

# Shi Guo

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## SUMMARY

7 years of programming experience in c++ and Java in both research and industry.  
5 years of computational physics research focusing on quantum Monte Carlo simulation.  
5 years of semiconductor automatic testing experience using Advantest 93k platform.

## SKILLS

Programming: C++, Java, Matlab, Python, Subversion Control(SVN, GIT)  
Theory: Algorithms and Data Structure, Digital Signal Processing, Semiconductor Device Physics, Radio Frequency

## EXPERIENCE

**Application Engineer**, Advantest America, Inc. July.2013-Now

Developed and delivered system on chip(SoC) test programs for Advantest 93K automated tester platform.

### Achievement Highlights

- Developed test methods in C++/java for DC test, digital test, RF(Transmitter/Receiver) test.
- Developed universal test method library for On-Die Parametric test on different TI DSP device, provide device characterization results to R&D.
- Collaborated with application engineers to deliver test program for production.
- Provided on-site pre-sales support for different customers(TI, Broadcom) to trouble-shoot any tester hardware/software related problems.

**Research Assistant**, Department of Physics, North Carolina State University, Jun.2009-Jun.2013

Conducted computational physics research focusing on electronic structure using quantum Monte Carlo method, developed and maintained computational software code in C++ for 3 years.

### Achievement Highlights

- Maintained quantum Monte Carlo code under Linux-based cluster environment.
- Evaluated the dipole moment of weakly bonded ultracold molecules precisely using Quantum Monte Carlo method and provided the data with good quality to research funding agency.
- Developed, contributed quantum Monte Carlo software package by designing every class and method independently using C++(10k lines).
- Performed the first successful calculation in literature on relativistic effects of two dimensional electron gas in semiconductor devices.

## EDUCATION

### • Ph.D Physics

North Carolina State University, Raleigh, NC, USA, Dec.2013  
GPA:3.63/4.0

### • B.S. Physics, Minor in Economics

Shanghai Jiaotong University, Shanghai, China, Jun.2007