Asst. Prof. SEVİL ÖZER

Personal Information

Email: sevil.ozer@yeniyuzyil.edu.tr
Web: https://avesis.yeniyuzyil.edu.tr/sevil.ozer

International Researcher IDs
ScholarID: dyIDuQoAAAAJ
ORCID: 0000-0002-0186-763X
Publons / Web Of Science ResearcherID: ABI-3104-2020
ScopusID: 57189710582
Yoksis Researcher ID: 260494

Biography

I received my BS degree in 2003 from Middle East Technical University, my MS degree in 2006 from İhsan Dogramacı Bilkent University, and my Ph.D. degree in 2012 from Basel University, respectively, all in Physics. After completing my Ph.D, I joined the Electric and Electronic Department of Bogazici University as a postdoctoral researcher until April 2016. Then I joined the Biomedical Engineering Department of Yeniyuzyil University, where I have been a faculty member since February 2017.

Education Information

Doctorate, Universitaet Basel, Natural Sciences, Applied Physics, Switzerland 2008 - 2012
Postgraduate, Ihsan Dogramaci Bilkent University, Fen Bilimleri Enstitusu, Fizik, Turkey 2003 - 2006
Undergraduate, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Physics, Turkey 2000 - 2003

Foreign Languages

German, B1 Intermediate
English, C2 Mastery

Certificates, Courses and Trainings

Health&Medicine, LEICA WORKSHOP, LEICA MICROSYSTEMS, 2019
Other, SPINTRONICS- FROM GMR TO QUANTUM INFORMATION, JULICH FORSCHUNGZENTRUM, 2009

Dissertations

Doctorate, Exchange-Bias Structures studied by High Resolution Quantitative Magnetic Force Microscope, Universitaet Basel (University of Basel), Natural Sciences, Applied Physics, 2012
Postgraduate, Fabication and characterization of microelectromechanical resonators, Ihsan Dogramaci Bilkent University, Fen Bilimleri Enstitusu, Fizik, 2006

Research Areas

Life Sciences, Physics, Natural Sciences

Academic Titles / Tasks

Assistant Professor, Istanbul Yeni Yuzyil University, Faculty Of Engineering-Architecture, Department Of Biomedical Engineering, 2017 - Continues
Lecturer, Istanbul Yeni Yuzyil University, Faculty Of Engineering-Architecture, Department Of Biomedical Engineering, 2016 - 2017
Researcher, Bogazici University, 2012 - 2016
Research Assistant, Universitaet Basel (University of Basel), 2008 - 2012
Research Assistant, Ihsan Dogramaci Bilkent University, 2003 - 2008

Academic and Administrative Experience

Institute Board Member, Istanbul Yeni Yuzyil University, Faculty Of Engineering-Architecture, Department Of Biomedical Engineering, 2024 - Continues
Assistant Director of the Institute, Istanbul Yeni Yuzyil University, Institute Of Science, 2020 - 2023
Faculty Board Member, Istanbul Yeni Yuzyil University, Faculty Of Engineering-Architecture, Department Of Biomedical Engineering, 2018 - 2023
Program Coordinator, Istanbul Yeni Yuzyil University, Institute Of Science, 2018 - 2023
Institute Board Member, Istanbul Yeni Yuzyil University, Institute Of Science, 2018 - 2023
Faculty Management Board Member, Istanbul Yeni Yuzyil University, Faculty Of Engineering-Architecture, Department Of Biomedical Engineering, 2017 - 2023
Deputy Head of Department, Istanbul Yeni Yuzyil University, Faculty Of Engineering-Architecture, Department Of Biomedical Engineering, 2021 - 2022

Courses

YÜKSEK LİSANS TEZİ, Undergraduate Double Major, 2020-2021
BİYOSENSÖRLER, Undergraduate Double Major, 2020-2021
FİZİK I, Undergraduate, 2020-2021, 2019-2020
TIBBİ GÖRÜNTÜLEME İLERİ KONULAR, Undergraduate Double Major, 2019-2020
BİTİRME PROJESİ I, Undergraduate, 2019-2020, 2017-2018, 2016-2017
TIBBİ GÖRÜNTÜLEME SİSTEMLERİ, Undergraduate, 2019-2020, 2018-2019, 2017-2018, 2016-2017
ELEKTROMANYETİK TEORİ, Undergraduate, 2019-2020, 2018-2019
BİYOMEKANİK, Undergraduate, 2019-2020, 2018-2019, 2017-2018
ileri BİYOMEKANİK, Undergraduate Double Major, 2019-2020, 2017-2018
FİZİK II, Undergraduate, 2019-2020
MİKROELEKTROMEKANİK SİSTEMLER, Undergraduate, 2019-2020, 2017-2018
BİTİRME PROJESİ II, Undergraduate, 2019-2020, 2017-2018, 2016-2017
BİYOMEMS VBİYOMEMS UYGULAMALARI, Undergraduate Double Major, 2019-2020
Biyomedikal Nanoteknoloji, Undergraduate Double Major, 2018-2019
Bitirme Projesi, Undergraduate, 2018-2019
Mikroelekromekanik Sistemler, Undergraduate, 2018-2019
biyomedikal Optik, Undergraduate, 2018-2019, 2017-2018, 2016-2017
İstatistik, Undergraduate, 2018-2019

Yüksek Lisans Seminer, Undergraduate Double Major, 2018-2019
BİYONANOTEKNOLOJİ, Undergraduate Double Major, 2017-2018, 2016-2017
Yüksek Lisans Seminer Dersi, Undergraduate Double Major, 2017-2018
RADYASYON FİZİĞİ, Undergraduate, 2016-2017
BİYOMEMS VE BİYOMEMS UYGULAMALARI, Undergraduate Double Major, 2016-2017

Advising Theses

ÖZER S., Bilgisayarlı tomografi anjiyografide derin öğrenme rekonstrüksiyon yönteminin diğer rekonstrüksiyon yöntemleri ile karşılaştırılması, Postgraduate, M.BERKAY(Student), 2022
ÖZER S., Nanoindentasyon yöntemini kullanarak nanoparçacıkların hücre elastisitesi üzerindeki değişimlerinin incelenmesi, Postgraduate, B.ASLANCAN(Student), 2022
ÖZER S., Melanom tespiti için mems tabanlı biyosensör tasarımı ve analizi, Postgraduate, P.AKÇALI(Student), 2022
ÖZER S., Yapay zeka ile melanom tespiti, Postgraduate, T.KÜÇÜKERBİR(Student), 2022
ÖZER S., Yüksek esneklikli elektrokardiyogram sinyal simülatörü, Postgraduate, P.DEMİRKAYA(Student), 2021
ÖZER S., Omurganın arka dinamik stabilizasyonu için yeni tasarim, Postgraduate, P.TAHERZADEH(Student), 2020

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Evaluation of the Anticarcinogenic and Cytotoxicity Effects of Small Gold Nanorods Against Gliomablast Cell Lines in an In vitro Model**
Özer S.
Current Analytical Chemistry, vol.21, no.2, pp.149-156, 2025 (SSCI)

II. **Magnetic and Biomedical Properties of Iron Nanoparticles Synthesized Using Vitex Agnus-Castus Extract**
Özer S., Kızılbey K., Canım Ateş S.
MATERIALS, vol.17, no.24, pp.6064, 2024 (SCI-Expanded)

III. **Biomechanical Effects of the Implant Designed for Posterior Dynamic Stabilization of the Lumbar Spine (L4-L5): A Finite Element Analysis Study**
Taherzadeh P., Kelleci K., ÖZER S.
Tehnicki Vjesnik, vol.31, no.1, pp.193-199, 2024 (SCI-Expanded)

IV. **Design and Simulation of the Microcantilever Biosensor for MITF Antigen and D5 Monoclonal Antibody Interaction Finite Element Analysis, and Experimental**
Akcali P., Kelleci K., ÖZER S.
Current Protein and Peptide Science, vol.25, no.3, pp.256-266, 2024 (SCI-Expanded)

V. **Lumbar spine implant design with finite element method and determination of biomechanical effects Sonlu elemanlar yöntemi ile lomber spine implant tasarimi ve biyomekanik etkilerin belirlenmesi**
Taherzadeh P., Kelleci K., ÖZER S.
Journal of the Faculty of Engineering and Architecture of Gazi University, vol.38, no.3, pp.1945-1952, 2023 (SCI-Expanded)

VI. **Nanomechanics on FGF-2 and Heparin Reveal Slip Bond Characteristics with pH Dependency**
Sevim S., Ozer S., Jones G., Wurzel J., Feng L., Fakhraee A., Shamsudhin N., Ergeneman O., Pellicer E., Sort J., et al.
ACS Biomaterials Science and Engineering, vol.3, no.6, pp.1000-1007, 2017 (SCI-Expanded)

VII. **An atomic force microscope with dual actuation capability for biomolecular experiments**
Sevim S., Shamsudhin N., Ozer S., Feng L., Fakhraee A., Ergeneman O., Pané S., Nelson B. J., Torun H.
Scientific Reports, vol.6, 2016 (SCI-Expanded)

VIII. **Temperature dependence of large exchange-bias in TbFe-Co/Pt**
Romer S., Marioni M., Thorwarth K., Joshi N., Corticelli C., Hug H., Oezer S., Parlinska-Wojtan M., Rohrmann H.
Applied Physics Letters, vol.101, no.22, 2012 (SCI-Expanded)

IX. **Engineering the ferromagnetic domain size for optimized imaging of the pinned uncompensated spins in exchange-biased samples by magnetic force microscopy**
Joshi N., Özer S., Ashworth T., Stickar P., Romer S., Marioni M., Hug H.
Applied Physics Letters, vol.98, no.8, 2011 (SCI-Expanded)

Articles Published in Other Journals

I. **Gürültünün İnsan Sağlığı Üzerindeki Etkisini Azaltmak İçin Uygun Yalıtım Malzemelerinin Belirlenmesi**
ÖZER S., KELLECİ K.
Eskişehir Osmangazi Üniversitesi Mühendislik ve Mimarlık Fakültesi Dergisi, 2024 (Peer-Reviewed Journal)
II. **Investigation of nanoparticles on cell elasticity using the nanoindentation method**
Pak B. A., Kelleci K., ÖZER S.
International Journal for Computational Methods in Engineering Science and Mechanics, vol.25, no.3, pp.152-164, 2024 (ESCI)
III. **A Numerical Study to Investigate the Hydrodynamic Properties of Nanowire Motion in Liquid**
ÖZER S.
International Journal of Multiphysics, vol.17, no.3, pp.333-348, 2023 (ESCI)
IV. **The Role of Forwarding Dynamic (FD) Simulation in Developing New Knee Prosthesis**
ALTINSOY Ş., Saleh N., ÖZER S.
Süleyman Demirel University-Journal of Natural and Applied Sciences, vol.27, no.1, pp.116-124, 2023 (Peer-Reviewed Journal)
V. **Biosensor Platforms for Cancer Derived Exosomes Detection**
KELLECİ K., ÖZER S.
Yeni Yuzyil Journal of Medical Sciences, vol.2, no.3, pp.22-31, 2021 (Peer-Reviewed Journal)
VI. **Dually actuated atomic force microscope with miniaturized magnetic bead-actuators for single-molecule force measurements**
Sevim S., Ozer S., Feng L., Wurzel J., Fakhraee A., Shamsudhin N., Jang B., Alcantara C., Ergeneman O., Pellicer E., et al.
Nanoscale Horizons, vol.1, no.6, pp.488-495, 2016 (Scopus)

Refereed Congress / Symposium Publications in Proceedings

I. **Calibration of Magnetic Tip and Quantitative Assessment of Magnetic Force Microscopy Images**
Özer S.
2nd INTERNATIONAL CONFERENCE ON APPLIED MAGNETİSM 17-19 September 2024, Istanbul Technical University, Istanbul-Türkiye, İstanbul, Turkey, 23 September 2024
II. **Design of CTAB coated NixFe3-xO4 Magnetic Nanoparticles as Magnetic Particle Imaging (MPI) Tracers**
ÖZER S., CANIM ATEŞ S., DOĞAN BİNGÖLBALİ N.
2nd INTERNATIONAL CONFERENCE ON APPLIED MAGNETİSM 17-19 September 2024, Istanbul Technical University, Istanbul-Türkiye, Turkey, 17 September 2024
III. **Investigation of Different Coatings on CoFe2O4 Magnetic Nanoparticles for Anticancer Activities**
ÖZER S., CANIM ATEŞ S., DOĞAN BİNGÖLBALİ N.
NanoTR-18, Turkey, 26 August 2024
IV. **Python da veri büyütmeyle melanom cilt kanseri tahmini**
Küçüker T., KELLECİ K., ÖZER S.
9. BİLİM GÜNLERİ KONGRESİ, 09 May 2023
V. **NANOPARTİKÜLLERİN HÜCRE ELASTİSİTESİNE OLAN ETKİSİNİN NANOİNDENTASYON İLE İNCELENMESİ**

Pak B. A., KELLECİ K., ÖZER S.
9. BİLİM GÜNLERİ KONGRESİ, 09 May 2023

VI. **Computer-Assisted Melanoma Skin Cancer Detection Using Data Augmentation**
Küçükerbir T., KELLECİ K., ÖZER S.
6th International Symposium on Innovative Approaches in Smart Technologies, Turkey, 8 - 10 December 2022, pp.15

VII. **MEMS-based biosensor design and analysis for melanoma detection**
Akçalı P., KELLECİ K., ÖZER S.
5TH INTERNATIONAL EURASIAN CONFERENCE ON BIOLOGICAL AND CHEMICAL SCIENCES (EURASIANBIOCHEM 2022), Ankara, Turkey, 24 - 25 November 2022

VIII. **Yüksek Esnekli Elektrokardiyogram Simülatörü**
Demirkaya P., KELLECİ K., ÖZER S.
ELEKTRİK-ELEKTRONİK ve BİYOMEDİKAL MÜHENDİSLİĞİ KONFERANSI (ELECO 2022), Bursa, Turkey, 24 - 26 November 2022

IX. **3D Neuromuscular Modelling of A Transfemoral Amputee Walking**
ALTINSOY Ş., ÖZER S., MAHMOOD A., SALEH N.
International Conference on Engineering Technologies (ICENTE22), Turkey, 17 - 19 November 2022

X. **Applications of AFM in Bioscience and Biotechnology**
Pak B. A., KELLECİ K., ÖZER S.
16th NANOSCIENCE & NANOTECHNOLOGY CONFERENCE (NanoTR-16), Ankara, Turkey, 05 September 2022

XI. **AFM in Bioscience and Biotechnology**
ÖZER S., KELLECİ K.
NANO-TR 16, Ankara, Turkey, 05 September 2022

XII. **Kanser Kaynaklı Eksozom Tespitinde Biyosensör Platformlar**
KELLECİ K., ÖZER S.
7. Bilim Günleri, İstanbul, Turkey, 5 - 07 May 2021, pp.58

XIII. **SMART PİLL BOX**
ÖZER S.
EEMKON2019, Turkey, 14 - 16 November 2019

XIV. **THE NOVEL DESİGN FOR POSTERİOUR DYNAMİC STABİLİZATİON OF THE LUMPAR SPINE**
ÖZER S.
2ND INTERNATIONAL EUROASIAN CONFERENCE ON BIOLOGICAL AND CHEMICAL SCIENCES, Ankara, Turkey, 28 - 29 June 2019

XV. **Design of an AFM with Dual ActuationCapability for Biomolecular Measurements**
ÖZER S., Feng L., Sevim S., Torun H.
13. NANOSCİENCE AND NANOTECHNOLOGY CONFERENCE, Antalya, Turkey, 22 - 25 October 2017

XVI. **Miniaturized Magnetic Beads For Single-molecule Force Measurements**
Sevim S., Feng L., ÖZER S., Torun H.
AFM Biomed 2017, Krakow, Poland, 4 - 08 September 2017

XVII. **Dually Actuated Atomic Force Microscope with Miniaturized Magnetic Bead-Actuators for Single-Molecule Force Measurements**
ÖZER S., Torun H., Sevim S., Feng L.
JAPMED 10, İzmir, Turkey, 4 July - 08 September 2017

XVIII. **Development of an AFM with Dual Actuation Capability for Biomolecular Measurements**
ÖZER S., Sevim S., Feng L., Torun H.
AFM Biomed Conference, Krakow 2017, Krakow, Poland, 4 - 08 September 2017

XIX. **Electromagnetic AFM Force-Clamp Setup using a Software-Based Controller**
Feng L., Sevim S., ÖZER S., Torun H.
AFM Biomed 2017, Krakow, Poland, 04 September 2017

XX. **Biyomoleküler Uygulamalar için Piezo ve Manyetik olmak üzere çift Eyleyiciye Sahip Atomik Kuvvet Mikroskobu Tasarımı**

ÖZER S., Sevim S., Feng L., Torun H.
Yogun Madde Fiziği 2017 İzmir, İzmir, Turkey, 21 April 2017

XXI. **Biyomoleküler Uygulamalar için Piezo ve Manyetik olmak üzere Çift Eyleyiciye sahip Atomik Kuvvet Mikroskobu (AKM) Tasarımı**
ÖZER S., Sevim S., Feng L., Torun H.
22. Yoğun Madde Fiziği, Ankara, Turkey, 16 December 2016

XXII. **DESIGN, IMPLEMENTATION AND CHARACTERIZATION OF A 3D-PRINTEDAFM HEAD WITH PIEZOTUBE AND ELECTROMAGNETIC ACTUATORS FORBIOMOLECULAR APPLICATIONS**
Sevim S., ÖZER S., Feng L., Kate C., KARACA O., Torun H.
18. INTERNATİONAL MİCROSCOPY CONGRESS, PRAG, Czech Republic, 7 - 12 September 2014

XXIII. **QUANTİTAİVE MFM ON A BaFe2 SİNGLE CRYSTAL**
ÖZER S., Joshi N., HUG H. J.
DPG2013, 11 - 12 April 2013

XXIV. **Switching process and large positive exchange-bias inTbFe/(Co/Pt)×5**
Marionni M. M., Romer S., Joshi N., ÖZER S., THORWARTH K., WOJTAN M. P., ROHRMANN H., HUG H. J.
56th Conference on Magnetism and Magnetic Materials, Arizona, United States Of America, 30 October - 03 November 2011

XXV. **Exchange bias and domain evolution at 10 nm scales. (Invited)**
HUG H. J., Marionni M. M., Romer S., ÖZER S., Joshi N.
56th Conference on Magnetism and Magnetic Materials, Arizona, United States Of America, 30 October - 03 November 2011

XXVI. **Engineering the ferromagnetic domain size for optimizedimaging of the pinned uncompensated spins in exchange biased samples by magnetic force microscopy**
ÖZER S., Joshi N., Timothy A., STİCKAR P., Romer S., Marionni M. M., HUG H. J.
56th Conference on Magnetism and Magnetic Materials, Arizona, United States Of America, 30 October - 03 November 2011

XXVII. **CONTRAST FORMATİON OF AND DECONVOLUTİON OF PİNNED UCS BY MFM**
ÖZER S., Joshi N., Romer S., HUG H. J., Marionni M. M.
DPG2011, Dresden, Germany, 13 - 18 April 2011

XXVIII. **Domain size enginnering of exchange biased samples**
Joshi N., Romer S., HUG H. J., Marionni M. M., THORWARTH K., STİCKAR P., ÖZER S.
DPG 2011, Dresden, Germany, 13 - 18 April 2011

XXIX. **Exchange Bias Enhancement by Cr Addition to CoO in CoO-Co/Pt Multilayer System**
ÖZER S., HUG H. J., Marionni M. M., Joshi N.
INTERNATİONAL CONFERENCE ON SUPERCONDUCTİVİTY AND MAGNETİSM ICSM 2010, Antalya, Turkey, 25 April 2010

Supported Projects

ÖZER S., KELLECİ K., Melanom Biyobelirteçi Olan Mitf Proteinin Anti-MITF (D5) Antikoru ile Spesifik Bağlanmasının Atomik Kuvvet Mikroskobu ile Doğrudan İncelenmesi Direct Investigation of Specific Binding of Melanoma Biomarker Mitf Protein with Anti-MITF (D5) Antibody by Atomic Force Microscopy., 2023 - Continues
Özer S., Project Supported by Other Official Institutions, Yüzeyi İşlevselleştirilmiş Kobalt Ferrit CoxFe3xO4 Nanoparçacıklarının Biyouyumluğu ve Antikanserojen Etkilerinin Değerlendirilmesi Manyetik Parçacık Görüntüleme MPG Performanslarının Belirlenmesi, 2024 - 2025
ÖZER S., CANIM ATEŞ S., KIZILBEY K., Project Supported by Higher Education Institutions, Altın nanoyapılar ile etkileşimde olan L929 hücresinin nanoindentasyon metoduyla incelenmesi, 2021 - 2022
ÖZER S., Canım Ateş S., DOĞAN BİNGÖLBALİ N., BİNGÖLBALİ A., Project Supported by Higher Education Institutions, Kobalt Ferrit Manyetik Nano Parçacıklarının Glioblastoma Hücre Hatları Üzerine Olan Sitotoksik Etkinin İncelenmesi ve Manyetik Parçacık Görüntüleme Performansının Değerlendirilmesi, 2021 - 2022

ÖZER S., Torun H., Magnetic Nano Actuators for Quantitative Analysis, 2012 - 2016
ÖZER S., Joshi N., HUG H. J., Other International Funding Programs, Magnetism of Thin Films and Heterostructures-Project funding (Div. I-III)-130519, 2010 - 2012
ÖZER S., THORWARTH K., Joshi N., HUG H. J., Other International Funding Programs, Magnetism of Thin Films and Heterostructures-Project funding (Div. I-III) -117970, 2007 - 2010

Student Project

R & D Project, Design of UV Thermal Disinfection Device, Istanbul Yeni Yuzyil University, Faculty Of Engineering-Architecture, Department Of Biomedical Engineering, Turkey, 2022 - 2023

Metrics

Publication: 44
Citation (Scopus): 60
H-Index (Scopus): 4