

### Mohammad Afkani Physics Student



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Karaj, Iran



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## About me -

I'm a Physics student interested in laws of the Universe. curiosity made me find answers to questions in the deep nanoworld, the way it affects the human being and vice-versa.

# Coding -

Linux & Bash & Git

C & Python

LaTeX & MS Office

WP & HTML CSS JS

### Softwares -

Quantum ESPRESSO

WIEN2k

BoltzTrap2

XCrySDen & VESTA

### [Interests]

Condensed Matter Physics, Nano Physics, Computational Physics, Open-source Projects, Linux, Machine Learning.

2014

2020

| 2020 | B.Sc. Solid-State Physics                        | Kharazmi University |
|------|--|---------------------|
|      | Fully Funded Scholarship, GPA <sup>†</sup> : 2.1 |                     |

Diploma Mathematics and Physics. Dehkhoda High School Fully Funded Scholarship, GPA<sup>†</sup>: 1.5

## Publications

|      | properties of CsXNO $(X = 1)$  | Mg, Ca and Sr) quaternary Heusler      |
|------|--------------------------------|--|
|      | alloys (accepted)              | Materials Chemistry and Physics        |
|      |                                |  |
| 2020 | Inflation: Are latest detected | events of gravitational waves in favor |
|      | of string theory?              | arXiv:2003.00450                       |

Bulk and surface DFT investigations of the electronic and magnetic

Investigation of the electronic and thermoelectric properties of GeS 2019 monolayer (NCWNN)

2019 Electronic and elastic properties of the full Heusler structure Zr<sub>2</sub>RhAl.(14th Conference on Condensed Matter)

2018 Investigation of the structural, electronic and magnetic properties

of silicon carbide monolayer coated with manganese using density function theory. (The Annual Physics Conference Of Iran) conference

2018 Electronic and optical properties of Penta-BP<sub>5</sub> monolayer. (The 7th

International Congress on Nanoscience)

2017-2019 The Physics society of Iran

### Activites

| 2017 - 2020 | Volunteer Librarian; Faculty of Physics                     |
|-------------|---|
| 2020        | Teaching assistant; Fundamentals of Physics II              |
| 2019        | Executive director at Yalda's night; Faculty of Physics     |
| 2018        | Teaching assistant; Analytical Physics course               |
| 2018        | Running online education system; Crystallography courses    |
| 2017        | Multi computers clustering                                  |
| 2016        | Running library management system(KOHA); Faculty of Physics |

| 2020 | Physics School 25th Physics School at The institute for advanced sciences            | IASBS studies in basic               |
|------|--|--------------------------------------|
| 2018 | Workshop<br>2nd Workshop on Machine Learning in Physics:<br>Condensed Matter Physics | Tehran University<br>Applications in |
| 2018 | Lecture<br>Ubuntu 18.04 LTS release party  | Faculty of Physics                   |
| 2017 | Presention   | Startup weekend                      |

The first startup weekend in Karaj

<sup>†</sup> Germany grading scale: Modified Bavarian formula