

# Prof. MUSTAFA ÇETİN GÜLEÇYÜZ

## Personal Information

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## Education Information

Doctorate, Ankara University, Fen Fakültesi, Fizik Bölümü, Turkey 1994 - 1999

Postgraduate, Ankara University, Fen Fakültesi, Fizik Bölümü, Turkey 1990 - 1994

Undergraduate, Ankara University, Fen Fakültesi, Fizik Bölümü, Turkey 1985 - 1989

## Dissertations

Doctorate, Elemanter çözümler yönteminin özfonksiyonlarının ve diklik bağıntılarının Boltzmann denkleminin üçüncü formunda kullanılması, Ankara University, Fen Fakültesi, Fizik Bölümü, 1999

Postgraduate, Anizotropik Saçılmalı Modelli Lineer Transport Denkleminin Çözümleri, Ankara University, Fen Fakültesi, Fizik Bölümü, 1994

## Academic Titles / Tasks

Professor, Ankara University, Fen Fakültesi, Fizik Bölümü, 2015 - Continues

Associate Professor, Ankara University, Fen Fakültesi, Fizik Bölümü, 2010 - 2015

Assistant Professor, Ankara University, Fen Fakültesi, Fizik Bölümü, 2002 - 2010

Lecturer PhD, Ankara University, Fen Fakültesi, Fizik Bölümü, 1999 - 2002

Research Assistant, Ankara University, Fen Fakültesi, Fizik Bölümü, 1990 - 1999

## Academic and Administrative Experience

Ankara University, 2017 - 2020

Ankara University, 2012 - 2013

## Advising Theses

GÜLEÇYÜZ M. Ç., The solution of the neutron transport equation with PL, TN, HN methods and applications, Doctorate, A.ERSOY(Student), 2019

GÜLEÇYÜZ M. Ç., Nötron transport denkleminin çözümünde kullanılan yarı-analitik yöntemler ve uygulamaları, Doctorate, D.TÜRECİ(Student), 2010

GÜLEÇYÜZ M. Ç., Nötron transport denkleminin HN yöntemi ve singüler özfonksiyonlar yöntemi ile çözümü, Slab-Albedo ve Milne problemi, Doctorate, S.BULUT(Student), 2008

GÜLEÇYÜZ M. Ç., Nötron transport denkleminin HN yöntemi ve singüler özfonksiyonlar yöntemi ile çözümü, Slab-albedo problemi ve Milne problemi, S.BULUT(Student), 2008  
GÜLEÇYÜZ M. Ç., Nötron transport denkleminin HN yöntemiyle çözümü ve uygulamaları, Doctorate, R.GÖKHAN(Student), 2005

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

- I. **Modified F-N solution of the neutron transport equation for the Milne problem with FBIS kernel**  
Ersoy A., Tureci G., ŞENYİĞİT M., Gulecyuz M. Ç.  
INDIAN JOURNAL OF PHYSICS, vol.93, no.9, pp.1195-1201, 2019 (SCI-Expanded)
- II. **Milne problem for non-absorbing medium with extremely anisotropic scattering kernel in the case of specular and diffuse reflecting boundaries**  
Gulecyuz M. Ç., ŞENYİĞİT M., Ersoy A.  
INDIAN JOURNAL OF PHYSICS, vol.92, no.1, pp.81-90, 2018 (SCI-Expanded)
- III. **Albedo and constant source problems for extremely anisotropic scattering**  
Kocmen M. A., TEĞMEN A., Tureci D., Gulecyuz M. Ç., Tureci R. G.  
KERNTECHNIK, vol.78, no.3, pp.245-249, 2013 (SCI-Expanded)
- IV. **Solving the constant source problem for the quadratic anisotropic scattering kernel using the modified FN method**  
Türeci D., Türeci R., TEĞMEN A., GÜLEÇYÜZ M. Ç.  
Kerntechnik, vol.77, no.1, pp.60-63, 2012 (SCI-Expanded)
- V. **Legendre polynomial series of the infinite medium Green's Function in neutral particle transport theory: The half-space albedo problem**  
GÜLEÇYÜZ M. Ç., Kaşkaş A.  
Kerntechnik, vol.74, no.5-6, pp.315-319, 2009 (SCI-Expanded)
- VI. **The slab albedo and criticality problem for the quadratic scattering kernel with the HN method**  
Türeci R., GÜLEÇYÜZ M. Ç.  
Kerntechnik, vol.73, no.4, pp.171-175, 2008 (SCI-Expanded)
- VII. **Solution of half space and slab albedo problems for linearly anisotropic scattering with the modified FN method**  
Türeci D., GÜLEÇYÜZ M. Ç.  
Kerntechnik, vol.73, no.5-6, pp.277-283, 2008 (SCI-Expanded)
- VIII. **The HN method for half-space Albedo and constant source problems for isotropic and anisotropic scattering kernels**  
Tezcan C., Gulecyuz M. Ç., Tureci R. G., Kaskas A.  
Journal of Quantitative Spectroscopy and Radiative Transfer, vol.103, no.3, pp.611-619, 2007 (SCI-Expanded)
- IX. **The effects of different expansions of the exit distribution on the extrapolation length for linearly anisotropic scattering**  
Bulut S., Gulecyuz M. Ç., Kaskas A., Tezcan C.  
Kerntechnik, vol.72, no.1-2, pp.77-85, 2007 (SCI-Expanded)
- X. **HN solutions of the time dependent linear neutron transport equation for a slab and a sphere**  
Türeci G., GÜLEÇYÜZ M. Ç., Tezcan C.  
Kerntechnik, vol.72, no.1-2, pp.66-73, 2007 (SCI-Expanded)
- XI. **Analytic algorithms for determining radiative transfer optical properties of ocean waters**  
Kaskas A., Gulecyuz M. Ç., Tezcan C., McCormick N. J.  
Applied Optics, vol.45, no.29, pp.7698-7705, 2006 (SCI-Expanded)
- XII. **An application of transport theory for optical oceanography: The isotropic point source**  
Kaskas A., Tezcan C., Gulecyuz M. Ç.  
Journal of Optics A: Pure and Applied Optics, vol.8, no.8, pp.683-688, 2006 (SCI-Expanded)
- XIII. **Neutron transport problems for extremely anisotropic scattering**

Kaskas A., Karahasanoglu M., Gulecyuz M. Ç.

Kerntechnik, vol.71, no.5-6, pp.290-296, 2006 (SCI-Expanded)

- XIV. **The critical slab problem for linearly anisotropic scattering and reflecting boundary conditions with the HN method**  
GÜLEÇYÜZ M. Ç., Türeci R., Tezcan C.  
Kerntechnik, vol.71, no.3, pp.149-154, 2006 (SCI-Expanded)
- XV. **The H-N method for slab albedo problem for linearly anisotropic scattering**  
Bulut S., Gulecyuz M. Ç.  
KERNTECHNIK, vol.70, no.5-6, pp.301-308, 2005 (SCI-Expanded)
- XVI. **The singular eigenfunction method: The critical slab problem for linearly anisotropic scattering**  
Türeci R., GÜLEÇYÜZ M. Ç., Kaşkaş A., Tezcan C.  
Kerntechnik, vol.70, no.4, pp.230-232, 2005 (SCI-Expanded)
- XVII. **The singular eigenfunction method: The critical slab problem for linearly anisotropic scattering**  
Tureci R., Gulecyuz M. Ç., Kaskas A., Tezcan C.  
Kerntechnik, vol.70, no.5-6, pp.322-326, 2005 (SCI-Expanded)
- XVIII. **Application of the HN method to the critical slab problem for reflecting boundary conditions**  
Tureci R., Gulecyuz M. Ç., Kaskas A., Tezcan C.  
Journal of Quantitative Spectroscopy and Radiative Transfer, vol.88, no.4, pp.499-517, 2004 (SCI-Expanded)
- XIX. **The HN method for solving linear transport equation: Theory and applications**  
Tezcan C., Kaskas A., Gulecyuz M. Ç.  
Journal of Quantitative Spectroscopy and Radiative Transfer, vol.78, no.2, pp.243-254, 2003 (SCI-Expanded)
- XX. **Radiation transfer in an inhomogeneous half-space**  
Tezcan C., Kaskas A., Gulecyuz M. Ç.  
Journal of Quantitative Spectroscopy and Radiative Transfer, vol.76, no.1, pp.107-115, 2003 (SCI-Expanded)
- XXI. **The solution of the third form transport equation using singular eigenfunctions: the slab and the sphere criticality problems**  
Kaskas A., Tezcan C., Gulecyuz M. Ç.  
JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER, vol.66, no.6, pp.519-528, 2000 (SCI-Expanded)
- XXII. **Slab albedo problem for anisotropic scattering using singular eigenfunction solution of the CN equations**  
Gulecyuz M. Ç., Kaskas A., Tezcan C.  
Journal of Quantitative Spectroscopy and Radiative Transfer, vol.61, no.3, pp.329-338, 1999 (SCI-Expanded)
- XXIII. **The singular eigenfunction method: The Milne problem for isotropic and extremely anisotropic scattering**  
Tezcan C., Kaskas A., Gulecyuz M. Ç.  
Journal of Quantitative Spectroscopy and Radiative Transfer, vol.62, no.1, pp.49-57, 1999 (SCI-Expanded)
- XXIV. **The Milne and the Constant Source Problems for the FBIS Kernel**  
GÜLEÇYÜZ M. Ç., Kaşkaş A.  
Turkish Journal of Physics, vol.22, no.6, pp.461-468, 1998 (SCI-Expanded)
- XXV. **The F-N method for anisotropic scattering in neutron transport theory: The critical slab problem**  
Gulecyuz M. Ç., Tezcan C.  
JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER, vol.56, no.2, pp.309-313, 1996 (SCI-Expanded)
- XXVI. **A new approach of solving the third form of the transport equation in plane geometry: Half-space albedo-problem**  
Tezcan C., Gulecyuz M. Ç., Erdogan F.  
JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER, vol.55, no.2, pp.251-258, 1996 (SCI-Expanded)

## Articles Published in Other Journals

- I. **The Milne problem using the P-N method for a nonabsorbing medium with linearly anisotropic scattering**  
GÜLEÇYÜZ M. Ç., Ersoy A.  
TURKISH JOURNAL OF PHYSICS, vol.41, no.4, pp.285-294, 2017 (ESCI)
- II. **Solution of the CN equations using singular eigenfunctions and applications**  
Erdogan F., Gulecyuz M. Ç., Kaskas A., Tezcan C.  
Annals of Nuclear Energy, vol.23, no.6, pp.533-541, 1996 (Scopus)
- III. **The slab albedo problem using singular eigenfunctions and the third form of the transport equation**  
Kaskas A., Gulecyuz M. Ç., Tezcan C.  
Annals of Nuclear Energy, vol.23, no.17, pp.1371-1379, 1996 (Scopus)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Calculation of the Neutron Diffusion Equation by Using Homotopy Perturbation Method**  
Koklu H., Ersoy A., Gulecyuz M. Ç., Ozer O.  
9th International Physics Conference of the Balkan-Physical-Union (BPU), İstanbul, Turkey, 24 - 27 August 2015, vol.1722

## Metrics

Publication: 30

Citation (WoS): 162

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