### Curriculum Vitae

Dr. Shahryar Motamedi

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# Summary

Astrophysicist with a Ph.D. in Astrophysics, specializing in galactic dynamics, modified gravity, and solar system physics. Strong background in analytical modeling, numerical simulations, and high-performance scientific computing. Research contributions span Milgromian dynamics, relativistic three-body chaos, solar/stellar dynamics, and space engineering.

#### Online Profiles

GitHub: github.com/shmotamedi

ResearchGate: researchgate.net/profile/Shahryar-Motamedi LinkedIn: linkedin.com/in/shahryar-motamedi-26b169b7

## Education

#### Ph.D. in Astrophysics 2015–2024

Institute for Advanced Study of Basic Sciences (IASBS), Zanjan, Iran

Advisor: Prof. Hosein Haghi (haghi@iasbs.ac.ir)

#### M.Sc. in Space Engineering 2010–2013

Sharif University of Technology (SUT), Tehran, Iran Advisor: Prof. Seid H. Pourtakdoust (pourtak@sharif.edu)

B.Sc. in Physics 2006–2010

Sharif University of Technology (SUT), Tehran, Iran

# Research Experience

Research Assistant IASBS, Zanjan, Iran

Studied and compared dynamical friction timescales in Milgromian vs. equivalent Newtonian dynamics.

Research Assistant SUT, Tehran, Iran

Investigated chaos in the relativistic restricted three-body problem.

Visiting Researcher USTC, Hefei, China, 2019

Developed methods to compare Modified Newtonian Dynamics (MOND) with dark matter models.

#### Predoc Researcher RCISP, Tehran, Iran, 2014

Designed a high-precision orbit propagator using perturbation techniques, integrating physics and engineering approaches.

#### Honsrs & Awards

Ph.D. Entrance Exam: Ranked first in the IASBS Ph.D. entrance examination.

M.Sc. Admission: Awarded a full graduate scholarship at SUT with direct admission (no entrance exam) for top-ranked national students.