Nasim Bazazzadeh

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EDUCATION

Shahid Beheshti University — **Tehran, Iran**
PhD in Physics Grade: 18.70/20 — *2016-2021*

Shahid Beheshti University — **Tehran, Iran**
M.Sc. in Physics Grade: 18.47/20 — *2014-2016*

Shahid Beheshti University — **Tehran, Iran**
B.Sc. in Physics Grade: 18.00/20 — *2010-2014*

HONORS

- Selected as Exceptionally Talented Student at Shahid Beheshti University and Granted Straight Admission for PhD Program in Solid State Physics at Shahid Beheshti University
- The first rank among 50 physics students, M.Sc. Graduation, 2016.
- Selected as Exceptionally Talented Student at Shahid Beheshti University and Granted Straight Admission for Master's Program in Solid State Physics at Shahid Beheshti University
- The first rank among 55 physics students, B.Sc. Graduation, 2014.

THEORETICAL SKILLS

Spin wave theory
SpinW, MATLAB, Python
- Modeling and simulation of spin waves.
- Magnon band, Berry curvature, Chern number
- Quantum magnetism

Density functional theory (DFT)
VASP, Quantum ESPRESSO
- SCF calculation
- Collinear/non-collinear magnetic calculation
- Ion relaxation
- Phonon band calculation

Statistical modeling
UppASD, MATLAB
- Monte Carlo simulation of atomistic spin dynamics
- Simulation of stochastic processes (Brownian motion, random walk and ...)

EXPERIMENTAL SKILLS

Transport measurements

- I-V Characterization (Two probes and four probes)

Synthesis methods

- Sputtering
- Electrodeposition

Software

- LabVIEW

PUBLICATIONS

- **Nasim Bazazzadeh**, M. Hamdi, S. Park, A. Khavasi, A. Sadeghi, and S. M. Mohseni. "Magnetoelastic coupling enabled tunability of magnon spin current generation in 2D antiferromagnets." *Physical Review B* 104, (2021): L180402.
- **Nasim Bazazzadeh**, M. Hamdi, F. Haddadi, A. Khavasi, A. Sadeghi, and S. M. Mohseni. "Symmetry enhanced spin-Nernst effect in honeycomb antiferromagnetic transition metal trichalcogenide monolayers." *Physical Review B* 103, no. 1 (2021): 014425.
- **Nasim Bazazzadeh**, Seyed Majid Mohseni, Amin Khavasi, Mohammad Ismail Zibaii, S. M. S. Movahed, and Gholam Reza Jafari. "Dynamics of magnetic nano-flake vortices in Newtonian fluids." *Journal of Magnetism and Magnetic Materials* 419 (2016): 547-552.
- **Nasim Bazazzadeh**, F. R. Asadi, A. Khavasi, M. Mohseni and G. R. Jafari, "Brownian dynamics simulation of magnetic-vortex microdiscs," *International Conference on Nanostructures (ICSN6)*, 2016.

TEACHING EXPERIENCES

- Teaching Assistant in Solid State Physics
- Teaching Assistant in Thermodynamics

PROJECTS

PhD Thesis *Jan 2019 - Nov 2021*

- Magnon-Phonon coupling in transition metal trichalcogenide monolayers

M.Sc. Thesis *May 2015 – Sep 2016*

- Orientation and dynamics of floating magnetic nanodiscs in dilute medium

LANGUAGES

- Persian (native)
- English

ADDITIONAL

- Avogadro
- Maple
- C
- Linux

SCHOLARSHIPS/GRANTS

- Research Assistant scholarship by Shahid Behesthi University (2019-2021)
- Cognitive sciences and technologies Council (COGC) grant (2016)

COLLABORATIONS

- Sungjoon Park, Department of Physics and Astronomy, Seoul National University
- Amin Khavasi, Electrical Engineering Department, Sharif University of Technology
- Mohammad Ismail Zibaii, Center for Laser and Plasma Research, Shahid Beheshti University
- Mohmmad Sadegh Movahhed, Department of Physics, Shahid Beheshti University

AREAS OF INTEREST

- SPINTRONICS
- MAGNONICS
- MAGNETIC 2D MATERIALS

REFERENCES

- **S. Majid Mohseni** (Associated Professor at Department of physics, Shahid Beheshti University)
  Email: m-mohseni@sbu.ac.ir
- **Ali sadeghi** (Associated Professor at Department of physics, Shahid Beheshti University)
  Email: ali_sadeghi@sbu.ac.ir
- **Gholamreza Jafari** (Professor at Department of physics, Shahid Beheshti University)
  Email: g_jafari@sbu.ac.ir