

Saeed Taghavi

Address:

East 220 St., 137 St., Shahed Sq., Tehran, Iran.

Postal Code: -

Contacts:

Web page: <http://staghavi.webs.com/>
https://www.researchgate.net/profile/Saeed_Taghavi
Email: saeed.taghavi.v@gmail.com

Phone: +98 911 953 7258

Skype: saeed.tagavi6

<https://github.com/SaeedTaghavi>

PERSONAL INFORMATION

- **Nationality:** Iranian
- **Date of birth:** 14 Aug. 1989
- **Marital Status:** Married

EDUCATION

- **Master of Science:** Graduated in physics from Institute for Advanced Studies in Basic Sciences (IASBS¹), Iran.
Supervisor: Dr. Yousef Azizi (IASBS, Iran).
Thesis Title: Complex Dynamical Behavior in Astrophysical Systems. [September 2011 to March 2014]
- **Bachelor of Science:** Graduated in physics from Ferdowsi University of Mashhad². [September 2007 to June 2011]

HONOR AND AWARDS

- **Best poster presentation** at the 7th National Meeting of Astronomy and Astrophysics of Iran (January 2014).
- **Ranked third** as a BSc graduate at Ferdowsi University of Mashhad (2011).

RESEARCH INTERESTS

- Theoretical and Computational Neuroscience, Sensation and Sensory Processing (especially those related to Pain);
- Dynamical Systems, Theory of Complex Systems (Chaos, Synchronization, Scaling, Stochastic Effects);
- Computational Physics, High-performance Computing, Computational Technique Development and Implementation;
- Numerical Analysis of Experimental Data, Scientific Visualization, Data Mining, Time series Analysis, Machine Learning;
- Complex Network, Three-body forces and Interactions in Different Systems (Neuroscience, Econo-physics, Sociophysics).

PUBLICATIONS

- **Peer-reviewed**
 - Hosein Haghi, Akram Hasani Zonoozi, and **Saeed Taghavi**: "*Galactic orbital motions of star clusters: static versus semicosmological time-dependent Galactic potentials*". Monthly Notices of the Royal Astronomical Society, 450, 2812-2821, (05/2015).
- **Proceedings**
 - **S. Taghavi**, H. Haghi, A. H. Zonoozi: "*Dynamical Evolution of Star Clusters in a Time-dependent Galactic Potential*". 18th Meeting on Research in Astronomy at IASBS, Zanjan, 05/2015;
 - **S. Taghavi**, H. Haghi, A. H. Zonoozi: "*Galactic orbital motions of Halo Objects: the static vs. time-dependent gravitational potential*". 8th National Meeting of Astronomy and Astrophysics of Iran at Amir Kabir University of Tehran, 02/2015;
 - **S. Taghavi**, Y. Azizi: "*Fractal Structure for Bounded Solutions of 3-body Problem in Phase Space*". 7th National Meeting of Astronomy and Astrophysics of Iran at Shahid Bahonar University of Kerman, 01/2014.

RESEACH POSITIONS

- Part-time researcher at G. U. Cert, Golestan University, Gorgan, Iran. [April 2017 to October 2017]
Title: Embedded Operating Systems, Security Issues in IoT.
- Part-time researcher at IASBS, Zanjan, Iran. Supervisor: Dr. Hossein Haghi [July 2014 to May 2015]
Title: Dynamical Evolution of Star Clusters in a Time-dependent Galactic Potential
- Part-time researcher at IASBS, Zanjan, Iran. Supervisor: Dr. Yousef Azizi [April to July 2014]
Title: Detecting Self-similar Patterns Using Wavelet Transform in Data Analysis

¹ <http://www.iasbs.ac.ir>

² <http://www.um.ac.ir>

TEACHING EXPERIENCES

- [Tertiary] *Fundamentals of Physics* (Bachelor course), at Mazandaran University of Science and Technology. [Fall 2014 - Now]
- [Tertiary] *Fundamentals of Physics Laboratory*, at Mazandaran University of Science and Technology. [Fall 2014-Now]
- [Tertiary] TA for the *Computational Astrophysics* (PhD course) at IASBS. [winter 2013]
- [Tertiary] TA for the *Computer Applications in Physics* (Bachelor course), at Ferdowsi University. [winter 2010]

WORK EXPERIENCES

- Developer and System and Network Administrator at FootNet.
 - Installation and Management of Linux Server.
 - Installation and Management of Network Services, Virtualization Infrastructures, LDAP, Databases, etc.
 - Technical Training of Group Members;
 - Developed two Plugins for a Social Network Engine regarding sport news (moto-shub).

COMPUTER SKILLS

- **Operating Systems:**
 - Expert in **Linux** (various distributions: Ubuntu, openSUSE, fedora, and etc.), and **Windows**;
 - Well experienced in installation and management of Linux servers (especially Ubuntu Server).
- **Network Services:**
 - Well experienced in installation and management of Network Services such as Web (Apache), LDAP, DHCP, FTP, Databases (My SQL, Mango DB), Backup, Virtualization (VMware ESXi, Virtual Box), Monitoring Tools (SNMAP), VLANs.
- **Security:**
 - OS and Services Hardening, Monitoring of Security Incidents;
 - Work Experience with Linux security modules such as SELinux.
- **Programming:**
 - Expert in **Python, FORTRAN** and **Linux Bash Scripting**.
 - Well experienced in developing code in **C++, PHP, Mathematica**, and **Mat Lab**.
 - Well experienced in developing code and parallel programming using **Open MP, MPI** (FORTRAN).
 - General knowledge in using the GPU architecture in parallel programming.
 - Numerical Algorithms (Finite Difference Methods; Spectral Methods; Wavelet Analysis; Molecular Dynamics; Monte Carlo Simulation).
 - Image Processing (especially for astronomy FITS images, using IRAF, PyRAF), Data Mining (using Panda module).
 - Web Design on Apache, and experienced HTML, CSS, PHP.
- **Scientific Software:**
 - Experienced in using **Mathematica, Mat Lab, Maple, and VMD**.
- **Other Software:** Expert in **Gnu-plot** and **LATEX**.
 - Expert in Microsoft Word, Microsoft Power Point, AutoCAD, well experienced in using Microsoft Excel;
 - Well experienced in using API of different web servers.

PERESENTATIONS (TALKS)

- [Invited Speaker] Synchronization in a Network of Phase Oscillators with Three-body Interaction, the Celebration of Research Day, University of Science and Technology of Mazandaran, December 2016, Behshahr, Iran.
- [Invited Speaker] Dynamical Evolution of Star Clusters in a Time-dependent Galactic Potential, 18th International Annual Meeting on Research in Astronomy at IASBS, May 2015, Zanjan, Iran.
- Complex Dynamical Behavior in Astrophysical Systems, IASBS, March 2014 [MSc thesis].
- Regularization Methods in Molecular Dynamics, IASBS, November 2013.
- Chaos and Complexity in Physics, IASBS [MSc proposal].
- Double pendulum and chaos: Solving a problem using Mathematica and Maple.

POSTERS AT CONFERENCES

- "Fractal Structure for Bounded 3-body Problem in Phase Space", 7th National Meeting of Astronomy and Astrophysics of Iran at Shahid Bahonar University, January 2014, Kerman, Iran.
- "Galactic Orbital Motion: Static versus Time-dependent Gravitational Potential", International Workshop on Galaxies Inside and out, at Institute for Research in Fundamental Sciences (IPM), January 2015, Tehran, Iran.

SUMMARY OF COLOQUIUM / WORKSHOPS / SCHOOLS

- Introductory School on **Parallel Programming and Parallel Architecture for High-Performance Computing**, 3-14 October 2016, the Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy.
- 18th Annual Meeting on Research in Astronomy, 14-16 May 2015, Institute for Advanced Studies in Basic Sciences (IASBS), Zanjan, Iran [a member of the Local Organizing Committee, Invited Speaker].
- 8th National Meeting of Astronomy and Astrophysics of Iran, 4-6 February 2015, Amirkabir University of Technology, Tehran, Iran[Talk].
- 4th workshop on **Computational Neuroscience**, 26-29 August 2014, Institute for Advanced Studies in Basic Sciences, Zanjan, Iran.
- 20th IASBS Meeting on Condensed Matter Physics and School on Soft Matter and Biological Physics, 28-30 May 2014, Institute for Advanced Studies in Basic Sciences, Zanjan, Iran.
- 7th National Meeting of Astronomy and Astrophysics of Iran, 23-24 January 2014, Shahid Bahonar University, Kerman [Poster].
- A Set of Workshops on the Topic of Data Reduction and Numerical Analysis of Experimental Data, Institute for Research in Fundamental Sciences (IPM), Tehran, Iran;
- 5th Workshop on **High Performance and Grid Computing (HPC05)**, 12-18 February 2013, School of Physics, Institute for Research in Fundamental Sciences (IPM), Tehran, Iran.
- Regional Conference on Climate Change and Global Warming, 24-25 October 2012, IASBS, Zanjan, Iran.

LANGUAGE ABILITY

- **Persian:** Native
- **English:** Fluent

Service / Outreach

- Professional Member of the Physics Society of Iran;
- Starting the Sustainable Energy group and workshops at the University of Science and Technology of Mazandaran;
- Holding more than five Open Source Software and Programming parties for university and high school students.

Hobbies

- Reading(Science, Literature, Philosophy);
- Mountaineering, Countryside Walking, Swimming;
- Photography, Movies, Listening to Music, Playing Harmonica.

References

- **Dr. Alireza Valizadeh**, email: valizade@iasbs.ac.ir
Research interest: [Neuroscience](#), [Dynamical Systems](#), [Complex Systems](#).
Associate Professor, Physics Department, Institute for Advanced Studies in Basic Sciences (IASBS), No. 444, Prof. Yousef Sobouti Blvd, P. O. Box 45195-1159, Zanjan, Iran. Phone: (+98) 2433152120 Fax: (+98) 24 33152104
- **Dr. Yousef Azizi**, email: azizi@iasbs.ac.ir
Research interest: [Theoretical Neuroscience](#), [Dynamical systems](#), [Complex Systems](#).
Assistant Professor, Physics Department, Institute for Advanced Studies in Basic Sciences (IASBS), No. 444, Prof. Yousef Sobouti Blvd, P. O. Box 45195-1159, Zanjan, Iran. Phone: (+98) 2433152223 Fax: (+98) 24 33152104
- **Dr. Hamid Mohammadzadeh**, email: hamidmohammadzadeh@mazust.ac.ir
Research interest: [Lie Algebra](#), [Group Theory](#).
Rector of the Mazandaran University of Science and Technology, Mazandaran, Behshahr, Iran
Associate Professor, Mathematics Department, University of Science and Technology of Mazandaran, Behshahr, Iran.
Postal Code: 48518-78195, Phone: (+98) 1134552021 Fax: (+98) 1134552008
- **Dr. Hossein Haghi**, email: haghi@iasbs.ac.ir
Research interest: [Modeling Dense Stellar Systems](#), [Astrophysics of Galaxies](#), [Alternative Gravity Theories](#)
Associate Professor, Physics Department, Institute for Advanced Studies in Basic Sciences (IASBS), No. 444, Prof. Yousef Sobouti Blvd P. O. Box 45195-1159, Zanjan, Iran. Phone: (+98) 2433152124 Fax: (+98) 24 33152104