Asst. Prof. RAŞİT ÇAKIR



Personal Information

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Address: RTEÜ Fener Mah Zihni Derin Yerleşkesi Fen Edebiyat Fakültesi Fizik Bölümü 53100

International Researcher IDs
ORCID: 0000-0002-7104-9069
Publons / Web Of Science ResearcherID: P-9594-2015
Yoksis Researcher ID: 54980

Education Information

Doctorate, University of North Texas, Collage Of Arts And Sciences, Physics, United States Of America 2002 - 2007
Postgraduate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Fizik, Turkey 1998 - 2001
Undergraduate, Middle East Technical University, Fen Edebiyat Fakültesi, Fizik, Turkey 1994 - 1998

Foreign Languages

Arabic, A1 Beginner
English, C2 Mastery

Dissertations

Doctorate, Fractional Brownian motion and dynamical approach to complexity, University of North Texas, Collage Of Arts And Sciences, Physics, 2007
Postgraduate, Metal alaşımların moleküler dinamik simülasyonları: yapı, termodinamik özellikler ve katı-sıvı faz geçişi, Middle East Technical University, Türk-İslam Düşüncesi Tarihi Anabilim Dalı, Fizik, 2001

Research Areas

Mathematics, Probability Theory, Stochastic Processes, Physics, Interdisciplinary Physics and Related Science and Technology Areas, Materials Science, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Electronic structure of bulk material, Electrical properties of electronic structures, interfaces, thin films and low-dimensional structures, Natural Sciences

Academic Titles / Tasks

Assistant Professor, Recep Tayyip Erdogan University, Fen Edebiyat Fakültesi, Fizik Bölümü, 2020 - Continues

Assistant Professor, Recep Tayyip Erdogan University, Mühendislik Fakültesi, Malzeme Bilimi Ve Nanoteknoloji, 2018 - 2020
Assistant Professor, Recep Tayyip Erdogan University, Mühendislik Fakültesi, Malzeme Bilimi Ve Nanoteknoloji, 2012 - 2018
Assistant Professor, Agri Ibrahim Cecen University, Fen Edebiyat Fakültesi, Fizik, 2009 - 2012
Research Assistant, University of North Texas, Collage Of Arts And Sciences, Physics, 2002 - 2007
Research Assistant, Middle East Technical University, Fen Edebiyat Fakültesi, Fizik, 1998 - 2002

Academic and Administrative Experience

Deputy Head of Department, Recep Tayyip Erdogan University, Mühendislik Fakültesi, Malzeme Bilimi Ve Nanoteknoloji Bölümü, 2012 - 2020

Courses

Lecture on Specialized Field, Postgraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021
Mechanical, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016
Quantum Nanostructures, Postgraduate, 2021 - 2022, 2020 - 2021
Heat and Thermodynamics, Undergraduate, 2022 - 2023
Statistical Physics, Undergraduate, 2022 - 2023, 2021 - 2022
Technical English-I, Undergraduate, 2022 - 2023
Englisg Listening and Writing, Undergraduate, 2021 - 2022, 2020 - 2021
Seminar, Postgraduate, 2021 - 2022, 2020 - 2021
Numerical Analysis, Undergraduate, 2021 - 2022
English Reading Comprehension, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021
Master Thesis, Postgraduate, 2022 - 2023
Fizik, Undergraduate, 2021 - 2022
Numerical Analysis, Undergraduate, 2020 - 2021
Differential Equations with Partial Derivative, Undergraduate, 2020 - 2021
İleri Kuantum Mekaniği-I, Postgraduate, 2020 - 2021
Quantum Physics, Undergraduate, 2019 - 2020
Engineering Statistics, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018
Physics, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016
Quantum Mechanics, Undergraduate, 2020 - 2021
Random Processes, Undergraduate, 2019 - 2020, 2018 - 2019
Engineering Mathematics II, Undergraduate, 2017 - 2018
Differential Equations in Engineering, Undergraduate, 2017 - 2018
Applied Engineering Mathematics, Undergraduate, 2017 - 2018
Engineering Mathematics, Undergraduate, 2017 - 2018, 2016 - 2017
Engineering Mathematics-I, Undergraduate, 2017 - 2018
Differential Equations in Engineering, Undergraduate, 2016 - 2017, 2015 - 2016
Differential Equations, Undergraduate, 2017 - 2018
Applied Engineering Mathematics, Undergraduate, 2016 - 2017
Engineering Mathematics-II, Undergraduate, 2016 - 2017
Engineering Statistics, Undergraduate, 2016 - 2017
Differential Equations, Undergraduate, 2016 - 2017, 2015 - 2016
Differential Equations, Undergraduate, 2016 - 2017, 2015 - 2016

Advising Theses

Çakır R., KUANTUM KUYULARININ FARKLI POTANSİYEL PROFİLLERİ İÇİN OPTİK VE ELEKTRONİK ÖZELLİKLERİNİN HESAPLANMASI, Postgraduate, T.ZARBALIYEV(Student), 2023

Jury Memberships

Post Graduate, Post Graduate, İzmir Katip Çelebi Üniversitesi, February, 2021

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Binding energies of shallow donors in polar ZnO/ZnBeO quantum well**
ÇAKIR R., Yıldırım H.
Solid State Communications, vol.379, 2024 (SCI-Expanded)

II. **Donor binding energies in single ZnCdO/ZnO quantum well**
ÇAKIR R.
THIN SOLID FILMS, vol.755, 2022 (SCI-Expanded)

III. **Beam dynamic studies at accelerator system of gun for a self-amplified spontaneous emission free electron laser project**
YILDIZ H., Porsuk D., YILDIZ İ., ÇAKIR R.
NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT, vol.1021, 2022 (SCI-Expanded)

IV. **Design and comparison of superconducting rf gun cavities and beam dynamics for linear electron accelerators**
Yildiz H. D., Porsuk D., Cakir R., Tugay H.
NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT, vol.939, pp.74-82, 2019 (SCI-Expanded)

V. **Superconducting Cavity Utilization for Linear Accelerator Systems**
Yildiz H. D., Çakır R., Porsuk D.
ACTA PHYSICA POLONICA A, vol.128, 2015 (SCI-Expanded)

VI. **Design and simulation of 31/2-cell superconducting gun cavity and beam dynamics studies of the SASE-FEL System at the Institute of Accelerator Technologies at Ankara University**
Yildiz H. D., Cakir R., Porsuk D.
NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT, vol.785, pp.180-190, 2015 (SCI-Expanded)

VII. **First look at the physics case of TLEP**
Bicer M., Yildiz H. D., Yıldız İ., Coignet G., Delmastro M., Alexopoulos T., Grojean C., Antusch S., Sen T., He H., et al.
JOURNAL OF HIGH ENERGY PHYSICS, 2014 (SCI-Expanded)

VIII. **From the trajectory to the density memory**
Cakir R., Krokhın A., Grıgolını P.
CHAOS SOLITONS & FRACTALS, vol.34, pp.19-32, 2007 (SCI-Expanded)

IX. **Dynamical origin of memory and renewal**
Cakir R., Grıgolını P., Krokhın A. A.
PHYSICAL REVIEW E, vol.74, 2006 (SCI-Expanded)

Articles Published in Other Journals

I. **Intersubband Transitions in Nonpolar ZnO/BeMgZnO Quantum Wells: Effects of Physical Dimension, Concentration and Donor Level**
YILDIRIM H., ÇAKIR R.
Iğdır Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.12, no.4, pp.2113-2128, 2022 (Peer-Reviewed Journal)

II. **Polarization Effects on Intersubband Absorption in GaN/ZnGeN2 Quantum Wells**
ÇAKIR R.
Iğdır Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.11, no.4, pp.2772-2781, 2021 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

I. **Simulation of Main Linear Accelerator Cavities**
Yıldız H., Çakır R., Dilaver P.
2nd International Conference on Computational and Experimental Science and Engineering International Congress (ICCESEN2015), Antalya, Turkey, 14 - 19 October 2015

II. **Design Optimization For X Ray Free Electron Lasers**
Yıldız H., Çakır R., Esra D.
2nd International Conference on Computational and Experimental Science and Engineering International Congress (ICCESEN2015), Antalya, Turkey, 14 - 19 October 2015

III. **Lineer Serbest Elektron Lazer Sistemlerinde Süper İletken Tabanca Kavite Dizaynı**
Yıldız H., Çakır R., Dilaver P.
Adım Fizik Günleri-IV, Kütahya, Turkey, 28 - 29 May 2015

IV. **Optimized Self Amplified Spontaneous Emission Laser Parameters at Linear Accelerators**
Yıldız H., Çakır R., Esra D.
Theoretical and Experimental Studies in Nuclear Applications and Technology (TESNAT2015), Osmaniye, Turkey, 23 - 26 April 2015

V. **Photocathode Gun Cavity and Solenoid Design at Linear Accelerators**
Yıldız H., Çakır R., Dilaver P.
Theoretical and Experimental Studies in Nuclear Applications and Technology (TESNAT2015), Osmaniye, Turkey, 23 - 26 April 2015

VI. **Gun Main Linac Design Simulations and Beam Dynamics at Linear Colliders**
Yıldız H., Çakır R., Dilaver P.
Ankara YEF Günleri, Ulusal Fizik ve Fizik Mühendisliği Çalıştayı, Ankara, Turkey, 12 - 14 February 2015

VII. **Superconducting Gun Cavity Design Simulation for Linear Accelerator Systems**
Yıldız H., Çakır R., Dilaver P.
4th International Conference on Superconductivity and Magnetism (ICSM 2014), Antalya, Turkey, 27 April - 02 May 2014

VIII. **Superconducting gun cavity optimization**
Yıldız H., Çakır R., Dilaver P.
7th Asian Conference on Applied Superconductivity and Cryogenics, Nevşehir, Turkey, 23 - 25 October 2013

IX. **Superconductng Cavity Simulation For Production of Lazer With Nano meter Wavelenth**
Yıldız H., Çakır R., Dilaver P.
9th Nanoscience and Nanotechnology Conference, Erzurum, Turkey, 24 - 28 June 2013

X. **The statistical analysis of systems driven by fractional Gaussian noise in a double well potential**
Çakır R., Akın O. Ç.
2nd International Symposium on Computing in Science & Engineering, Aydın, Turkey, 1 - 04 June 2011, pp.641-642

Supported Projects

Çakır R., Yıldız H., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, Türk Hızlandırıcı Merkezinin Teknik Tasarımı ve Test Laboratuarları, 2006 - 2015

Scientific Refereeing

European Journal of Engineering and Applied Sciences, Other Journals, December 2021

Metrics

Publication: 21
Citation (WoS): 488
Citation (Scopus): 439
H-Index (WoS): 3
H-Index (Scopus): 3

Congress and Symposium Activities

Design Optimization For X-Ray Free Electron Laser, 2nd International Conference on Computational and Experimental Science and Engineering International Congress (ICCESEN2015), Attendee, Antalya, Turkey, 2015
Cavity and Field Problems at Linear Accelerators, 2nd International Conference on Computational and Experimental Science and Engineering International Congress (ICCESEN2015), Attendee, Antalya, Turkey, 2015
Lineer Serbest Elektron Lazer Sistemlerinde Süper İletken Tabanca Kavite Dizaynı, Adım Fizik Günleri-IV, Attendee, Kütahya, Turkey, 2015
Photocathode Gun Cavity and Solenoid Design at Linear Accelerators, Theoretical and Experimental Studies in Nuclear Applications and Technology (TESNAT2015), Attendee, Osmaniye, Turkey, 2015
Optimized Self Amplified Spontaneous Emission Laser Parameters at Linear Accelerators, Theoretical and Experimental Studies in Nuclear Applications and Technology (TESNAT2015), Attendee, Osmaniye, Turkey, 2015
Gun, Main Linac Design Simulations and Beam Dynamics at Linear Colliders,Ankara YEF Günleri, Ulusal Fizik ve Fizik Mühendisliği Çalıştayı, Attendee, Ankara, Turkey, 2015
Superconducting Cavity Utilization for Linear Accelerator Systems,International Conference on Computational and Experimental Science and Engineering (ICCESEN 2014), Attendee, Antalya, Turkey, 2014
Superconducting Gun-Cavity Design Simulation for Linear Accelerator Systems, 4th International Conference on Superconductivity and Magnetism (ICSM 2014), Attendee, Antalya, Turkey, 2014
Superconducting gun cavity optimization, 7th Asian Conference on Applied Superconductivity and Cryogenics, Attendee, Nevşehir, Turkey, 2013
Superconducting Cavity Simulation For Production of Laser With Nano-meter Wavelength, 9th Nanoscience and Nanotechnology Conference (NanoTR-9), Attendee, Erzurum, Turkey, 2013
The statistical analysis of systems driven by fractional Gaussian noise in a double well potential, 2nd International Symposium on Computing in Science & Engineering, Attendee, Aydın, Turkey, 2011