Curriculum Vitae

Shahryar Motamedi

Birth: July 23, 1987 Nationality: Iranian Address: Tehran, Iran Mobile: +98 912 489 8825

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Summary

Astrophysicist specializing in galactic dynamics, modified gravity, and solar system physics. Expertise in analytical modeling, numerical simulations, and high-performance scientific computing. Research contributions include Milgromian dynamics, relativistic three-body chaos, solar/stellar dynamics, and space engineering.

Online Profiles

GitHub: github.com/shmotamedi – codes for astrophysical simulations

ResearchGate: researchgate.net/profile/Shahryar-Motamedi – publications and citations

LinkedIn: linkedin.com/in/shahryar-motamedi-26b169b7 – skills and experiences

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 Background

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.