

# Rongzhong Li

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EDUCATION	<p><b>Wake Forest University</b>, Winston-Salem, NC, USA</p> <ul style="list-style-type: none"><li>• Master of Science in Computer Science Aug 2014 ~ May 2016</li><li>• Ph.D. in Physics Aug 2010 ~ May 2015</li></ul> <p><b>Kuang Yaming Honors School, Nanjing University</b>, Jiangsu, China</p> <ul style="list-style-type: none"><li>• Bachelor of Science in Physics Sep 2006 ~ Jun 2010</li></ul>
RESEARCH EXPERIENCE	<p>Wake Forest University</p> <ul style="list-style-type: none"><li>• Research Assistant, Department of Computer Science Jan 2015 ~ May 2016</li></ul> <p>Work with <b>Dr. Paúl Pauca</b> on the Boeing and WFU collaborative project to analyze GBs of sensor data to classify fiber failures using machined learning algorithms.</p> <ul style="list-style-type: none"><li>• Research Assistant, Department of Physics Aug 2011 ~ May 2015</li></ul> <p>Worked in <b>Dr. Samuel Cho's</b> Computational Biophysics Group and developed codes to setup molecular dynamics simulations, analyze TBs of coordinates, and visualize results.</p> <p>Nanjing University University</p> <ul style="list-style-type: none"><li>• Undergraduate Researcher, Department of Physics Sep 2009 ~ Jun 2010</li></ul> <p>Worked with <b>Dr. Jian Zhang</b> in the <b>Institute of Biophysics in Nanjing University</b> and wrote codes to simulate protein and RNA folding.</p>
PUBLICATIONS	<ul style="list-style-type: none"><li>• <b>Li R</b>, Stevens CA, Cho SS. Molecular dynamics simulations of protein-nanoparticle biocorona formation. <i>Modeling, Methodologies and Tools for Molecular and Nano-scale Communications</i>, Eds. Junichi Suzuki, Tadashi Nakano. <b>Springer Publishing</b>. (in press, book chapter) 2016</li><li>• <b>Li R</b>. A true random number generator algorithm from digital camera image noise for varying lighting conditions. <b>IEEE Southeast Conference</b>. 2015</li><li>• <b>Li R</b>, Macnamara LM, Leuchter JD, Alexander RW, Cho SS. MD simulations of tRNA and aminoacyl-tRNA synthetases: dynamics, folding, binding, and allostery. <b>Int. J. Mol. Sci.</b>. 2015</li><li>• <b>Li R</b>, Chen R, Chen P, Wen Y, Ke P-C, Cho SS. Computational and experimental characterizations of silver nanoparticle-apolipoprotein biocorona. <b>J. Phys. Chem. B</b>. 2013</li><li>• <b>Li R</b>, Ge H, Cho SS. Sequence-dependent base stacking interactions guide tRNA folding energy landscapes. <b>J. Phys. Chem. B</b>. 2013</li></ul>
PROVISIONAL PATENTS	<ul style="list-style-type: none"><li>• System for identification of composite failure mechanisms with acoustic emission. 2016</li><li>• Devices, methods, and programs for true random numbers using digital camera. 2015</li></ul>
EXTRA-CURRICULAR ACTIVITIES	<ul style="list-style-type: none"><li>• Compiled a personal poetry collection of 110 poems (a 30k-word book). 2006 ~ 2016</li><li>• Organized the individual CV review sessions for 9 physics and CS graduates. 2016</li><li>• Formed a team of 3 graduates on Virginia Tech Hackathon. 2016</li><li>• Coached as the student mentor for 3 undergraduates's research projects. 2013 ~ 2015</li><li>• Photographer and BBS admin for WFU Chinese Student &amp; Scholars Association. 2013</li></ul>
TEACHING EXPERIENCE	<ul style="list-style-type: none"><li>• Taught Physics 266, Intermediate Laboratory (30 students/semester), WFU 2015</li><li>• Taught Physics 110, Introductory Physics (20 students/semester), WFU 2010 ~ 2015</li></ul>
SKILLS	C/C++; Mathematica; Matlab; Shell scripts; Python; Git; CUDA; JavaScript; Gnuplot; Maple; L <sup>A</sup> T <sub>E</sub> X; SQL; Photography; Photoshop; Raspberry Pi; AutoCAD; 3D printer; Machine shop.

PROJECTS	<ul style="list-style-type: none"> <li>• Star-trail Photography Simulator Feb 2016 An iOS app developed during VTHacks that adds customized star-trails to night photos.</li> <li>• Traditional Chinese Family Tree Builder Aug 2015 A database and visualization for a family tree that consists of 350+ people over 150+ years.</li> <li>• Pocket Cube with Hint May 2015 A Mathematica program that simulates a pocket cube (2x2x2) game with recovering hints.</li> <li>• Nano Fiber Measurer Aug 2014 A Mathematica tool package for measuring the dimensions of fibers in microscopy images.</li> <li>• HealThy Body Oct 2013 ~ Dec 2013 An android app providing a lifestyle challenge for diabetic patients.</li> <li>• Handmade Metal Irish Whistle Mar 2012 ~ Jun 2012 A hobbyist machine shop project that turns brass &amp; alum. pipes into 3 low D Irish whistles.</li> </ul>
ACADEMIC	<ul style="list-style-type: none"> <li>• Wake Forest University Graduate School Summer Research Support 2015</li> </ul>
AWARDS	<ul style="list-style-type: none"> <li>• Wake Forest University Graduate School Alumni Student Travel Award 2012 &amp; 2015</li> </ul>
INVITED TALKS	<ul style="list-style-type: none"> <li>• IEEE Southeast Conference, Fort Lauderdale, FL. 2015 A true random number generator using digital camera noise under varying conditions.</li> <li>• North Carolina Academy of Science 112th Annual Meeting, Winston Salem, NC. 2015 A true random number generator using digital camera noise under varying conditions.</li> <li>• American Physical Society Meeting, Baltimore, MD. 2013 Ion concentration dependent tRNA folding energy landscapes.</li> <li>• Center for Molecular Communication and Signaling, Winston-Salem, NC. 2012 Molecular conformational signaling networks determine ion concentration dependent tRNA folding mechanisms.</li> </ul>
POSTER	<ul style="list-style-type: none"> <li>• WFU Graduate Student and Postdoctoral Research Day, Winston-Salem, NC. 2015</li> </ul>
PRESENTATIONS	<ul style="list-style-type: none"> <li>3MT talk: A real random number generator algorithm from digital camera image noise under varying lighting conditions.</li> <li>• WFU Graduate Student and Postdoctoral Research Day, Winston-Salem, NC. 2014 3MT talk: GPU optimized simulation for silver nanoparticle bio-corona formation.</li> <li>• Center for Molecular Communication and Signaling, Winston-Salem, NC. 2013 Ion-Concentration dependent MD simulations of tRNA folding shows back tracking event.</li> <li>• WFU Graduate Student and Postdoctoral Research Day, Winston-Salem, NC. 2012 Ion-concentration dependent MD simulations of tRNA folding.</li> <li>• Gordon Research Conference: Protein Folding Dynamics, Ventura, CA. 2012 Ion-concentration dependent MD simulations of tRNA folding.</li> </ul>

*Last Updated: May 2016*