

# THE CURRICULUM VITAE

LEILA SHAHKARAMI

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## I. PERSONAL INFORMATION

**Full Name:** Leila Shahkarami

**Title:** Dr.

**Date of birth:** September 23, (1983)

**Marital status:** Married

**Nationality:** Iranian

**Address:** School of Physics, Damghan University, Damghan 41167-36716, Iran.

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## II. EDUCATION

- B.Sc. in Physics, Lorestan University (2001-2005).
- M.Sc. in Physics, on Moleculer Dynamics Simulation of Slip Behavior in Liquid Films on Surfaces of Patterned Wettability, Shahid Beheshti University (2005-2007),  
**Supervisor:** K. Ghafori Tabrizi.
- Ph.D. in Physics (QFT and Particle Physics), on Non-Perturbative Solutions of a Coupled Dynamical Fermion and Soliton System in Two Dimensions, Shahid Beheshti University, (2007-2012),  
**Supervisor:** Siamak Sadat Gousheh.

### III. RESEARCH INTERESTS

- AdS/CFT and Holography.
- Topological Field Theory (Soliton and Instanton).
- Quantum Gravity.
- Cosmology and Gravity.

### IV. HONORS

- The top undergraduate student in Physics (18.22), Lorestan University, 2005.
- The top graduate student in Physics (18.64), Shahid Beheshti University, 2007.
- The top Ph.D. student in Physics (18.89), Shahid Beheshti University, 2012.
- The first grade in the Ph.D. entrance exam of Shahid Beheshti University.

### V. TEACHING EXPERIENCES

- Physics II, Shahid Beheshti University, (2011).
- Physics Lab I, Shahid Beheshti University, (2007-2008).
- Physics Lab I & II, Shahid Beheshti University, (2012).
- Physics II, Teacher Asistant, Shahid Beheshti University, (2009-2012).
- Physics I, Teacher Asistant, Shahid Beheshti University, (2011-2012).
- Electromagnetism I, Teacher Asistant, Shahid Beheshti University, (2009).
- Physics I & II, Shahid Rajaei Teacher Training University, (2013).
- Physics I, Tafresh University, (2013).
- Gravity II for Graduate students, Payamenoor University of Tehran, (2013).
- Gravity I for Graduate students, Payamenoor University of Tehran, (2014).
- A Course in Particle Physics for Graduate students, Payamenoor University of Tehran, (2014).
- Physics I & II, Damghan University, (2014-now).

- Electromagnetism I & II, Damghan University, (2015-2018).
- Computational Physics for Graduate students, Damghan University, (2015-2017).
- Computer I, Damghan University, (2018).
- English for the Students of Physics, Damghan University, (2018-2020).
- Computer II, Damghan University, (now).
- Modern Physics, Damghan University, (2018-now).
- Nuclear and Particle Physics, Damghan University, (2017-now).
- Particle Physics, Damghan University, (2017-now).
- **Adviser of the following M.Sc. theses:**
  - Vacuum Polarization and Casimir Energy of a Fermi Field in a Scalar Potential Well in a One Spatial Dimension.
  - Chern-Simons Vortices as a Representation of Anyons.
  - Study of Thermalization Using Entanglement Entropy.
  - A Study of Holographic Entanglement Entropy as a Probe of Confinement Phase Transition

## VI. PUBLICATIONS

1. **L. Shahkarami** and S.S. Gousheh, *Exact solutions of a fermion-soliton system in two dimensions*, JHEP **06**, 116 (2011) ([arXiv:1309.3179 \[hep-th\]](#)).
2. **L. Shahkarami**, A. Mohammadi and S.S. Gousheh, *Casimir energy for a coupled fermion-soliton system*, JHEP **11**, 140 (2011) ([arXiv:1209.5237 \[hep-th\]](#)).
3. S.S. Gousheh, A. Mohammadi and **L. Shahkarami**, *Casimir energy for a coupled fermion-kink system and its stability*, Phys. Rev. D **87**, 045017 (2013) ([arXiv:1209.4490 \[hep-th\]](#)).
4. S.S. Gousheh, A. Mohammadi and **L. Shahkarami**, *Non-adiabatic non-cyclic generalization of the Berry phase for a spin-1/2 particle in a rotating magnetic field*, ([arXiv:1212.2104 \[hep-th\]](#)).
5. S.S. Gousheh, A. Mohammadi and **L. Shahkarami**, *An investigation of the Casimir energy for a fermion coupled to the sine-Gordon soliton with parity decomposition*, Eur. Phys. J. C **74**, 3020 (2014) ([arXiv:1212.2089 \[hep-th\]](#)).

6. S.S. Gousheh, S.S. Mousavi and **L. Shahkarami**, *Vacuum polarization and Casimir energy of a Dirac field induced by a scalar potential in one spatial dimension*, Phys. Rev. D **90**, 045027 (2014) ([arXiv:1402.3922 \[hep-th\]](#)).
7. M. Ali-Akbari, F. Charmchi, A. Davody, H. Ebrahim and **L. Shahkarami**, *Time-dependent meson melting in external magnetic field*, Phys. Rev. D **91**, 106008 (2015) ([arXiv:1503.04439 \[hep-th\]](#)).
8. M. Ali-Akbari, F. Charmchi, A. Davody, H. Ebrahim and **L. Shahkarami**, *Evolution of  $Q\bar{Q}$  potential in  $N = 4$  super Yang-Mills plasma*, Phys. Rev. D **93**, 086005 (2016) ([arXiv:1510.00212 \[hep-th\]](#)).
9. F. Charmchi, Z. Haghani, S. Shahidi and **L. Shahkarami**, *One-loop corrections to vector Galileon theory*, Phys. Rev. D **93**, 124044 (2016) ([arXiv:1511.07034 \[hep-th\]](#)).
10. M. Ali-Akbari, F. Charmchi, H. Ebrahim and **L. Shahkarami**, *Various time-scales of relaxation*, Phys. Rev. D **94**, 046008 (2016) ([arXiv:1602.07903 \[hep-th\]](#)).
11. **L. Shahkarami**, H. Ebrahim, M. Ali-Akbari and F. Charmchi, *Far-from-Equilibrium Initial Conditions Probed by a Nonlocal Operator*, Phys. Lett. B **773**, 91 (2017) ([Spires, arXiv:1702.08482 \[hep-th\]](#)).
12. **L. Shahkarami** and M. Dehghani and P. Dehghani, *Holographic Schwinger effect in a  $D$ -instanton background*, Phys. Rev. D **97**, 046013 (2018) ([arXiv:1511.07986 \[hep-th\]](#)).
13. S. Shahidi, F. Charmchi, Z. Haghani and **L. Shahkarami**, *Modified gravity one-loop partition function*, Eur. Phys. J. C **78**, 833 (2018) ([Spires, arXiv:1805.05368 \[hep-th\]](#)).
14. L. Shahkarami and **F. Charmchi**, *Confining  $D$ -instanton background in an external electric field*, Eur. Phys. J. C **79**, 343 (2019) ([Spires, arXiv:1904.09806 \[hep-th\]](#)).
15. D. Masoumi, **L. Shahkarami** and F. Charmchi, *Effect of electromagnetic fields on deformed  $AdS_5$  models*, Phys. Rev. D **101**, 126011 (2020) ([Spires, arXiv:2003.06848 \[hep-th\]](#)).
16. **L. Shahkarami**, *Magnetic catalysis in a confining holographic theory (in Persian)*, Iranian Journal of Physics Research (IJPR) **20**, 463 (2020), No. 3.

## VII. CONFERENCES, WORKSHOPS, AND VISITS

- International conference of physics of Iran, 2005, Khoramabad-Iran.

- IPM workshop on Casimir, 2010, Tehran-Iran.
- National conference on gravitation and cosmology, Shahid Beheshti University, 2010, Tehran-Iran.
- IPM school in symmetries in High Energy Physics 2013, Tehran-Iran.
- IPM school and workshop on QCD and QGP, 2014, Tehran-Iran.
- One-day school on quark-gluon plasma from holography, University of Tehran, 15 October 2015, Tehran-Iran.
- One-day school on quark-gluon plasma from holography, Isfahan University of Technology, 19 May 2016, Tehran-Iran.
- A short-term visit of CERN TH, 1 July-1 August 2016, Geneva-Switzerland.
- ULtra-RelatIvistiCH HEavy IoNZ 2016 workshop to celebrate 60th birthday of Ulrich Heinz, 18 July-20 July 2016, CERN TH, Geneva-Switzerland.
- Annual physics conference of Iran, Shiraz University (**talk**), 22-25 August 2016, Shiraz-Iran.
- 7th conference of Physics of particles and fields, Damghan University (**organizer**), 25-26 January 2017, Damghan-Iran.
- One-day school on quark-gluon plasma from holography, Shahrood University of Technology, 18 May 2017, Shahrood-Iran.
- A short-term visit of ICTP HECAP, 3-17 July 2017, Trieste-Italy.
- A short-term visit of ICTP HECAP, 4-19 July 2018, Trieste-Italy.
- A short-term visit of CERN TH, 19 July-5 August 2018, Geneva-Switzerland.
- Annual physics conference of Iran, Imam Khomeini International University (**talk**), 27-30 August 2018, Qazvin-Iran.
- Annual physics conference of Iran (Online), Razi University (**talk**), 22-25 August 2020, Kermanshah-Iran.

## VIII. SKILLS

- **Languages:**

Persian (Mother Tongue).

English.

- **Computer:**

Programming Language: Fortran.

Software: Mathematica.