

KAMAL HAJIAN

Curriculum Vitae

PERSONAL INFORMATION

PhD in physics	2015
Nationality	Iranian
Date of birth	30/10/1980
Languages	Persian (native), English (fluent) German, Turkish (intermediate)

RESEARCH POSITIONS

07/2025 – now	Researcher METU, Turkey
06/2023 – 06/2025	Researcher IPM, Iran
05/2022 – 05/2023	Researcher METU, Turkey
11/2020 – 05/2022	Junior fellow HWK, Germany
11/2019 – 11/2020	Researcher METU, Turkey
03/2019 – 07/2019	Riemann fellow Leibniz University, Germany
09/2018 – 03/2019	Long-term visitor IPM, Iran
09/2015 – 09/2018	Post-doctoral position IPM, Iran

EDUCATION

2010 – 2015	Doctor of Philosophy HIGH ENERGY PHYSICS <i>Sharif University of Technology</i>
Supervisor	Prof. Mohammad M. Sheikh-Jabbari
Thesis	On Thermodynamics and Phase Space of Near Horizon Extremal Geometries
2008 – 2010	Master of Science PHYSICS <i>Sharif University of Technology</i>
Supervisor	Prof. Mehdi Golshani
Thesis	Necessity of Privileged Frame of Reference in Physics
2004 – 2008	Bachelor of Science PHYSICS <i>Sharif University of Technology</i>

RESEARCH INTERESTS

- Black hole thermodynamics and conserved charges,
- Classical gravity accompanied with quantum fields,
- Memory effect and soft charges,
- Cosmology.

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AWARDS AND HONORS

2020-2	TÜBITAK fellowship,
2019	Riemann fellowship,
2016	<i>Saramadan</i> postdoctoral,
2010	Ph.D Prize of National Elites Foundation of Iran,
2009	Honored in 6 th ceremony of “Stars of Sharif”,
2008	Gold medal in 13 th national olympiad of physics,
2007	Rank 9 th in competition for M.Sc in physics,
2007	Rank 4 th in 12 th national olympiad of physics.

SELECTED PUBLICATIONS

K. Hajian and B. Tekin, *Coupling Constants as Conserved Charges in Black Hole Thermodynamics*, Phys. Rev. Lett. **132**, no.19, 191401 (2024).

K. Hajian, *On the origin of black hole paradoxes*, Nucl. Phys. B **999**, 116452 (2024).

K. Hajian, M. M. Sheikh-Jabbari and B. Tekin, *Gauge invariant derivation of zeroth and first laws of black hole thermodynamics*, Phys. Rev. D **106**, no.10, 104030 (2022).

D. Chernyavsky and K. Hajian, *Cosmological constant is a conserved charge*, Class. Quant. Grav. **35**, no. 12, 125012 (2018).

K. Hajian and M. M. Sheikh-Jabbari, *Redundant and Physical Black Hole Parameters: Is there an independent physical dilaton charge?*, Phys. Lett. B, **768**, 228, (2017).

K. Hajian and M. M. Sheikh-Jabbari, *Solution Phase Space and Conserved Charges: A General Formulation for Charges Associated with Exact Symmetries*, Phys. Rev. D, **93**, no. 4, 044074, (2016).

G. Compère, K. Hajian, A. Seraj and M. M. Sheikh-Jabbari, *Wiggling Throat of Extremal Black Holes*, JHEP, **1510**, 093, (2015).

K. Hajian, A. Seraj, M. M. Sheikh-Jabbari, *NHEG Dynamics: Laws of Near Horizon Extremal Geometry (Thermo)Dynamics*, JHEP, **1403**, 014, (2014).

COMPUTER SKILLS

Basic	C++, HTML
Applied	Office, GIMP, Photoshop, Bluefish, Audacity, Pitivi, RVC
Advanced	MATLAB, Mathematica, xAct package, Diffgeo, COLSYS, L ^A T _E X, XePersian
Operating system	Linux, Microsoft Windows