

Prof. Mustafa SARISAMAN

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: AAE-4922-2020

ScopusID: 26531726100

Yoksis Researcher ID: 217652

Education Information

Post Doctorate, Koc University, Faculty Of Science, Fizik, Turkey 2010 - 2017

Doctorate, University of Miami, College Of Arts And Sciences, Fizik, United States Of America 2003 - 2009

Postgraduate, Bogazici University, Faculty Of Arts And Sciences, Department Of Physics, Turkey 2001 - 2003

Undergraduate, Bogazici University, Fen Edebiyat, Fizik, Turkey 1996 - 2001

Research Areas

Physics, Atomic and Molecular Physics, Atomic Spectra and Photon Interactions, Electromagnetism, Acoustics, Heat Transfer, Classical Mechanics and Fluid Dynamics, Optics, General Physics, Mathematical Methods in Physics, Quantum Mechanics, Fields Theory and Relativity, Basic Particles and Areas, General Theory of Particles and Fields, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Natural Sciences

Academic Titles / Tasks

Professor, Istanbul University, Faculty of Science, Department of Physics, 2020 - Continues

Associate Professor, Istanbul University, Faculty of Science, Department of Physics, 2018 - 2020

Lecturer PhD, Florida International University, College of Science, Physics, 2010 - 2010

Lecturer PhD, University of Miami, College of Science, Physics, 2010 - 2010

Research Assistant, University of Miami, College of Science, Physics, 2003 - 2010

Research Assistant, Bogazici University, Fen Edebiyat Fakültesi, Fizik Bölümü, 2001 - 2003

Academic and Administrative Experience

Uygulama ve Araştırma Merkezi Yönetim Kurulu Üyesi, Istanbul University, Rektörlük, Uluslararası Öğrenci Uygulama ve Araştırma Merkezi, 2019 - Continues

Head of Department, Istanbul University, Faculty Of Science, Department Of Physics, 2020 - 2023

Courses

Tebip-Kişisel Proje, Undergraduate, 2019 - 2020
General Relativity Theory 2, Doctorate, 2018 - 2019
Continuous Groups of Transformations, Postgraduate, 2019 - 2020
Advanced Quantum Mechanics I, Postgraduate, 2019 - 2020
Mathematical Methods in Physics, Undergraduate, 2018 - 2019
DIFFERENTIAL EQUATIONS IN PHYSICS, Undergraduate, 2017 - 2018
GENERAL PHYSICS, Undergraduate, 2017 - 2018
College Physics I, Undergraduate, 2009 - 2010
Physics with calculus I, Undergraduate, 2009 - 2010

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Unlocking Optical Illusions: Transforming Perception with Optical Null Media**
Sadeghi M. M., Sarisaman M., Rostamzadeh S.
OPTICS AND LASER TECHNOLOGY, vol.176, pp.1-9, 2024 (SCI-Expanded)
- II. **Circular Dichroism in Nonlinear Topological Weyl Semimetals**
Alomeare H., Nutku F., Sarisaman M.
JOURNAL OF OPTICS, vol.1, pp.1-18, 2024 (SCI-Expanded)
- III. **Tilt-induced vortical response and mixed anomaly in inhomogeneous Weyl matter**
Rostamzadeh S., Taşdemir Ş., Sarisaman M., Jafari S. A., Goerbig M.
PHYSICAL REVIEW B - CONDENSED MATTER AND MATERIALS PHYSICS, vol.107, no.7, pp.75155-75166, 2023 (SCI-Expanded)
- IV. **Charge-pseudospin coupled diffusion in semi-Dirac graphene: pseudospin assisted valley transport**
Rostamzadeh S., Sarisaman M.
NEW JOURNAL OF PHYSICS, vol.24, pp.83026-83043, 2022 (SCI-Expanded)
- V. **Late time transition of Universe and the hybrid scale factor**
Aydiner E., Başaran-Öz I., Dereli D. T., Sarisaman M.
European Physical Journal C, vol.82, no.39, pp.1-15, 2022 (SCI-Expanded)
- VI. **Unitary structure of palindromes in DNA**
Tibatan M. A., Sarisaman M.
BIOSYSTEMS, vol.211, no.104565, pp.1-8, 2022 (SCI-Expanded)
- VII. **Spectral singularities and tunable slab lasers with 2D material coating**
Ghaemi-Dizicheh H., Mostafazadeh A., Sarisaman M.
Journal Of The Optical Society Of America B-Optical Physics, vol.37, no.7, pp.2128-2138, 2020 (SCI-Expanded)
- VIII. **Lasing with Topological Weyl Semimetal.**
Oktay G., Sarisaman M., Tas M.
Scientific reports, vol.10, pp.3127, 2020 (SCI-Expanded)
- IX. **Broadband and wide-angle invisibility with PT-symmetric 2D-Weyl semimetal**
Sarisaman M., TAŞ M.
JOURNAL OF APPLIED PHYSICS, vol.126, no.16, 2019 (SCI-Expanded)
- X. **Broadband coherent perfect absorber with PT-symmetric 2D-materials**
Sarisaman M., Tas M.
ANNALS OF PHYSICS, vol.401, pp.139-148, 2019 (SCI-Expanded)
- XI. **PT-symmetric coherent perfect absorber with graphene**
Sarisaman M., Tas M.
JOURNAL OF THE OPTICAL SOCIETY OF AMERICA B-OPTICAL PHYSICS, vol.35, no.10, pp.2423-2432, 2018 (SCI-Expanded)
- XII. **Spectral singularities, threshold gain, and output intensity for a slab laser with mirrors**
Dogan K., Mostafazadeh A., Sarisaman M.
ANNALS OF PHYSICS, vol.392, pp.165-178, 2018 (SCI-Expanded)

- XIII. **Unidirectional invisibility and PT symmetry with graphene**
Sarisaman M., Tas M.
PHYSICAL REVIEW B, vol.97, no.4, 2018 (SCI-Expanded)
- XIV. **Nonlinear spectral singularities and laser output intensity**
Ghaemi-Dizicheh H., Mostafazadeh A., Sarisaman M.
JOURNAL OF OPTICS, vol.19, no.10, 2017 (SCI-Expanded)
- XV. **Unidirectional reflectionlessness and invisibility in the TE and TM modes of a PT-symmetric slab system**
Sarisaman M.
PHYSICAL REVIEW A, vol.95, no.1, 2017 (SCI-Expanded)
- XVI. **Spectral singularities in the TE and TM modes of a PT-symmetric slab system: Optimal conditions for realizing a CPA-laser**
Mostafazadeh A., Sarisaman M.
ANNALS OF PHYSICS, vol.375, pp.265-287, 2016 (SCI-Expanded)
- XVII. **Lasing-threshold condition for oblique TE and TM modes, spectral singularities, and coherent perfect absorption**
Mostafazadeh A., Sarisaman M.
PHYSICAL REVIEW A, vol.91, no.4, 2015 (SCI-Expanded)
- XVIII. **Spectral singularities in the surface modes of a spherical gain medium**
Mostafazadeh A., Sarisaman M.
PHYSICAL REVIEW A, vol.88, no.3, 2013 (SCI-Expanded)
- XIX. **PSEUDODUALITY AND COMPLEX GEOMETRY IN SIGMA MODELS**
Sarisaman M.
INTERNATIONAL JOURNAL OF GEOMETRIC METHODS IN MODERN PHYSICS, vol.10, no.7, 2013 (SCI-Expanded)
- XX. **Spectral singularities and whispering gallery modes of a cylindrical gain medium**
Mostafazadeh A., Sarisaman M.
PHYSICAL REVIEW A, vol.87, no.6, 2013 (SCI-Expanded)
- XXI. **Euclidean pseudoduality and boundary conditions in sigma models**
Sarisaman M.
NUCLEAR PHYSICS B, vol.868, no.1, pp.314-327, 2013 (SCI-Expanded)
- XXII. **Optical spectral singularities and coherent perfect absorption in a two-layer spherical medium**
Mostafazadeh A., Sarisaman M.
PROCEEDINGS OF THE ROYAL SOCIETY A-MATHEMATICAL PHYSICAL AND ENGINEERING SCIENCES, vol.468, no.2146, pp.3224-3246, 2012 (SCI-Expanded)
- XXIII. **Spectral singularities of a complex spherical barrier potential and their optical realization**
Mostafazadeh A., Sarisaman M.
PHYSICS LETTERS A, vol.375, no.39, pp.3387-3391, 2011 (SCI-Expanded)
- XXIV. **PSEUDODUALITY IN SUPERSYMMETRIC SIGMA MODELS ON SYMMETRIC SPACES**
Sarisaman M.
MODERN PHYSICS LETTERS A, vol.26, no.24, pp.1825-1841, 2011 (SCI-Expanded)
- XXV. **PSEUDODUALITY IN SUPERSYMMETRIC SIGMA MODELS**
Sarisaman M.
INTERNATIONAL JOURNAL OF MODERN PHYSICS A, vol.25, no.15, pp.2997-3023, 2010 (SCI-Expanded)
- XXVI. **Pseudoduality between symmetric space sigma models**
Sarisaman M.
JOURNAL OF MATHEMATICAL PHYSICS, vol.50, no.11, 2009 (SCI-Expanded)
- XXVII. **PSEUDODUALITY AND CONSERVED CURRENTS IN SIGMA MODELS**
Sarisaman M.
MODERN PHYSICS LETTERS A, vol.24, no.2, pp.123-134, 2009 (SCI-Expanded)

Articles Published in Other Journals

- I. **Unveiling the Mysteries of Metamaterial Lasers: Exploring Novel Applications through Non-Hermitian Scattering Formalism**
Sarisaman M.
PROGRESS OF THEORETICAL AND EXPERIMENTAL PHYSICS, vol.1, pp.1-12, 2024 (Peer-Reviewed Journal)
- II. **Topological Behavior of Spectral Singularities in Topological Weyl Semimetals**
Sarisaman M.
JOURNAL OF PHYSICS CONDENSED MATTER, vol.1, pp.1-13, 2024 (Peer-Reviewed Journal)
- III. **Mutation Mechanism In DNA: Non-Hermitian Approach**
Sarisaman M., Tibatan M. A., Uzunal S.
Biorxiv, vol.1, no.1, pp.1-12, 2023 (Peer-Reviewed Journal)
- IV. **Quark Mixing with Four Standard Model Families**
Arik E., Arik M., SARISAMAN M., Solmaz L., Sultansoy S.
Balkan Physics Letters, vol.15N1, pp.9-12, 2007 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Energy Stored in a Slab Covered by Graphene Sheets**
Sarisaman M.
in: Carbon Related Materials, Satoru Kaneko, et al., Editor, Springer Nature Singapore Pte Ltd., Singapore, pp.71-89, 2020

Supported Projects

SARISAMAN M., OKTAY G., Project Supported by Higher Education Institutions, Topolojik Weyl Yarı Metallerde Spektral Tekillikler ve Optik Uygulamaları, 2020 - Continues

SARISAMAN M., İNDAP M. E., Project Supported by Higher Education Institutions, Topolojik Weyl Yarımetallerde Uyumlu Mükemmel Soğurucular, 2020 - Continues

Sarisaman M., TUBITAK Project, Yapılandırılmış metamatzemelere dayalı uygulanabilir görünmezlik pelerini cihazlarının tasarımı, simülasyonu, performansı ve geliştirilmesi, 2023 - 2024

SARISAMAN M., ROSTAMZADEH S., Project Supported by Higher Education Institutions, Topolojik Mikroaygıtlarda Kuantum Optik Spin Değişimi, 2019 - 2023

Sarisaman M., TUBITAK Project, PT Symmetry in Topological Dirac and Weyl Semimetals and their Applications in Optics, 2020 - 2021

AYDINER E., SARISAMAN M., BAŞARAN ÖZ I., DERELİ T., Project Supported by Higher Education Institutions, Kaotik Evren Teorisinin Metrik Bağımlı İncelenmesi, 2019 - 2021

SARISAMAN M., TUBITAK Project, Doğrusal Olmayan Saçılma Kuramı, Doğrusal Olmayan Spektral Tekillikler Ve Tek Yönlü Görünmezlik, 2016 - 2018

SARISAMAN M., TUBITAK Project, Ters Saçılma Kuramı, Karmaşık Enerjiye Bağlı Potansiyeller, Ve Optik Uygulamaları, 2013 - 2016

SARISAMAN M., TUBITAK Project, Spektral Tekillikler Ve Optik Sistemlerdeki Uygulamaları, 2011 - 2013

Metrics

Publication: 32
Citation (WoS): 304
Citation (Scopus): 303

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