

Tigran Stepan Hakobyan

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Institute of Physics

Ակադեմիկոս Գուրգեն Սահակյանի անվան տեսական ֆիզիկայի ամբիոն
Associate professor

Education

Institution	YSU
Faculty	Faculty of physics, theoretical physics chair
Date	1989 - 1992
Degree name	PhD student

Institution	YSU
Faculty	Faculty of physics, Theoretical physics chair
Date	1982 - 1989
Degree name	Masters

Scientific Rank/degree

Institution	YSU
Date	2013
Degree name	Doctor
Specialty	Physico-mathematical sciences
Research Topic	Exact methods in one-dimensional and quasi-one-dimensional systems

Institution	Yerevan Physics Institute
Date	1996
Degree name	Candidate
Specialty	Physico-mathematical sciences
Scientific Supervisor	Ara Sedrakyan
Research Topic	R-matrices in quantum groups

Language skills

Հայերեն English Русский Français

Work experience

Institution	A. Alikhanyan national science laboratory (Yerevan Physics Institute)
Period of time	2022 till now

Rank/degree	leading researcher
Institution	YSU
Period of time	2021 till now
Rank/degree	leading researcher
Institution	Theoretical physics chain, YSU
Period of time	2013 till now
Rank/degree	Associated professor

Publications

Article

Simple Extension of Kitaev Chain for Z3 Parafermions [Простое обобщение цепочки Китаева для Z3 парафермионов]

Hakobyan T.S., Varosyan R.H., Harutunyan G.H.

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2024
28-35

Article

Z_3 and ($\times Z_3$)^3 symmetry protected topological paramagnets.

Hrant Topchyan, Vasilii Iugov, Mkhitar Mirumyan, Shahane Khachatryan, Tigran Hakobyan,

Tigran Sedrakyan

Journal of High Energy Physics 2023 35

Article

Algebra of Dunkl Laplace-Runge-Lenz vector

Misha Feigin, Tigran Hakobyan

Letters in Mathematical Physics 2022 59, 1-29

Article

Superintegrable systems related to truncated Calogero model

T. Hakobyan, S. Vardanyan

Proceedings of Science 2021 006/10

Article

Lowest energy states of an O(N) fermionic chain

Tigran Hakobyan

Physical Review B 2020 085128(1-18)

Article

Symmetry Algebra of Dynamical and Discrete Calogero Models

Tigran Hakobyan, Seda Vardanyan

Physics of Particles and Nuclei Letters 2020 734-737

Article

Symmetries of the generalized Calogero model and the Polychronakos-Frahm chain

Article

Myers-Perry Conformal Mechanics
H. Demirchian, T. Hakobyan, A. Nersessian, M.M. Shekh-Jabbari
Physics of Particles and Nuclei 2018 860-864

Article

Integrability of Calogero-Coulomb Problems
Tigran Hakobyan, Armen Nersessian
Physics of Particles and Nuclei Letters 2017 331-335
<http://link.springer.com/journal/11497>

Article

Constants of Motion in Deformed Oscilaltor and Coulomb Systems
Tigran Hakobyan, Armen Nersessian, Hovhannes Shmavonyan
Physics of Particles and Nuclei Letters 2017 400-402
<http://link.springer.com/journal/11497>

Article

Symmetries in superintegrable deformations of oscillator and Coulomb systems: Holomorphic factorization
Tigran Hakobyan, Armen Nersessian
Physical Review D 2017 025014
<http://journals.aps.org/prd/>

Article

Two-center Coulomb Problem with Calogero Interaction
Tigran Hakobyan, Armen Nersessian
Physics of Atomic Nuclei 2017 383-388
<http://link.springer.com/journal/11450>

Article

Lobachevsky geometry in TTW and PW systems
Tigran Hakobyan, Armen Nersessian, Hovhannes Shmavonyan
Physics of Atomic Nuclei 2017 591-597
<http://link.springer.com/journal/11450>

Article

Near horizon extremal Myers-Perry black holes and integrability of associated conformal mechanics
Tigran Hakobyan, Armen Nersessian, M.M.Sheikh-Jabbari
Physics Letters B 2017 586-591
<http://www.journals.elsevier.com/physics-letters-b>

Article

CALOGERO MODEL AND ITS GENERALIZATION
T.Hakobyan, A.Nersessian

Article

Spherical Calogero model with oscillator/Coulomb potential: Classical case
Francisco Correa, Tigran Hakobyan, Olaf Lechtenfeld, Armen Nersessian

Physical Review D 2016 125008,9

<http://journals.aps.org/prd/>

Article

Spherical Calogero model with oscillator/Coulomb potential: Quantum case
Francisco Correa, Tigran Hakobyan, Olaf Lechtenfeld, Armen Nersessian

Physical Review D 2016 125009

<http://journals.aps.org/prd/>

Article

Integrability and separation of variables in Calogero-Coulomb-Stark and two-center Calogero-Coulomb systems

Tigran Hakobyan, Armen Nersessian

Physical Review D 2016 045025,14

<http://journals.aps.org/prd/>

Article

Coulomb systems with Calogero Interaction

Tigran Hakobyan, Armen Nersessian

Proceedings of the YSU. Physical and Mathematical Sciences 2016 15-19

<http://www.ystu.am/science/en/journals>

Article

On Dunkl angular momenta algebra

Misha Feigin, Tigran Hakobyan

Journal of High Energy Physics 2015 107,22

<http://www.springer.com/physics/particle+and+nuclear+physics/journal/13130>

Article

Lowest-energy states in parity-transformation eigenspaces of $SO(N)$ spin chain

Tigran Hakobyan

Nuclear Physics B 2015 248-258

<http://www.sciencedirect.com/science/journal/05503213>

Article

Runge-Lenz vector in Calogero-Coulomb problem

Tigran Hakobyan, Armen Nersessian

Physical Review A 2015 22111

<http://journals.aps.org/pra/>

Article

Superintegrability of generalized Calogero models with oscillator or Coulomb potential

Tigran Hakobyan, Olaf Lechtenfeld, Armen Nersessian

Article

The structure of invariants in conformal mechanics

Tigran Hakobyan, David Karakhanyan, Olaf Lechtenfeld

Nuclear Physics B 2014 399-420

<http://www.sciencedirect.com/science/journal/05503213>

Article

The spherical sector of the Calogero model as a reduced matrix model

Tigran Hakobyan, Armen Nersessian, Francisco Correa, Olaf Lechtenfeld

Nuclear Physics B 2012 250-266

<http://www.journals.elsevier.com/nuclear-physics-b/>

Article

Integrable generalizations of oscillator and Coulomb systems via action-angle variables

Tigran Hakobyan, Armen Nersessian, Armen Saghatelian, Vahagn Yeghikyan, Olaf Lechtenfeld

Physics Letters A 2012 679-686

<http://www.journals.elsevier.com/physics-letters-a>

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Action-angle variables and novel superintegrable systems

Armen Nersessian, Tigran Hakobyan, Armen Saghatelian, Vahagn Yeghikyan, Olaf Lechtenfeld

Physics of Particles and Nuclei 2012 577-582

<http://www.springer.com/physics/particle+and+nuclear+physics/journal/11496>

Manual

Չուզահեռ ծրագրավորում MPI փաթեթի միջոցով

S.U. Հակոբյան

2012 42

Article

Invariants of the spherical sector in conformal mechanics

Tigran Hakobyan, Armen Nersessian, Armen Saghatelian, Olaf Lechtenfeld

Journal of Physics A-Mathematical and Theoretical 2011 055205, 14 pages

<http://iopscience.iop.org/journal/1751-8121>

Article

Invariants of the spherical sector in conformal mechanics

Tigran Hakobyan, Armen Nersessian, Armen Saghatelian, Olaf Lechtenfeld

Journal of Physics A-Mathematical and Theoretical 2011 055205, 14

<http://iopscience.iop.org/journal/1751-8121>

Article

Ordering of Energy Levels for Extended SU(N) Hubbard Chain

Tigran Hakobyan

Symmetry Integrability and Geometry-Methods and Applications 2010 024,13

<http://www.emis.de/journals/SIGMA/>

Article

Hidden symmetries of integrable conformal mechanical systems

Tigran Hakobyan, Armen Nersessian, Sergey Krivonos, Olaf Lechtenfeld

Physics Letters A 2010 801-806

<http://www.journals.elsevier.com/physics-letters-a>

Article

Lobachevsky geometry of (super)conformal mechanics

Tigran Hakobyan, Armen Nersessian

Physics Letters A 2009 1001-1004

<http://www.journals.elsevier.com/physics-letters-a>

Article

The cuboctahedric Higgs oscillator from the rational Calogero model

Tigran Hakobyan, Armen Nersessian, Vahagn Yeghikyan

Journal of Physics A: Mathematical and General (Journal of Physics A-Mathematical and Theoretical) 2009

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<http://iopscience.iop.org/journal/0305-4470>

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Cuboctahedric Higgs oscillator from the Calogero model

Armen Nersessian, Tigran Hakobyan, Vahagn Yeghikyan

Journal of Physics A-Mathematical and Theoretical 2009 205206

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Armen Nersessian, Tigran Hakobyan

Physics Letters A 2009 1001-1004

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Article

Antiferromagnetic ordering of energy levels for a spin ladder with four-spin cyclic exchange:

Generalization of the Lieb-Mattis theorem

Tigran Hakobyan

Physical Review B 2008 012407,4

<http://journals.aps.org/prb/>

Article

Energy-level ordering and ground-state quantum numbers for a frustrated two-leg spin-1/2 ladder

Tigran Hakobyan

Physical Review B 2007 214421,14

<http://journals.aps.org/prb/>

Article

The ordering of energy levels for su(n) symmetric antiferromagnetic chains

Tigran Hakobyan

Nuclear Physics B 2004 575-594

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Article

The possibility of gapless excitations in antiferromagnetic spin chains with long-range interactions

T. Hakobyan

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L599-L604

<http://iopscience.iop.org/journal/0305-4470>

Article

Phase diagram of the frustrated two-leg ladder model

T. Hakobyan, J. H. Hetherington, M. Roger

Physical Review B 2001 144433,17

<http://journals.aps.org/prb/>

Article

Delocalization of states in two-component superlattices with correlated disorder

T. Hakobyan, D. Sedrakyan, A. Sedrakyan, I. Gomez, F. Dominguez-Adame

Physical Review B 2000 11432-11436

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Article

Bethe Ansatz and thermodynamic limit of affine quantum group invariant extensions of the t-J model

T. Hakobyan, A. Avakyan, A. Sedrakyan, J. Ambjorn

Journal of Mathematical Physics 1999 5687-5701

<http://scitation.aip.org/content/aip/journal/jmp>

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The European Physical Journal B

T. Hakobyan, V. Harutunyan, V. Gevorkyan, V. Makhov

EUROPEAN PHYSICAL JOURNAL B 1999 31-33

<http://epjb.epj.org/>

Article

Luminescence Excitation and Influence of Radiation on the Stimulated Processes in Corundum Crystals

T. Hakobyan, V. Harutyunyan, E. Hakhverdyan, V. Gevorkyan, V. Grigoryan, V. Makhov

PHYSICA STATUS SOLIDI A-APPLICATIONS AND MATERIALS SCIENCE 1999 623-629

[http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1862-6319/homepage/2231_ed...](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1862-6319/homepage/2231_ed...)

Article

A family of affine quantum group invariant integrable extensions of the Hubbard Hamiltonian

A. Avakyan, T. Hakobyan, A. Sedrakyan

Nuclear Physics B 1997 633-652

<http://www.sciencedirect.com/science/journal/05503213>

Article

Spin chain Hamiltonians with affine Uqq symmetry

T. Hakobyan, A. Sedrakyan

Modern Physics Letters B 1996 250-254

Article

On the universal R-matrix of $Uqsl(2)$ at roots of unity

T. Hakobyan, A. Sedrakyan

COMMUNICATIONS IN MATHEMATICAL PHYSICS 1996 157-171

<http://link.springer.com/journal/220>

Article

Lattice electrons in constant magnetic field: Bethe like ansatz

T. Hakobyan, A. Sedrakyan

Modern Physics Letters A 1995 495-501

<http://www.worldscientific.com/worldscinet/mpla>

Article

Universal R matrix of $Uqsl(n,m)$ quantum superalgebras

T. Hakobyan, A. Sedrakyan

Journal of Mathematical Physics 1994 2552-2559

<http://scitation.aip.org/content/aip/journal/jmp>

Article

R-matrices for $Uqosp(1, 2)$ for highest weight representations of $U qosp(1, 2)$ for general q and q an odd root of unity

T. Hakobyan, A. Sedrakyan

Modern Physics Letters B 1993 266-271

<http://www.worldscientific.com/worldscinet/mplb>

Article

R-matrices for highest weight representations of $slq(2,C)$ at roots of unity

T. Hakobyan, A. Sedrakyan

Modern Physics Letters B 1993 27-32

<http://www.worldscientific.com/worldscinet/mplb>

Article

Some new spinor representations of quantum groups $Bq(n)$, $Cq(n)$, $Gq(2)$

T. Hakobyan, A. Sedrakyan

Journal of Mathematical Physics 1993 2554-2560

<http://scitation.aip.org/content/aip/journal/jmp>
