



# Amir Hossein Firouzian

## Curriculum Vitae

### Education

- 2020–Present **M.Sc. in Physics, Solid State**, *K. N. Toosi University of Technology*, Faculty of Science.
- 2009–2015 **B.Sc. in Physics, Condensed Matter**, *K. N. Toosi University of Technology*, Faculty of Science.
- 2005–2009 **High School Diploma**, *Amir High School*.

### B.Sc. Senior Project,

- Title *Proton Deuteron (P-PN) scattering cross-section in Chiral Potential*
- Supervisors Ph.D. Mehdi Radin

### Experience

#### CTO, NRTC

- 2014 **NRTC Technical Chair.**
- Present Mainly responsible to make technical decisions for our IT infrastructure, Also update myself with the latest technology changes. We configure Shahrood and Tafresh University cluster to do Quantum ESPRESSO job using only free software packages. Also, we try to teach this knowledge to others by establishing internship sessions

#### Translation

- July 2015 **BOINC Persian Translation Team Coordinator**, *Transifex*.
- Present This software is a platform for grid computing and release by UC Berkeley
- July 2015 **Mumble Persian Translation Team Coordinator**, *Transifex*.
- Present This FLOSS Software is VoIP Solution that uses a low bandwidth compared to other proprietary software like Skype™

#### Teaching

- Feb. 2019 **2<sup>nd</sup> Internship Session**, *NRTC*, Tehran.
- April 2019 Three month of free workshop on various aspects of computing. We try to write guide which can be found on: <https://github.com/NRTC/quick-start-guide>
- Sep. 2018 **1<sup>st</sup> Internship Session**, *NRTC*, Tehran.
- Dec. 2018 Working on CARBON GNU/Linux Distribution: <https://github.com/NRTC/carbon-linux>
- Oct. 2015 **Teaching Wolfram Mathematica**, *Shahid Rajaee Teacher Training University*, Tehran.
- Nov. 2015 A ten-hour class for university students, covering Wolfram concepts and some build-in visualization commands.
- July 2015 **Teaching C/C++**, *Held by IEEE student branch in University of Tehran*, Tehran.
- Sept. 2015

#### Miscellaneous

- Oct. 2010 **Administrator of computers in IT Center**, *K. N. Toosi University of Tech. Faculty Of Science*,
- Feb. 2011 Tehran.

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## Publications

Elaheh Akhoundi, Mahdi Faghihnasiri, Sara Memarzadeh, and Amir Hossein Firouzian. Mechanical and strain-tunable electronic properties of the sns monolayer. *Journal of Physics and Chemistry of Solids*, 126:43 – 54, 2019.

Mahdi Faghihnasiri, Mahyar Rezvani, Mostafa Shabani, and Amir Hossein Firouzian. The temperature effect on mechanical properties of silicon carbide sheet based on density functional treatment. *Solid State Communications*, 227:40 – 44, 2016.

Narges Taghizade, Amir Hossein Firouzian, Azita Nouri, and Mahdi Faghihnasiri. Mechanical, thermal, electronic and optical properties of cu3nbs4: an ab-initio study. *Materials Research Express*, 6(9):096528, jul 2019.

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## Awards

- 2009 National Undergraduate Admission Scholarship
- 2016 National Graduate Admission Scholarship
- 2020 National Graduate Admission Scholarship

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## Computer skills

### Topics

C/C++(GNU GCC, Microsoft VC, LLVM), FORTRAN 90/95(GNU gfortran, Intel FORTRAN Compiler), Python3(cpython), MATLAB, Wolfram Language, Shell Script(GNU Bash, Power-Shell), HTML-CSS, T<sub>E</sub>X, JAVA SE, R, MPI(OpenMPI, Intel MPI), ScaLAPACK(Intel, Netlib), BLAS(OpenBLAS, Netlib), SLURM, luster Distribute File System, OpenMP, Docker(Moby), virtualization(xen, KVM, Virtualbox), Intel MKL (FFT), GPGPU(CUDA, OpenCL), Parallel Computational Paradigm

### Operating Systems

- GNU/LINUX Debian, Gentoo, Fedora, Kali
- BSD FreeBSD
- Windows Microsoft Windows 10, 7, XP
- DOS FreeDOS

### Hardware knowledge

- RDMA Mellanox Infiniband
- BMC iLO, IPMI

### General Software

LibreOffice, Microsoft Office

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## Talk & Presentation

- 2010 Application of Mathematica In physics III
- 2012 CCD Cameras & How they work
- 2013 Application of LASER in LEGO Project

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## Workshop That I Participate In

- Mar. 2016 **4<sup>th</sup> Workshop on Advanced Techniques for Scientific Programming and Management of Open source Software Packages**, ICTP, Trieste, Italy.  
<http://indico.ictp.it/event/7657/>
- Mar. 2016 **Deal.II Users and Developers Training**, ICTP, Trieste, Italy.  
<http://indico.ictp.it/event/7751/>
- Nov. 2014 **IEEE Iran Section Workshop on Advance MATLAB**, K. N. Toosi Uni. of Tech. Faculty Of Electrical & Computer Engineering, Tehran, Iran.

- Mar. 2014 **Emargance On Complex System**, *IPM*, Tehran, Iran.
- July 2012 **Summer Workshop on Theoretical Computer Science**, *IPM*, Tehran, Iran.
- May 2011 **IPM 3<sup>rd</sup> Optimization Workshop**, *K. N. Toosi University of Tech. Faculty Of Science*, Tehran, Iran.
- May 2010 **IPM 2<sup>nd</sup> Optimization Workshop**, *K. N. Toosi University of Tech. Faculty Of Science*, Tehran, Iran.