algorithm
- First-author paper (submitted to ICIP 2020) and a co-authored a paper (submitted to *Electronic Letters*)

Design of Broad-band Slow Wave Structure and Output Window for 94GHz Staggered Double-vane Traveling Wave Tube, BUAA May 2018 – Sept. 2019
Advisor: Professor Cunjun Ruan

- Designed and developed a planar distributed three-beams SDV-SWS with broadband input/output diamond windows at center frequency of 95GHz
- Achieved good dispersion characteristics and transmission properties with ultra-wide band
- Used electromagnetic simulation software like CST Studio to design, simulate and test model
- Demonstrated a high output power and a broad band for W-band SDV-TWT without any oscillation
- Completed first-authored paper, which has been accepted by PIERS 2019

AWARDS AND HONORS

- *Jun 2019*, Yuanhang Undergraduate Summer Overseas Research Scholarship
- *May 2019*, Third Prize in Class B of Innovation and Entrepreneurship Scholarship by Ministry of Industrialization Information
- *Nov 2018*, **Excellent Ranking** in National Undergraduate Training Program for Innovation and Entrepreneurship
- *Dec 2018*, Special Award of Academic Scholarship (top 3%)
- *May 2018*, Led team to win **First Prize** in China Undergraduate Physics Tournament in North China Division
- *Feb 2018,* Honorable Prize of MCM/ICM
- *Dec 2017*, **First Place** in the Physics Competition in Beihang University
- *Dec 2017*, Outstanding Scholarship (top 5%)
- *Nov 2017*, **First Prize** of Outstanding Study Scholarship (top 5%)
- *Oct 2017*, Competitive-world Scholarship (top 1%)

SKILLS AND INTERESTS

Language:	English (fluent), Chinese (native) **TOFEL:** 98 (26+25+23+24) | **GRE:** 323 (V156+Q167+3.0)
Computer:	C, MATLAB, Verilog, Python, SQL
Mathematics:	Calculus, Complex Analysis, Differential Equation, Linear Algebra, Probability Theory
Interests:	Social Sciences (Game Theory, Psychology), enjoy reading books on Deep Learning; Volunteer as science teacher at the local primary school; school chorus, school band II (violinist)