

# GEORGE N. WONG

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## EDUCATION

- New York University**, New York, NY 2011 – 2015  
Bachelors' of Arts in Physics with honors, Mathematics and Computer Science
- Westhill High School**, Syracuse, NY 2007 – 2011  
Regents Diploma with Advanced Designation with Honors

## RESEARCH EXPERIENCE

- Center for Cosmology and Particle Physics (NYU)** 2014 – present  
*Computational and Theoretical Astrophysics*  
Extending models of relativistic jets from the analytic regime, radiative transfer afterglow calculation, statistical analysis of Swift afterglow mission observations
- NYU WIRELESS** 2012 – 2015  
*Millimeter Waves, MIMO Technologies, Circuit and Systems Design*  
Analysis/Channel Model Development for Directional Waves at 28 and 73 GHz, Algorithm Design for Thresholding / Voltage Phase Triggering, mmWave Channel Sounder Design/Operation
- Kent Lab (NYU)** 2011 – 2012  
*Nanoscale Ferromagnetic Structures*  
Design/Photoetching of Circuit Boards, MFM (Magnetic Force Microscopy) Data Analysis, Computational EM Field Modeling

## TEACHING EXPERIENCE

- New York University, Teaching Assistant**
- PHYS-UA.105 Classical & Quantum Waves Spring 2016
- CSCI-UA.480 Advanced Computer Systems (*Hardware Interface / Security Design*) Spring 2016
- PHYS-UA.95 Physics III (*Thermodynamics, Optics, Waves*) Fall 2015
- CSCI-UA.201 Computer Systems Organization (*Lower-level programming and design*) Fall 2015
- Adjunct Instructor, NYU Physics Department**
- General Physics Sequence (*Physics for non-majors*) Summer 2014
- Courant Institute of Mathematical Studies Splash (cSplash)**
- Electronic Privacy and Security: Introductory Cryptography 2014
- Introduction to Quantum Mechanics 2014

## SELECTED COMPUTER SKILLS

- Operating Systems** Windows XP/7, Mac OSX, Linux, Solaris
- Languages** C/C++, C#, Java, LabVIEW, MATLAB, Python, Assembly, D, Objective-C
- Script Languages** Bourne Shell, JavaScript, L<sup>A</sup>T<sub>E</sub>X (T<sub>E</sub>X), PHP, HTML, CSS
- Applications** Vi/Vim, Unity, Photoshop, Maya, GIMP, Git, MySQL
- Other** OpenMPI, gnuplot, Beowulf-style Linux clusters (NASA *Pleiades* cluster, NYU *Mercer* HPC cluster )

## SELECTED HONORS & AWARDS

Samuel F. B. Morse Medal for Excellence in Physics	2015
George Granger Brown Scholarship in Physics	2015
IEEE Donald G. Fink Award	2015
Co-President, NYU Society of Physics Students	2014 – 2015
NYU WIRELESS \$60k Research Grant	2014 – 2015
NYU College of Arts and Science Tuition Scholarship	2011 – 2015
NYU Presidential Honors Scholar	2011 – 2015
Louis Baron Scholarship in Mathematics	2013 – 2015
Sigma Pi Sigma Honors Society	2014
Recipient of 3 Dean's Undergraduate Research Fund Awards	2012 – 2013
Julius Silver Scholarship	2011

## SELECTED COURSEWORK / EXPERIENCE

<b>Physics</b>	Quantum Mechanics, Electromagnetism, Dynamics, Thermal, Statistical, Quantum Field Theory, Computational Methods, Fluid Mechanics
<b>Mathematics</b>	Calculus, Linear Algebra, Analysis (Real/Complex/Multivariate), Algebra, Differential Equations, Number Theory
<b>Computer Science</b>	Algorithms, Architecture, Cryptography, Data Structures, Optimization, Operating Systems
<b>Languages</b>	English (native) French (working proficiency)

## WORK EXPERIENCE

<b>Courant Institute of Mathematical Sciences</b> — New York University	2013 – 2014
Backend/Frontend database design and implementation for wireless propagation measurement data	
<b>Lucera</b> — Cantor Fitzgerald	Summer 2013
Design and development of kernel/OS & hardware monitoring software for bare metal hypervisor cloud computing in high frequency trade systems and development for FX spot trading engine LumeFX	
<b>Samsung (Contracted)</b> — Polytechnic Institute of New York	2012 – 2013
Development and execution of mmWave measurement plan (in “dense urban” environments), post processing, and statistical analysis of experimental data	
<b>Freelance Website Design/Coding</b>	
Design and scripting of customized websites built from the scratch using HTML, CSS, PHP, etc. for various persons and organizations	

## INVITED TALKS

<i>CEATEC</i> – Japan	October 2014
<i>3GPP-style Statistical Channel Models and Directional Beamforming Models for Outdoor and Indoor Millimeter-Wave Wireless Communications</i>	

## PUBLICATIONS

1. Y. Azar, *et al*, “28 GHz Propagation Measurements for Outdoor Cellular Communications Using Steerable Beam Antennas in New York City,” 2013 IEEE International Conference on Communications (ICC)
2. M. Samimi, *et al*, “28 GHz Angle of Arrival and Angle of Departure Analysis for Outdoor Cellular Communications Using Steerable Beam Antennas in New York City,” 77th Vehicular Technology Conference (VTC Spring) 2013
3. H. Zhao, *et al*, “28 GHz Millimeter Wave Cellular Communication Measurements for Reflection and Penetration Loss In and Around Buildings in New York City,” 2013 International Conference on Communications (ICC)
4. T.S. Rappaport, *et al*, “Millimeter Wave Mobile Communications for 5G Cellular: It Will Work!,” IEEE Access, Vol. 1, pp. 335-349. 2013