

## Prof. SERHAT ÇAKIR

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: M-3387-2013

Yoksis Researcher ID: 164126

### Education Information

Doctorate, Middle East Technical University, Faculty of Arts and Sciences, Department of Physics, Turkey 1983 - 1986

Undergraduate, Middle East Technical University, Faculty of Arts and Sciences, Department of Physics, Turkey 1975 - 1980

### Dissertations

Doctorate, Numerical simulations of artificial triggering of equatorial spread-F, Middle East Technical University, Faculty of Arts and Sciences, Department of Physics, 1987

### Research Areas

Science and Technological Policy Studies, Physics of Plasmas

### Academic Titles / Tasks

Professor, Baskent University, Faculty Of Economics And Administrative Sciences, Department Of Economics, 2022 - Continues

### Advising Theses

ÇAKIR S., Ulusal Savunma Alanında Nanoteknoloji Öngörüsü ve Öncelikli Alanların Belirlenmesi, Doctorate, V.ERGÜL(Student), 2022

ÇAKIR S., Türkiye Savunma Sanayinde İnsansız Kara Sistemleri (İKAS) Teknoloji Öngörüsü ve Öncelikli Alanların Belirlenmesi-2040, Doctorate, T.MUHAMMET(Student), 2022

ÇAKIR S., MİLLİ SAVUNMA SANAYİNDE BLOKZİNCİR MODEL ÖNERİSİ, Doctorate, A.AYTAÇ(Student), 2022

ÇAKIR S., Dijital Dönüşüm Yol Haritası Önerisi: Savunma Sanayinde Bir Uygulama, Doctorate, M.ASİLOĞULLARI(Student), 2022

ÇAKIR S., Design and experiments of a virtual cathode oscillator, Doctorate, E.POSTACI(Student), 2021

ÇAKIR S., An R&D roadmap for Turkish defense industry, Doctorate, O.Dağ(Student), 2020

ÇAKIR S., Development of a road map and emergency help and detection system for disaster search and rescue

operations, Doctorate, İ.Yoncacı(Student), 2020

ÇAKIR S., An Impact assessment model for technology development programs, Doctorate, E.Tiryaki(Student), 2020

ÇAKIR S., An investigation for maturity level and roadmap of unmanned aerial vehicle technologies in Turkey, Doctorate, A.Türk(Student), 2020

ÇAKIR S., An extended technology acceptance model for evaluating factors affecting manufacturing industry sme decision makers adoption of erp systems, Doctorate, M.Ce(Student), 2019

ÇAKIR S., Modeling of Environmental Temperature Dependency for Sensors Operated by Sagnac Effect, Postgraduate, E.ALAÇAKIR(Student), 2019

ÇAKIR S., Product maturity management methodology in aircraft development projects., Postgraduate, H.Çaykenarı(Student), 2019

ÇAKIR S., SERIOUS GAME DEVELOPMENT METHODOLOGY WITH SYSTEM AND HUMAN ORIENTED APPROACH, Postgraduate, L.BERKE(Student), 2019

ÇAKIR S., Simulations on glow discharge: development and validation of one-dimensional kinetic model by particle in cell/monte carlo collision method, Postgraduate, Ö.Tiryaki(Student), 2019

ÇAKIR S., Technology foresight and modeling: Turkish cybersecurity foresight 2040, Doctorate, H.Çifci(Student), 2019

ÇAKIR S., An optimization study on cavity magnetron, Postgraduate, M.KAYAN(Student), 2018

ÇAKIR S., A nanotechnology roadmap for the Turkish defense industry, Doctorate, A.AYDOĞDU(Student), 2018

ÇAKIR S., The capability contribution of main defense industry firms to their suppliers: a dynamic capabilities view, Doctorate, M.Aslan(Student), 2018

ÇAKIR S., The capability contribution of main defense industry firms to their suppliers: A dynamic capabilities view, Doctorate, M.ASLAN(Student), 2018

ÇAKIR S., A new technology foresight model and its application in Turkish defense industry for aerospace communication technologies of 2040, Doctorate, N.YÜKSEL(Student), 2018

ÇAKIR S., Impact assessment of vision 2023 technology foresight in defense sector, Doctorate, M.BURHAN(Student), 2018

ÇAKIR S., Imagery intelligence technology foresight and modeling of mobile applications in the defense industry, Postgraduate, B.BİLGE(Student), 2018

ÇAKIR S., Savunma sanayiinde açık yenilik: Ankara'da savunma sanayiinde faaliyet gösteren KOBİ'ler üzerinde bir uygulama ve model önerisi, Doctorate, A.KONUKBAY(Student), 2016

ÇAKIR S., Karmaşık platform/sistemlerin geliştirildiği ve üretildiği savunma sanayi için teknoloji sahipliğini ve olgunluğunu belirleme, Doctorate, Ş.YAŞAR(Student), 2014

ÇAKIR S., Imaging infrared seeker design, Postgraduate, A.ÜNAL(Student), 2014

ÇAKIR S., SİLAHLI KUVVETLERDE AR-GE PERSONELİ MESLEKİ GELİŞİM MODELİ: HV.K.K.LİĞİ UYGULAMASI, Doctorate, E.BERK(Student), 2012

ÇAKIR S., A case study of impact analysis: TUBITAK research support programmes, Postgraduate, İ.TANRIKULU(Student), 2010

ÇAKIR S., Modulation formats for wavelength division multiplexing (WDM) systems, Doctorate, F.BÜYÜKŞAHİN(Student), 2009

ÇAKIR S., Series solution of the wave equation in optic fiber, Doctorate, S.ÇILDIR(Student), 2007

ÇAKIR S., Numerical simulations on stimulated raman scattering for fiber raman amplifiers and lasers using spectral methods, Doctorate, H.BERBEROĞLU(Student), 2007

ÇAKIR S., Simulation on interferometric fiber optic gyroscope with amplified optical feedback, Postgraduate, B.SEÇMEN(Student), 2003

ÇAKIR S., Numerical analysis of the electric field in a graded index fiber waveguide, Postgraduate, Ş.Yaprak(Student), 2003

ÇAKIR S., The numerical solution on coupling coefficients of corrugated waveguides /, Postgraduate, P.MENTEŞ(Student), 2003

ÇAKIR S., Numerical analysis on the electric field in a graded index fiber waveguide, Postgraduate, Ş.YAPRAK(Student), 2003

ÇAKIR S., Modeling on rayleigh scattering in optical waveguides, Postgraduate, B.ÇAMAK(Student), 2003

ÇAKIR S., A serial solution of wave equation in inhomogeneous waveguides., Postgraduate, E.Aydın(Student), 2002

ÇAKIR S., A Serial solution of wave equation in inhomogenous waveguides, Postgraduate, E.AYDIN(Student), 2002  
ÇAKIR S., Solution to the NLS and whitham equations and their applications, Postgraduate, A.ÖZYÜREK(Student), 2001  
ÇAKIR S., Wavelength division multiplexing (WDM) and its components, and simulation on WDM systems, Postgraduate, F.FEZA(Student), 2001  
ÇAKIR S., Asymptotic solution of the radial wave equation for cylindrical waveguides, Postgraduate, S.SELMAN(Student), 2001  
ÇAKIR S., Asymptotic solutions of the radial wave equation for cylindrical waveguides, Postgraduate, S.Selman(Student), 2001  
ÇAKIR S., Gravitational instabilities in fusion research, Postgraduate, P.DEMİR(Student), 2000  
ÇAKIR S., Micro instabilities in fiber cables, Postgraduate, S.KUTER(Student), 2000  
ÇAKIR S., Micro instabilities in fiber cables, Postgraduate, S.Kuter(Student), 2000  
ÇAKIR S., Potential calculation in mirror geometry, Postgraduate, H.GÖKTAŞ(Student), 1996  
ÇAKIR S., Magnetohydrodynamic Rayleigh Taylor instability, Postgraduate, S.VATANKHAH(Student), 1991  
ÇAKIR S., Transport of ion in matter, Postgraduate, G.SAMADİ(Student), 1991

### Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Experimental Characterization and Simulation of a Dipole Plasma Antenna for VHF Band and Effect of Ar&#x2013;Ne Gas Composition**  
Baslar G. K., Kayhan O., TAŞGIN M. E., ÇAKIR S.  
IEEE Transactions on Plasma Science, vol.52, no.6, pp.2218-2228, 2024 (SCI-Expanded)
- II. **Performances of Velvet Cathodes With Different Geometries in a Reflex Triode Vircator**  
Postaci E., Erciyas H., Atmaca N. Y. A., Akman O., Nesil S., Yayil F., BERBER S., ÇAKIR S.  
IEEE TRANSACTIONS ON PLASMA SCIENCE, vol.48, no.10, pp.3565-3572, 2020 (SCI-Expanded)
- III. **Contrast Enhancement of Microscopy Images Using Image Phase Information**  
Cakir S., Kahraman D. C., Cetin-Atalay R., ÇETİN A. E.  
IEEE ACCESS, vol.6, pp.3839-3850, 2018 (SCI-Expanded)
- IV. **Analysis of bakery products by laser-induced breakdown spectroscopy**  
Bilge G., BOYACI İ. H., ESELLER K. E., TAMER U., ÇAKIR S.  
FOOD CHEMISTRY, vol.181, pp.186-190, 2015 (SCI-Expanded)
- V. **Plasma parameters in 40 MHz Argon discharge**  
Azooz A. A., ÇAKIR S., Bleej D. A.  
RESULTS IN PHYSICS, vol.5, pp.85-91, 2015 (SCI-Expanded)
- VI. **Modelling of a nonequilibrium spherical electric discharge under higher modes of incident microwaves**  
Rafatov I., ÇAKIR S.  
PHYSICS LETTERS A, vol.338, pp.353-365, 2005 (SCI-Expanded)

### Articles Published in Other Journals

- I. **Sectoral Applications of Nanotechnology**  
ERGUL V., Çakır S.  
Savunma Bilimleri Dergisi, vol.1, no.43, pp.1-22, 2023 (Peer-Reviewed Journal)
- II. **Impact assessment of Vision 2023 defense technology foresight**  
Burhan M., ÇAKIR S.  
FORESIGHT, vol.23, no.3, pp.367-383, 2020 (ESCI)
- III. **A nanotechnology roadmapping study for the Turkish defense industry**  
Aydogdu A., Burmaoglu S., Saritas O., ÇAKIR S.  
FORESIGHT, vol.19, no.4, pp.354-375, 2017 (ESCI)

**IV. VALIDATION OF THE PARTICLE IN CELL MONTE CARLO COLLISION NUMERICAL CODE FOR THE RF DISCHARGE SIMULATION**

KUŞOĞLU SARIKAYA C., RAFATOV İ., ÇAKIR S.

Balkan Physics Letters, vol.24, pp.36-47, 2016 (Peer-Reviewed Journal)

**Refereed Congress / Symposium Publications in Proceedings**

**I. ARC DISCHARGE SIMULATIONS FOR MAGNETOPLASMA DYNAMIC THRUSTER WITH HOLLOW CATHODE**

Eliseev S., Saifutdinov A., Kudryavtsev A., ÇAKIR S., RAFATOV İ.

VIII International Conference on Plasma Physics and Plasma Technology (PPPT-8), Minsk, Belarus, 14 - 18 September 2015

**II. Density Gradient Instability in Hall Thrusters**

ÇAKIR S., RAFATOV İ.

International Workshop "Nonlinear Photonics: Theory, Materials, Applications", Sankt-Peterburg, Russia, 29 June - 02 July 2015, pp.20

**III. Study of Self organization and Current Filamentation in the Glow Gas Discharge System**

RAFATOV İ., ÇAKIR S.

International Workshop "Nonlinear Photonics: Theory, Materials, Applications", Sankt-Peterburg, Russia, 29 June - 02 July 2015, pp.21

**IV. VALIDATION AND PARALLELIZATION OF THE PARTICLE IN CELL/MONTE CARLO COLLISION NUMERICAL CODE FOR THE RF DISCHARGE SIMULATIONS**

SARIKAYA C. K., RAFATOV İ., ÇAKIR S.

IEEE International Conference on Plasma Sciences (ICOPS), Belek, Turkey, 24 - 28 May 2015

**V. Validation of the Particle in Cell Monte Carlo Collision numerical code for the RF discharge simulations**

KUŞOĞLU SARIKAYA C., RAFATOV İ., ÇAKIR S.

The International Middle East Plasma Science (IMEPS), Antalya, Turkey, 23 - 25 April 2014

**VI. Numerical study of nonlinear oscillations and pattern formation in glow discharge semiconductor system**

RAFATOV İ., UZUN KAYMAK İ. Ü., ÇAKIR S.

Zvenigorod International Conference on Plasma Physics and Controlled fusion, Zvenigorod, Russia, 10 - 14 February 2014, pp.178

**VII. Asymptotic solution of the radial wave equation for optical fiber waveguides**

Cildir S., ÇAKIR S.

6th International Conference of the Balkan-Physical-Union, İstanbul, Turkey, 22 - 26 August 2006, vol.899, pp.313-314

**Metrics**

Publication: 18

Citation (WoS): 66

Citation (Scopus): 47

H-Index (WoS): 3

H-Index (Scopus): 3

**Non Academic Experience**

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