

**Curriculum Vitae**  
**19/04/2014**

**Personal Information**

**First Name:** Mohammad Hassan

**Last Name:** Naddaf Moghaddam

**Date of birth:** 21 September 1986

**Place of birth:** Birjand, Southern Khorasan - Iran

**Nationality:** Iranian

**Gender:** Male

**Marital status:** Single



**Current position**

**Part-time researcher in Astrophysics at IASBS**

**(Member of Astronomy Society of Iran, membership number: 248)**

**Address:** Department of Physics, Institute for Advanced Studies in Basic Sciences (IASBS), Zanzan 45137-66731, Iran.

**Email1:** [n.moghaddam@iasbs.ac.ir](mailto:n.moghaddam@iasbs.ac.ir)

**Email2:** [moghaddam.physics@gmail.com](mailto:moghaddam.physics@gmail.com)

**Phone:** (+98) 241 415-2016

**Mobile:** (+98) 935 - 831 2809

**Education**

**2004-2009:** B.S. student in Physics, Payam-Noor University (PNU), Mashad, Iran

**Project title: 1-** Coding to calculate the energies of a double well potential in one dimension

**2-** Coding to find the Chandrasekhar limit

**Supervisor:** Dr. Jamil Ariai

**2010- 2013:** M.S. student in Astrophysics, IASBS, Zanzan, Iran

**Thesis title:** Investigation the effect of host galaxy's tidal forces on life time and velocity dispersion of globular clusters

(Not mentioned in thesis title: and spatial distribution of stars of GCs, all by simulation)

**Supervisor:** Dr. Hosein Haghi

## Education

- 1- Translated a physics book into Persian in cooperation with Dr. M. Benam, winter 2011.  
Original book: "A guide to physics problems" written by Sidney B. Cahn, Boris E. Nadgorny, ebook ISBN: 0-306-48400-5. Part "Mechanics" of the book is translated, ISBN: 978-964-8019-25-4.
- 2- Co-author of text book "Analytical Mechanics" part 2 for students of university of Payam-noor, in cooperation with Dr. M. Benam and Dr. J. Ariaei, started in late of winter 2014.
- 3- A paper in preparation entitled "Dissolution time of Globular clusters: A Comparison between collisional and collision-less codes" extracted from my M.S. thesis.

## Research Interests

- Modified gravity
- General relativity
- Galactic and clusters dynamics
- Dark matter
- Cosmology of early universe

## Research Area

- Modified gravity in globular star clusters versus Newtonian dynamics
- Effect of Galactic tidal field on Globular clusters

## Conferences Attended

- 17th Annual conference of astrophysics, IASBS, Zanjan, Iran (May 2013)
- 6th Meeting of Astronomy and Astrophysics, University of Birjand, Birjand, Iran (Jan 2013)
- School and workshop of neutrino physics and astrophysics, IPM, Tehran, Iran (Sep 2012)
- Summer School on Cosmology, ICTP, Trieste, Italy (July 2012)
- Third Azarqui School of Astronomy, IKU, Istanbul, Turkey (July 2012)
- 16th Annual conference of astrophysics, IASBS, Zanjan, Iran (May 2012)
- Astronomical data reduction, IPM, Tehran, Iran (Feb 2012)
- 15th Annual conference of astrophysics, IASBS, Zanjan, Iran (May 2011)
- Conference on astrophysics, Sharif university of technology, Tehran, Iran (Jan 2011)

## Advanced Courses Passed

- **Modern Astrophysics 1**, "Introduction to Modern Astrophysics: Bradley W. Carroll, Dale A. Ostlie", with Dr. Hosein Haghi, score: **17.5 out of 20**
- **Modern Astrophysics 2**, "Introduction to Modern Astrophysics: Bradley W. Carroll, Dale A. Ostlie", with Dr. Hosein Haghi, score: **19 out of 20**
- **Galactic Dynamics**, "Galaxies in the Universe: L.S. Sparke & J.S. Gallagher", with Dr. Hosein Haghi, score: **17 out of 20**
- **General Relativity**, "Gravitation and cosmology: general relativity, Steven Weinberg", with Dr. Ghasem Exirifard, score: **18 out of 20**

## Lectures and presentations

- Oral presentation on "The effect of external tidal field on dissolution time (life-time) of globular clusters", IASBS, Zanjan, Iran (May 2013)
- Oral presentation on "The effect of external tidal field on velocity dispersion profile of globular clusters", University of Birjand, Birjand, Iran (Jan 2013)
- A Presentation on "Tidal interaction and velocity dispersion of globular clusters" in weekly astrophysics group seminars, IASBS, Zanjan, Iran (Nov 2012)
- Presented a poster on "Flattening of velocity dispersion profiles of globular clusters", IPM, Tehran, Iran (Sep 2012)
- Oral presentation on "Flattening of velocity dispersion profiles of globular clusters", IKU, Istanbul, Turkey (July 2012)
- Presented a poster on "Flattening of velocity dispersion profiles of globular clusters", ICTP, Trieste, Italy (July 2012)
- "brief history of 20th century physics", for freshmen of physics, PNU, Mashad, Iran (Nov 2007)
- "Introduction to Fortran", for students of physics, PNU, Mashad, Iran (Mar 2008)
- "Creation of universe (Big Bang)", public physics presentation, PNU, Mashad, Iran (Dec 2008)
- "Bell's inequality theorem", Quantum Mechanic Philosophy course, PNU, Mashad, Iran (May 2009)
- "White dwarfs and Chandrasekhar limit", physics seminar, PNU, Mashad, Iran (May 2009)
- "Flattening of velocity dispersion of globular clusters", proposal presentations, IASBS, Zanjan, Iran (Oct 2011)

## Work experiences

- *LOC of the 17th Annual conference of astrophysics, IASBS, Zanjan, Iran (May 2013)*
- *Not officially but LOC of 15th and 16th Annual conference of astrophysics, IASBS*
- *Tutor of high school and bachelor students of physics and mathematics*

## Computer Skills

- *Operating systems: Windows (98, XP, vista, 7), Linux (Ubuntu, Red hat)*
- *Programming: Fortran, C++, Bash-scripting*
- *Mathematical software: Mathematica, Mat Lab*
- *Plot and data analysis software: Origin, Gnuplot*
- *Astronomical software: IRAF, SExtractor*
- *Microsoft office tools*

## Language Skills

- *Persian (my native language)*
- *English (Upper intermediate-advanced: I'm working on my language skills all the time)*

## Hobbies

- *Singing (Persian), listening to music, philosophy, playing football, mountaineering*

## References

- **Hosein Haghi**, Assistant professor, [haghi@iasbs.ac.ir](mailto:haghi@iasbs.ac.ir), Department of physics, Institute for Advanced Studies in Basic Sciences (IASBS) Zanjan, Iran.
- **Jamil Arian**, Assistant professor, [j\\_arian@pnu.ac.ir](mailto:j_arian@pnu.ac.ir), Department of physics, Payam-Noor University (PNU), Mashad, Iran.
- **Mohammad Reza Benam**, Associate Professor, [m\\_benam@pnu.ac.ir](mailto:m_benam@pnu.ac.ir), Department of physics, Payam-Noor University (PNU), Mashad, Iran.
- **Any other references are available upon request.**