**Mr. Kongtao ZHU**

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**EDUCATION**

**Peking University**  Beijing, China

*Doctor of Science,* major in *Physical Electronics* 09/2006-07/2013

GPA: 3.28/4.0

*Bachelor of Science*, major in *Electronics Engineering* 09/2002-07/2006

GPA: 3.23/4.0

**Main Course:** *Advanced Mathematics, Linear Algebra, Methods of Mathematical Physics, Numerical Methods, Probability Theory, Algorithm and Data Structure, Advanced Computational Electroma.*

**Coursera Course:** *Machine Learning*

**WORKING EXPERIENCE**

**Beijing Polytechnic**  08/2013-Present

Position: *Lecturer* at Computer Science Department

* Taught courses including *C program, Embedded System, Java, C#, ASP.NET, IOT System, RFID, SOPC, IOT Gateway, Wireless Sensor Networks, The principle of Microcomputer* and gave guidance to students in their studies and academic year thesis
* Participated in the Teaching Reform Research Project-Internet of Things Teaching and Research Section, and recorded web courses on *Android-based Mobile Application Development*(Baidu Map section)
* Worked as the supervisor to instruct students in “Lanqiao Cup” National Programming Contest
* Served as the advisor each year to manage class work and employment guidance

**RESEARCH EXPERIENCE**

**The Gait Design of Quadruped Crawler Robot**  2014-2015

Position: Supervisor

* Established the kinematics model of the quadruped crawler robot(with 10 servos) for analysis
* Decomposed the course of crawler robot’s forward, backward or steering movement
* Installed an infrared sensor that allows the crawler to recognize obstacles ahead and go back or turn

**The Design and Implementation of a Robotic Pet dog’s Gait** 07/2015-12/2017

Position: Supervisor

* Established the kinematics model of the robotic dog(with 19 servos) for analysis
* Decomposed the walking process by keeping two diagonal legs in the same gait and the gravity center in the middle of the three supporting legs to hold the dog in balance(4 servos in each leg)
* Adjusted the servos one by one to ensure that the dog could keep balance in the actual walking process

**Algorithm Research of Generative Adversarial Networks (GAN)** 08/2018-10/2018

Supervisor: Prof. Liu Xiwei at Chinese Academy of Sciences

Position: Lead Researcher

* Referred to 121 papers from SCI and IEEE to analyze and categorize the GANs into four classifications in respect with the functions and into vision computing & natural language processing regarding to applications and wrote a summary of GAN algorithm
* Generated handwriting letters with the classic GAN, CGAN, WGAN and VAE-GAN(not finished)
* Generated 3D models of 2D face images using GANs(not finished)

**EXTRACURRICULUM ACTIVITY**

**Tutoring Program for International Students**  02/2013-07/2013

Position: Team Leader

* Led team member to conduct propaganda to enroll both native students and international students
* Organized nine one-on-one tutoring groups for language and cultural communication
* Kept close contact with each group and organized regular get-together party

**AWARD & HONOR**

Scholarship of Excellent Study of the Year (1000RMB) 10/2007

The gold award in the 4th Capital University Students' Scientific and Technological Innovation Works and Patent Achievements Exhibition(1%) 2015

First prize in Lan Qiao Programming Competition(city-level) 2015/2016/2017

Second prize in Lan Qiao Programming Competition (nation-level) 2015/2016/2017

**PUBLICATION**

1. **Kont-Tao Zhu**, Tian-Song Deng,etc. “Slow Light Property in Ring-shape-hole Slotted Photonic Crystal Waveguide”. Submitted to *Optics Communications* 290(2013)87-91 ([pdf](Slow light property in ring-shape-hole slotted photonic crystal waveguide.pdf))
2. **Kont-Tao Zhu**, Tian-Song Deng,etc. “Design of Wideband and Low Group Velocity Based on Coupled Cavity Waveguides*”.* Submitted to *Optics Communications* 285(2012)2611-2614 ([pdf](Design of wideband and low group velocity based on coupled cavity waveguides.pdf))
3. **Kont-Tao Zhu**, Tian-Song Deng,etc. “Controllable Tune of the Cutoff Frequencies in a Photonic Crystal Waveguide with Hexagonal Lattice”. Submitted to *Science China* 2013 56(6):1079-1084 ([pdf](2013ScienceChina.pdf))

**COMPUTER LANGUAGES**

* Proficient in Javascript, C, C#, JAVA, SQL, Matlab, FORTRAN, MEEP, PYTHON, TENSORFLOW, ASP.NET, etc.