

Ali A. Asgari

E-mail : a_asgari@modares.ac.ir

ADDRESS: Department of Physics, School of Sciences, Tarbiat Modares University, Tehran, IRAN
(ISLAMIC REP.)
Tel.:+98-21-82883437

EDUCATION

- 2009–2014 **Doctor of Philosophy** School of Sciences, Tarbiat Modares University
Thesis: *An inflationary universe with spatially closed topology*
Supervisor: Dr. Amir H. Abbassi¹
- 2002–2005 **Master of Science**
School of Sciences, Tarbiat Modares University
Thesis: *Horizons and closed trapped surfaces in gravity and cosmology*
Supervisor: Dr. Amir H. Abbassi
- 1998–2002 **Bachelor of Science**
Department of Physics, Shahid Beheshti University

RESEARCH INTERESTS

- Inflationary cosmology and CMB physics
- Modified gravity theories like as McDowell-Mansouri gravity and Chern-Simons gravity and their corresponding cosmology
- Topological gravity and topological parameters in gravity
- Quantum Mechanics and quantum field theory in curved spacetime and spacetime with non-trivial topology
- Quantum cosmology and string cosmologies

PUBLICATIONS

Publication in refereed journals

- Asgari, Ali A., Amir H. Abbassi, and Jafar Khodagholizadeh. "On the perturbation theory in spatially closed background." *The European Physical Journal C* (2014) 74:2917 (**IF=5.084**)
- Asgari, Ali A., and Amir H. Abbassi. "Evolution of the spectral index after inflation." *Journal of Cosmology and Astroparticle Physics* 09(2014)042 (**IF=5.810**)
- Khodagholizadeh, Jafar, Amir H. Abbassi, and Ali A. Asgari. "Damping of tensor mode in spatially closed cosmology." *Physical Review D* (2014) 90: 063520 (**IF=4.643**)
- Asgari, Ali A., and Amir H. Abbassi. "Scalar and tensor power spectra in a universe with positive curvature index and maximally symmetric spatial section." *Physics of the Dark Universe* (2015) 7-8: 1 (**IF=8.571**)
- Asgari, Ali A. and Amir H. Abbassi. "Slow-roll inflationary scenario in the maximally extended background." *The European Physical Journal C* (2016) 77:

¹Department of Physics, School of Sciences, Tarbiat Modares University, P.O. Box 14155-4838, Tehran, Iran

544 (IF=5.084)

- Jafar Khodagholizadeh, Jafar, Abbassi, Amir H., Asgari, Ali A. "Damping of gravitational waves in matter and Λ -dominated era. " *Astroparticle Physics* (2017) 95:1 (IF=3.257)

TEACHING EXPERIENCE

Fall 2009, fall 2010, fall 2015, fall 2016 and fall 2017: Tarbiat Modares University

Electrodynamics I

Teaching for M.Sc. students of physics

Teaching assistant: Prepared and conducted weekly tutorials for M.Sc. students of physics as well as marking duties.

Spring 2016: Tarbiat Modares University

Electrodynamics II

Spring 2017: Tarbiat Modares University

Lie Group Theory & Its Applications in Particle Physics

Spring 2018: Tarbiat Modares University

Cosmology I

Teaching for M.Sc. students of physics

RESEARCH SKILLS

- General relativity and cosmology
- Quantum field theory
- Loop quantum gravity
- Geometry and topology
- Nontrivial topologies