Rongzhong Li

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Portfolio: *http://borntoleave.github.io* ♟
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EMPLOYMENT	**Petoi LLC**	Winston-Salem, NC, USA

Petoi LLC — Winston-Salem, NC, USA
• Founder — Jul 2017 ~ Present
Invented a robotic cat for STEM education and AI-enhanced entertainment.

Wake Forest University — Winston-Salem, NC, USA
• Part-time Assistant Professor, Department of Computer Science — Sep 2016 ~ Present
Teach computer vision (OpenCV), Introduction to CS (Java) and STEM labs (Arduino, RasPi, designing, 3D printing).

EDUCATION

Wake Forest University — Winston-Salem, NC, USA
• Master of Science in Computer Science — Aug 2014 ~ Aug 2016
• Ph.D. in Physics — Aug 2010 ~ May 2015

Kuang Yaming Honors School, Nanjing University — Nanjing, Jiangsu, China
• Bachelor of Science in Physics — Sep 2006 ~ Jun 2010

RESEARCH EXPERIENCE

Wake Forest University
• Research Assistant, Department of Computer Science — Jan 2015 ~ Aug 2016
Worked with **Dr. Paúl Pauca** on the Boeing and WFU collaborative project to analyze GBs of sensor data to classify fiber failures using machined learning algorithms.

• Research Assistant, Department of Physics — Aug 2011 ~ May 2015
Worked in **Dr. Samuel Cho**'s Computational Biophysics Group and developed codes to setup molecular dynamics simulations, analyze TBs of coordinates, and visualize results.

Nanjing University
• Undergraduate Researcher, Department of Physics — Sep 2009 ~ Jun 2010
Worked with **Dr. Jian Zhang** in **the Institute of Biophysics in Nanjing University** and wrote codes to simulate protein and RNA folding.

PUBLICATIONS

• Tat Hong, Wu J, Pike M, Schaefer J, Pauca VP, **Li R**, Nickerson W. Machine Learning for Acoustic Emission Signatures in Composite Laminates. **ASC Technical Conference**. 2017

• Li W, Lucioni T, **Li R**, Bonin K, Cho SS, Guthold M. Stretching single fibrin fibers hampers their lysis. **Acta Biomaterialia**. 2017

• **Li R**, Stevens CA, Cho SS. Molecular dynamics simulations of protein-nanoparticle biocorona formation. *Modeling, Methodologies and Tools for Molecular and Nano-scale Communications*, Eds. Junichi Suzuki, Tadashi Nakano. **Springer Publishing**. (book chapter) 2017

• **Li R**. A true random number generator algorithm from digital camera image noise for varying lighting conditions. **IEEE Southeast Conference**. 2015

• **Li R**, Macnamara LM, Leuchter JD, Alexander RW, Cho SS. MD simulations of tRNA and aminoacyl-tRNA synthetases: dynamics, folding, binding, and allostery. **Int. J. Mol. Sci.**. 2015

• **Li R**, Chen R, Chen P, Wen Y, Ke P-C, Cho SS. Computational and experimental characterizations of silver nanoparticle-apolipoprotein biocorona. **J. Phys. Chem. B**. 2013

• **Li R**, Ge H, Cho SS. Sequence-dependent base stacking interactions guide tRNA folding energy landscapes. **J. Phys. Chem. B**. 2013

PATENTS

• Legged Robots and Methods For Controlling Legged Robots. (provisional) 2018
• Method and Apparatus for Acoustic Emissions Testing. (US application) 2016

PROJECTS	● OpenCat	Jul 2016 ~ Present

● OpenCat — Jul 2016 ~ Present
A mini cat-like quadrupedal robotic platform that integrates 10+ sensors and 10+ motors to perform versatile tasks, such as gait adjustment, balancing and recovery, obstacle avoidance, face identification, video streaming, voice control and more advanced AI.

● Pocket Cube with Hint — May 2015
A Mathematica demonstration that simulates a (2x2x2) pocket cube with recovering hints.

● Nano Fiber Measurer — Aug 2014
A Mathematica tool package for measuring the dimensions of fibers in microscopy images.

● Handmade Metal Irish Whistle — Mar 2012 ~ Jun 2012
A machine shop project that turns raw brass & aluminum pipes into 3 low D Irish whistles.

AWARDS
- ● Third place award at TechStars Triad Startup Weekend — 2017
- ● Wake Forest University Graduate School Summer Research Support — 2015
- ● Wake Forest University Graduate School Alumni Student Travel Award — 2012 & 2015

TEACHING EXPERIENCE
- ● Taught Physics 266, Intermediate Laboratory (30 students/semester), WFU — 2015
- ● Coached as the student mentor for 3 undergraduates's research projects. — 2013 ~ 2015
- ● Taught Physics 110, Introductory Physics (20 students/semester), WFU — 2010 ~ 2015

CONFERENCES AND TALKS
- ● Consumer Electronics Show (CES), Las Vegas, NV. — 2018
- ● ASC Technical Conference, West Lafayette, IN. — 2017
- ● IEEE Southeast Conference, Fort Lauderdale, FL. — 2015
- ● North Carolina Academy of Science 112th Annual Meeting, Winston Salem, NC. — 2015
- ● American Physical Society Meeting, Baltimore, MD. — 2013
- ● Center for Molecular Communication and Signaling, Winston-Salem, NC. — 2012

EXTRA-CURRICULAR ACTIVITIES
- ● Compiled a personal poetry collection of 120 poems (a 30k-word book). — 2006 ~ 2016
- ● Led a team of 3 graduates on Virginia Tech Hackathon. — 2016
- ● Photographer and BBS admin for WFU Chinese Student & Scholars Association. — 2013

SKILLS
C/C++; Mathematica; Matlab; Python; Java; Shell scripts; Git; CUDA; OpenMP; DEAC Cluster; LaTeX; Linux; RasPi; Arduino; SketchUp; CAD; 3D printing; Photography; Machine shop.

Last Updated: Jan 2018