Seyed Mohammad Hoseini-Rad

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EDUCATION

- *Ph.D student,* Astrophysics
  University of Birjand,   2013 - Present

- *M.S. student,* Astrophysics
  Institute for advanced studies in basic science (IASBS),   2010 - 2013

  - Thesis: Investigating the evolution of the stellar mass function and mass segregation of globular clusters in Galactic tidal field (19.75/20).

- *B.S.,* Physics
  Ferdowsi University of Mashhad (FUM),   2005 - 2010

RESEARCH INTERESTS

- Evolution of globular clusters, high performance computing in Astrophysics & Cosmology, accretion discs

PUBLICATION

- Haghi H., Hoseini-Rad S.M., Zonoozi A.H, Kuepper A.H.W, "The effect of primordial mass segregation on the size scale of globular clusters", MNRAS, 2014, 444, 3699

- Hoseini-Rad S.M., Haghi H., Zonoozi A.H., "Time evolution of mass function and mass segregation of globular clusters in Galactic tidal field", Proceedings of The 6th National Annual Conference on Astronomy and Astrophysics, University of Birjand, Birjand, Iran, 2013

RESEARCH PROJECTS

- OpenMP parallelization of MOCCA (MOnte Carlo Cluster simulAtor) code. MOCCA is currently one of the most advanced codes for simulating real size star clusters. It follows the star cluster evolution closely to N-body codes but is much faster. (ongoing).

- Saffron cluster, University of Birjand, Department of Physics: as Senior Researcher. Saffron cluster is a Beowulf cluster which enables people to use high performance computation resources in the department. (2014).

- GPU cluster, IASBS: as Senior Researcher. IASBS GPU cluster provides a massively parallel facility for highly parallel computations. (2013).

PRESENTATIONS

- Introduction to High performance computing and its application in Astrophysics and Cosmology, University of Birjand, (Nov. 2014)

- Initial conditions of star clusters, University of Birjand, (Nov. 2014)

- Monte Carlo simulation of dense stellar systems, University of Birjand, (Jul. 2014)

- The impact of galactic halo mass on the size scale of distant globular clusters, Bad Honnef, (Jun. 2014)

- Time evolution of mass function and mass segregation of globular clusters in Galactic tidal field, University of Birjand, (Feb. 2013)

- Evolution of the mass function and mass segregation of globular clusters in Galactic tidal field, IPM, Tehran, (Nov. 2012)
- Accelerating NBODY6 with Graphics Processing Units, IASBS, Zanjan, (Mar. 2012)
- How to install softwares in Gnu/Linux, IASBS, Zanjan, (public presentation), (Feb. 2012)
- Free/open source softwares in Astronomy, Mashhad Society of Astronomy, (public presentation), (Jun. 2010)
- Introduction to Stellarium, Mashhad Society of Astronomy, (public presentation), (Jun. 2009)
- Introduction to Maple & Maxima, FUM, Mashhad, (Mar. 2009)

TEACHING

- Teacher assistant, Electromagnetism 2, University of Birjand, (Fall, 2014)
- Gnu/Linux course (for student of Astrophysics), IASBS, (Spring, 2013)
- Teacher assistant, Computational Physics 1 (Graduate Course), IASBS, (Fall, 2011)

HONORS

- Partial grant awarded to participate in 'The dance of stars, dense stellar systems from infant to old (The MODEST 14 Conference), Bad Honnef, Germany, Jun. 2-6, 2014.
- Partial grant awarded to participate in IAU symposium No. 298 'Setting the scene for GAIA and LAMOST, The current and next generations of surveys and models', Lijiang, China, May 20-24, 2013.
- Partial grant awarded to participate in program 'N body gravitational dynamical systems From N=2 to infinity', Institute Henri Poincaré, Paris, France, Sep. 9-Dec. 13, 2013.
- Ranked top 3.5% of the country in the National Annual University Entrance Exam with around 350,000 applicants in the country, Iran, (2005)

MEMBERSHIPS

- Member of Astronomical Society of Iran
- Member of the Board of Directors of Mashhad Linux User Group, (2009-2010)

ATTENDED CONFERENCES

- 7th Workshop of HPC and Grid Computing, Shahid Rajaee University, Tehran, 2014.
- Introduction to galaxies, IPM, Tehran, Sep. 16, 2014.
- Early Universe: from theory to observations, IPM, Tehran, Apr. 23, 2014.
- MODEST 14, The dance of stars, dense stellar systems from infant to old , Physikzentrum, Bad Honnef, Jun. 2-6, 2014.
- 6th National Annual Conference on Astronomy and Astrophysics, University of Birjand, Birjand, 2013
- 16th Astrophysics Conference, Institute for Advanced Studies in Basic Sciences (IASBS) Zanjan, 2012
- National Annual Conference on Gravity and Cosmology, Tehran University, Tehran, 2012
- 2nd Optical Data Reduction Workshop, IPM, Tehran, 2012

- 15th Astrophysics Conference, Institute for Advanced Studies in Basic Sciences (IASBS) Zanjan, 2011
- National Annual Conference on Gravity and Cosmology, Sharif University of Technology, Tehran, 2010

COMPUTER SKILLS

- *Languages :* FORTRAN77 & 95, C/C++, Bash, OpenMP parallelization, familiar with Python, MPI & CUDA
- *Scientific Softwares, Codes & Library:* Scipy, Numpy, Nbody6 (GPU & Parallel), Boost C++ library, GSL, LAPack, MKL, Maxima, Maple, familiar with IRAF, Sextractor , Mathematica, Octave and Matlab.
- *Operating Systems:* I'm a professional user of Gnu/Linux (Several distributions e.g. Red Hat (based), Debian (based)), Windows (XP/Vista/7)
- *Version Controlling, Documentation, Visualization & Presentation Tools:* Git, MS Office, Libre(Open) Office, LATEX, Gnuplot, S2plot, Partiview

LANGUAGE SKILLS

- English: intermediate (& in progress), Persian: native, Arabic: basics

INTERESTS & HOBBIES

- Learning more and more Gnu/Linux, climbing, Soccer

REFERENCES

- Available on request