

## Asst. Prof. ALİ ÇETİN

### Personal Information

Email: [acetin@ogu.edu.tr](mailto:acetin@ogu.edu.tr)

Web: <https://avesis.ogu.edu.tr/acetin>

### International Researcher IDs

ORCID: 0000-0003-0468-8087

ScopusID: 57038173900

Yoksis Researcher ID: 171272

### Education Information

Doctorate, Eskisehir Osmangazi University, FEN BİLİMLERİ ENSTİTÜSÜ, Fizik (YI) (Tezli), Turkey 1991 - 1998

Postgraduate, Anadolu University, Institute Of Science, Fizik (YI) (Tezli), Turkey 1988 - 1991

Undergraduate, Anadolu University, Faculty Of Science, Department Of Physics, Turkey 1984 - 1988

### Research Areas

Natural Sciences

### Academic Titles / Tasks

Assistant Professor, Eskisehir Osmangazi University, Fen-Edebiyat Fakültesi, Fizik Bölümü, 1998 - Continues

Research Assistant, Eskisehir Osmangazi University, Fen-Edebiyat Fakültesi, Fizik Bölümü, 1990 - 1998

### Courses

Fizik I Laboratuvarı, Undergraduate, 2016 - 2017

Elektromanyetik Teori II, Undergraduate, 2016 - 2017

Fizik II Laboratuvarı, Undergraduate, 2016 - 2017

Elektromanyetik Teori I, Undergraduate, 2016 - 2017

Fotonik I, Postgraduate, 2016 - 2017

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

- I. Design and Numerical Analysis of a One-Dimensional Photonic Crystal Biosensor for Detection of SARS-CoV-2  
Bilgili N., ÇETİN A.  
Plasmonics, 2024 (SCI-Expanded)

### Articles Published in Other Journals

- I. **Characteristic frequencies of transverse electric modes in a double negative slab waveguide with Kerr-type nonlinearity**  
Yalcinkaya A., Cetin A.  
SEMICONDUCTOR PHYSICS QUANTUM ELECTRONICS & OPTOELECTRONICS, no.3, pp.320-327, 2024 (ESCI)
- II. **Transmission Properties of Defect Modes with Different Defect Layer Geometries in One-Dimensional Photonic Crystals**  
Çetin A.  
International Journal of Engineering Science Invention (IJESI), vol.9, no.9, pp.56-60, 2020 (Peer-Reviewed Journal)
- III. **Analysis the Path of the Light in the Optical Waveguide with Quadratic Graded Index by Using Simple Approximation Method**  
Çetin A., Akyol S., Gülbändilar E.  
International Journal of Progressive Sciences and Technologies (IJPSAT), vol.22, no.1, pp.412-417, 2020 (Peer-Reviewed Journal)
- IV. **Optik Fiber Dalga Kılavuzlarının Yapı Parametrelerinin İncelenmesi**  
ÇETİN A., OCAK H. Y.  
BALIKESİR ÜNİVERSİTESİ FEN BİLİMLERİ ENSTİTÜSÜ DERGİSİ, vol.19, no.3, pp.70-76, 2017 (Peer-Reviewed Journal)
- V. **Fe ve Fe - 25 Al İçin Maksimum Streslerin (hkl) Düzlemlerinde Teorik Olarak Hesaplanması**  
OCAK H. Y., ÇETİN A., SARIOĞLU G.  
BALIKESİR ÜNİVERSİTESİ FEN BİLİMLERİ ENSTİTÜSÜ DERGİSİ, vol.19, no.3, pp.23-30, 2017 (Peer-Reviewed Journal)
- VI. **Optical visible wavelength region selective reflector design for photovoltaic cells using photonic crystal**  
Korkmaz V., ÇETİN A.  
TURKISH JOURNAL OF PHYSICS, vol.41, no.6, pp.491-497, 2017 (ESCI)
- VII. **TRANSMISSION PROPERTIES OF 1D DEFECT METALLIC DIELECTRIC PHOTONIC CRYSTALS**  
Bilgili N., ÇETİN A.  
ANADOLU UNIVERSITY JOURNAL OF SCIENCE AND TECHNOLOGY – Applied Sciences and Engineering, vol.17, no.4, pp.633-640, 2016 (Peer-Reviewed Journal)
- VIII. **Investigation of Electromagnetic Wave Propagation in Si SiO<sub>2</sub> Embedded Waveguide**  
Nurettin B., ÇETİN A.  
Journal of Multidisciplinary Engineering Science and Technology, vol.2, no.12, pp.3404-3407, 2015 (Peer-Reviewed Journal)
- IX. **Investigation of the transverse electromagnetic modes in an embedded optical waveguide**  
ÇETİN A., KILIÇKAYA M. S.  
Advanced Studies in Theoretical Physics, vol.9, no.15, pp.723-735, 2015 (Peer-Reviewed Journal)
- X. **Determining the Effective Refractive Index of AlGaAs GaAs Slab Waveguide Based on Analytical and Finite Difference Method**  
ÇETİN A., UÇGUN E., KILIÇKAYA M. S.  
Journal of Physical Science and Application, vol.2, no.9, pp.381-385, 2012 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **Physics I Experiments Laboratory Book for Engineering Students**  
Algin E., Peker D., İşsever U. G., Kılıç G., Aşıcı C., Baykul M. C., Çetin A., Çetinkaya Çolak S., Eroğlu S., İlilik E., et al.  
Eskişehir Osmangazi Üniversitesi, Eskişehir, 2019
- II. **Physics I Experiments Laboratory Book for Engineering Students**  
ALĞIN E., PEKER D., İŞSEVER U. G., KILIÇ G., AŞICI C., BAYKUL M. C., ÇETİN A., ÇETINKAYA ÇOLAK S., EROĞLU S., İLİK E., et al.  
Eskişehir Osmangazi Üniversitesi, Eskişehir, 2018

- III. **Mühendislik Öğrencileri İçin Fizik I Deneyleri Laboratuvar Kitabı**  
ATAY F., ÇETİN A., İŞSEVER U. G., KILIÇ G.  
Eskişehir Osmangazi Üniversitesi, 2017
- IV. **Mühendislik öğrencileri için FİZİK I DENEYLERİ LABORATUVAR KİTABI**  
ATAY F., ÇETİN A., İŞSEVER U. G., KILIÇ G.  
Eskişehir Osmangazi Üniversitesi Yayınları No: 275, Eskişehir, 2017
- V. **Physics I Experiments Laboratory Book For Engineering Students**  
ALĞIN E., PEKER D., İŞSEVER U. G., KILIÇ G., AŞICI C., BAYKUL M. C., ÇETİN A., ÇETİNKAYA ÇOLAK S., EROĞLU S., İLİK E., et al.  
Eskişehir Osmangazi Üniversitesi Yayınları no:290, Eskişehir, 2017

### **Refereed Congress / Symposium Publications in Proceedings**

- I. **Investigation of Light Speed in Fiber Cable with Multi-Layer Neural Networks**  
ÇETİN A., AKYOL S., GÜLBANDILAR E.  
International Congress on Engineering and Architecture, Antalya, Turkey, 14 - 16 November 2018, pp.1976-1984
- II. **Değişen İndisli Optik Fiberde Yaklaşım Yöntemi Kullanarak Temel Mod Analizi**  
ÇETİN A., OCAK H. Y., GÜLBANDILAR E.  
Adım Fizik Günleri 7, Aydın, Turkey, 23 - 25 May 2018, pp.21
- III. **Predicting The Effect of Zeolite on The Flexural Strength of Portland Cement with Fuzzy Logic**  
ÇETİN A., AKÇAY M., ÖZCAN G., GÜLBANDILAR E., KOÇAK Y.  
Adım Fizik Günler 7, Turkey, 23 - 25 May 2018, pp.19
- IV. **Bandgap and Reflections Calculations in Photonic PeriodicStructure**  
GÜLBANDILAR E., ÇETİN A.  
1st Light and Light-Based Technologies Workshop, Ankara, Turkey, 15 May 2018, pp.72
- V. **Investigation of Electromagnetic Waves in Optical Waveguideswith FDTM Method by Using Lorentz Drude Dispersive Method**  
ÇETİN A., GÜLBANDILAR E.  
1st Light and Light-Based Technologies Workshop, Ankara, Turkey, 15 May 2018, pp.48
- VI. **Investigation of Elastic Anisotropy Pressure Change in Fe-Al Alloys**  
OCAK H. Y., AKBUDAK S., UĞUR Ş., UĞUR G., ÇETİN A.  
3rd International Workshop on Thermodynamic of Metallic Alloys, 28 - 30 November 2017
- VII. **Narrow Band Photonic Crystal Filter Desing in Defective One Dimension (1D) Media**  
ÇETİN A., OCAK H. Y., SARIOĞLU G.  
3RD INTERNATIONAL TURKIC WORLD CONFERENCE ON CHEMICAL SCIENCES AND TECHNOLOGIES, 3RD ITWCCST, 10 - 13 September 2017
- VIII. **Calculation of Plane Energies (HKL) for Fe and Fe - 25 Al by Analytical Method**  
SARIOĞLU G., OCAK H. Y., ÇETİN A., ÜNAL R.  
3RD INTERNATIONAL TURKIC WORLD CONFERENCE ON CHEMICAL SCIENCES AND TECHNOLOGIES, 3RD ITWCCST, 10 - 13 September 2017
- IX. **Some Mechanical Characteristics of Fe -50 Mn Alloyed by the "Wien2K" Program**  
OCAK H. Y., SARİOĞLU G., AKBUDAK S., ÇETİN A.  
TURKISH PHYSICAL SOCIETY 3RD INTERNATIONAL PHYSICS CONGRESS, 6 - 10 September 2017
- X. **Optik Fiber Dalga Kılavuzlarının Yapı Parametrelerinin İncelenmesi**  
ÇETİN A., OCAK H. Y.  
Adım Fizik Günleri VI , 2017, 19 - 21 July 2017
- XI. **Fe ve Fe - 25 Al İçin Maksimum Streslerin (hkl) Düzlemlerinde Teorik Olarak Hesaplanması**  
OCAK H. Y., ÇETİN A.  
Adım Fizik Günleri VI , 2017, 19 - 21 July 2017
- XII. **Investigations of Modes And Relative Refractive IndexDifference in Weakly Guiding Optical Fibers**

ÇETİN A., OCAK H. Y.

1th INTERNATIONAL CONFERENCE ON ADVANCES INSCIENCE AND ARTS, ICASA 2017, 29 - 31 March 2017

- XIII. **Theoretical Calculations of Maximum Stress Values in Equilibrium for Bcc Fe and Fcc Al with Respect to Different Planes**

OCAK H. Y., ÇETİN A., AKBUDAK S., UĞUR G., UĞUR Ş., ÜNAL R.

1th INTERNATIONAL CONFERENCE ON ADVANCES INSCIENCE AND ARTS, ICASA 2017, 29 - 31 March 2017

- XIV. **Optimizing The Optical Visible Wavelength Region SelectiveReflector For Photovoltaic Cells Using Photonic Crystal**

ÇETİN A., OCAK H. Y.

1th INTERNATIONAL CONFERENCE ON ADVANCES INSCIENCE AND ARTS, ICASA 2017, 29 - 31 March 2017

- XV. **Investigation of Average Crystallite Size on Bcc Fe – Al by the Scherrer Method**

OCAK H. Y., ÇETİN A., AKBUDAK S., UĞUR G., UĞUR Ş.

1th INTERNATIONAL CONFERENCE ON ADVANCES INSCIENCE AND ARTS, ICASA 2017, 29 - 31 March 2017

- XVI. **Calculation of Internal Interaction Energy of Fe 1 x Al x Alloy System by Analytical Method**

OCAK H. Y., ÜNAL R., ÇETİN A.

2nd International Congress on the World of Technology and Advanced Materials (WITAM 2016), Kırşehir, Turkey,  
28 - 02 September 2016

- XVII. **Designing optical wavelength filter in 1D photonic structure**

ÇETİN A.

2nd International Congress on the World of Technology and Advanced Materials (WITAM 2016), Kırşehir, Turkey,  
28 - 02 September 2016

- XVIII. **Simple numerical studies on propagation characteristics of optical fiber waveguides**

ÇETİN A.

2nd INTERNATIONAL CONGRESS ON THE WORLD OF TECHNOLOGY AND ADVANCED MATERIALS, 28 September -  
02 October 2016

- XIX. **Transmission Properties of Metallic Photonic Crystals in One Dimension**

ÇETİN A., Bilgili N.

2nd International Conference on Engineering and Natural Science, SarayBosna, Bosnia And Herzegovina, 24 - 28  
May 2016

## Supported Projects

ÇETİN A., Project Supported by Higher Education Institutions, Sıfır Yansımalı Çeşitli Fotonik Yapıların FDTD Yöntemi  
Kullanılarak İncelenmesi, 2016 - 2018

## Metrics

Publication: 35

Citation (Scopus): 6

H-Index (Scopus): 1