Behzad Tahmasebzadeh, Ph.D.

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Profetional Experience

2022 – ...   ◼ **Postdoctoral Fellow**, University of Michigan, Ann Arbor, USA.

Education

2017 – 2022   ◼ **Ph.D. in Astrophysics,** Shanghai Astronomical Observatory, Shanghai, China.
Thesis title: *Schwarzschild dynamical modeling of barred galaxies with IFU observation.*

2013 - 2016   ◼ **M.Sc. in Astrophysics**, Institute for Advanced Studies in Basic Sciences, Zanjan, Iran.
Thesis title: *Inflationary cosmological models in Scalar–tensor gravity.*

2009 – 2013   ◼ **B.Sc. in physics**, Buali-Sina University, Hamedan, Iran.

Awards

2022   ◼ **CAS talent**, awarded as Excellent International Student by the Chinese Academy of Science.

2017   ◼ **CAS-TWAS**, Ph.D. scholarship (most competitive scholarship for study Ph.D. in China).

Visiting Scholar

Feb – March 2019   ◼ Collaboration visit to MPE, Munich, Germany.

Conferences

Talk & Poster

2022   ◼ **talk**, *Dynamical orbit decomposition of barred galaxies*, DYNAMITE workshop, ICRAR, Australia.

2021   ◼ **talk**, *Orbital origin of CX and OX structures in boxy-peanut bulges*, Seminar talk, University of Central Lancashire, UK.

2020   ◼ **talk**, *Orbit-based dynamical modeling of external barred galaxies*, Dynamics workshop and follow-up on barred galaxies, University of Cambridge, UK.

◼ **talk**, *Schwarzschild modeling of barred galaxy*, DYNAMITE v0.0 release event (software for dynamical modelling of galaxies), University of Vienna, Austria.

2019   ◼ **talk**, *Deprojection of barred galaxies from photometry*, MPE, Germany.

◼ **poster**, *Extract 3D density profile of barred galaxies from image*, The art of measuring galaxy physical properties, Milan, Italy.

2016   ◼ **poster**, *Brans-Dicke inflation in light of the Planck 2015 data*, Gravity and Cosmology annual meeting, Zanjan, Iran.

Conferences (continued)

Workshops

2020   ◼ Dynamical Reconstruction of Galaxies, Leiden University, Netherlands.

2019   ◼ 5th Scientific Writing for Young Astronomers, Kunming observatory, China.

         ◼ Summer school on galactic dynamics, Shanghai Astronomical Observatory, China.

Skills

Programming

Coding   ◼ Python, Fortran, Bash, Mathematica.

Software   ◼ DYNAMITE, AGAMA, NAFF, SUPERFREQ, GALFIT, GALPY, MGEFIT, ASTROPY, PPXF, GIST, DS9.

Software Development

         ◼ Member of collaboration team for DYNAMITE. A tool for orbit-superposition dynamical modelling of stellar systems.

         ◼ I modified the core part of DYNAMITE code to be applicable for modeling of barred galaxies.

Teaching

TA   ◼ Computational physics for M.Sc students, Spring 2015, IASBS, Iran.

Lecture   ◼ An introduction on Astronomy and Astrophysics, Spring 2012, BASU, Iran.

References

Prof. Juntai Shen   ◼ Shanghai Jiao Tong University ✉ jtshen@sjtu.edu.cn

Prof. Ling Zhu   ◼ Shanghai Astronomical Observatory ✉ lzhu@shao.ac.cn

Prof. Ortwin Gerhard ◼ MPE, Germany ✉ gerhard@mpe.mpg.de

Prof. Monica Valluri ◼ University of Michigan ✉ mvalluri@umich.edu

Dr. Eugene Vasiliev   ◼ University of Cambridge ✉ eugvas@lpi.ru

Research Publications

Journal Articles

1 **Tahmasebzadeh, Behzad**, L. Zhu, J. Shen, O. Gerhard, and G. van de Ven, "Orbit-Superposition Dynamical Modelling of Barred Galaxies," *arXiv e-prints*, arXiv:2210.14218, 2022. arXiv: 2210.14218 [astro-ph.GA].

2 S. Thater, P. Jethwa, **Tahmasebzadeh, Behzad**, *et al.*, "Testing the robustness of DYNAMITE triaxial Schwarzschild modelling: The effects of correcting the orbit mirroring,", 2022. 🔗 DOI: 10.1051/0004-6361/202243926.

3 C. Yang, L. Zhu, **Tahmasebzadeh, Behzad**, X.-X. Xue, and C. Liu, "Constructing the Milky Way Stellar Halo in the Galactic Center by Direct Orbit Integration,", 2022. 🔗 DOI: 10.3847/1538-3881/ac9900.

4 **Behzad Tahmasebzadeh**, L. Zhu, J. Shen, O. Gerhard, and Y. Qin, "Deprojection of external barred galaxies from photometry," *MNRAS*, 2021. 🔗 DOI: 10.1093/mnras/stab3002.

5 **Behzad Tahmasebzadeh** and K. Karami, "Generalized Brans-Dicke inflation with a quartic potential," *Nuclear Physics B*, 2017. 🔗 DOI: 10.1016/j.nuclphysb.2017.02.018.

6 **Behzad Tahmasebzadeh**, K. Rezazadeh, and K. Karami, "Brans-Dicke inflation in light of the Planck 2015 data," *JCAP*, 2016. 🔗 DOI: 10.1088/1475-7516/2016/07/006.