

## Asst. Prof. ÖNDER TÜRK

### Personal Information

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### Research Areas

Differential Equations, Partial Differential Equations, Numerical Analysis, Approximations and Expansions

### Academic Titles / Tasks

Assistant Professor, Middle East Technical University, Institute Of Applied Mathematics, Scientific Computing, 2020 - Continues

### Academic and Administrative Experience

Assistant Director of the Institute, Middle East Technical University, Institute of Applied Mathematics, 2020 - Continues

### Courses

INTRODUCTION TO SCIENTIFIC COMPUTING II, Postgraduate, 2019 - 2020, 2020 - 2021

SPECIAL TOPICS: ITERATIVE METHODS FOR LARGE SCALE LINEAR AND NONLINEAR EQUATIONS , Postgraduate, 2020 - 2021

INTRODUCTION TO SCIENTIFIC COMPUTING I, Postgraduate, 2020 - 2021

### Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **A DRBEM approximation of the Steklov eigenvalue problem**  
TÜRK Ö.  
ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, vol.122, pp.232-241, 2021 (Journal Indexed in SCI)
- II. **An MHD Stokes eigenvalue problem and its approximation by a spectral collocation method**  
Türk Ö.  
Computers and Mathematics with Applications, vol.80, pp.2045-2056, 2020 (Journal Indexed in SCI)
- III. **Approximation of the Stokes eigenvalue problem on triangular domains using a stabilized finite element method**  
Türk Ö.  
MECCANICA, vol.55, pp.2021-2031, 2020 (Journal Indexed in SCI)
- IV. **Chebyshev spectral collocation method approximations of the Stokes eigenvalue problem based on penalty techniques**  
Turk Ö., Codina R.  
APPLIED NUMERICAL MATHEMATICS, vol.145, pp.188-200, 2019 (Journal Indexed in SCI)

- V. **A stabilized finite element method for the two-field and three-field Stokes eigenvalue problems**  
Turk Ö., Boffi D., Codina R.  
COMPUTER METHODS IN APPLIED MECHANICS AND ENGINEERING, vol.310, pp.886-905, 2016 (Journal Indexed in SCI)
- VI. **A FEM approach to biomagnetic fluid flow in multiple stenosed channels**  
Turk Ö., Bozkaya C., Tezer M.  
COMPUTERS & FLUIDS, vol.97, pp.40-51, 2014 (Journal Indexed in SCI)
- VII. **Finite element study of biomagnetic fluid flow in a symmetrically stenosed channel**  
Turk Ö., Tezer M., Bozkaya C.  
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.259, pp.760-770, 2014 (Journal Indexed in SCI)
- VIII. **BEM and FEM based numerical simulations for biomagnetic fluid flow**  
Tezer M., Bozkaya C., Turk Ö.  
ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, vol.37, no.9, pp.1127-1135, 2013 (Journal Indexed in SCI)
- IX. **Chebyshev Spectral Collocation Method for Unsteady Mhd Flow and Heat Transfer of a Dusty Fluid Between Parallel Plates**  
Turk Ö., Tezer-Sezgin M.  
NUMERICAL HEAT TRANSFER PART A-APPLICATIONS, vol.64, no.7, pp.597-610, 2013 (Journal Indexed in SCI)
- X. **FEM solution of natural convection flow in square enclosures under magnetic field**  
Turk Ö., Tezer-Sezgin M.  
INTERNATIONAL JOURNAL OF NUMERICAL METHODS FOR HEAT & FLUID FLOW, vol.23, no.5, pp.844-866, 2013 (Journal Indexed in SCI)

### Articles Published in Other Journals

- I. **Chebyshev Spectral Collocation Method Approximation to Thermally Coupled MHD Equations**  
TÜRK Ö.  
Süleyman Demirel Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.22, pp.355-366, 2018 (Other Refereed National Journals)

### Refereed Congress / Symposium Publications in Proceedings

- I. **Boundary Perturbations in Laplace and Steklov Eigenproblems**  
Bahadır E., TÜRK Ö.  
3rd International E-Conference on Mathematical Advances and Applications, İstanbul, Turkey, 24 - 27 June 2020, pp.76
- II. **Modal analysis of elastic vibrations of incompressible materials based on a variational multiscale finite element method**  
Codina R., TÜRK Ö.  
European Numerical Mathematics and Advanced Applications Conference 2019, Egmond aan Zee, Netherlands, 30 September - 04 October 2019
- III. **A CSCM approximation of steady MHD flow and heat transfer between parallel plates with hydrodynamic slip and convective boundary conditions**  
TEZER M., TÜRK Ö.  
European Numerical Mathematics and Advanced Applications Conference 2019, Egmond aan Zee, Netherlands, 30 September - 04 October 2019
- IV. **Numerical approximation of the Stokes eigenvalue problem in cubic domain based on penalty technique**  
Codina R., TÜRK Ö.  
The International Congress of Mathematicians, Rio de Janeiro, Brazil, 1 - 09 August 2018, pp.91-92

- V. **Chebyshev spectral collocation method approximations of the Stokes eigenvalue problem based on penalty techniques**  
TÜRK Ö., Codina R.  
European Conference on Numerical Mathematics and Advanced Applications (ENUMATH) 2017, Voss, Norway, 25 - 29 September 2017, pp.322
- VI. **A stabilized finite element method for the two-field and three-field Stokes eigenvalue problems**  
Boffi D., Codina R., TÜRK Ö.  
Computational Methods in Applied Mathematics (CMAM-7), Jyväskylä, Finland, 31 July - 06 August 2016, pp.65
- VII. **A finite element formulation for Maxwell eigenvalue problem using continuous Lagrangian interpolations**  
TÜRK Ö., Codina R., Boffi D.  
THE MATHEMATICS OF FINITE ELEMENTS AND APPLICATIONS 2016, Londrina, Brazil, 14 - 17 July 2016, pp.266
- VIII. **A DRBEM Approach for the STOKES Eigenvalue Problem**  
TEZER M., TÜRK Ö.  
Inter. Conf. on Computational and Mathematical Methods in Science and Engineering, CMMSE 2016, Rota-Cadiz, Spain, 4 - 08 July 2016, pp.1210-1219
- IX. **Chebyshev Spectral Collocation Method for Natural Convection Flow of a Micropolar Nanofluid in the Presence of a Magnetic Field**  
Turk Ö.  
European Conference on Numerical Mathematics and Advanced Applications (ENUMATH), Ankara, Turkey, 14 - 18 September 2015, vol.112, pp.453-461
- X. **Natural Convection Flow of a nanofluid in an Enclosure under a uniform magnetic field**  
TEZER M., BOZKAYA C., TÜRK Ö.  
Advances in Boundary Element & and Meshless Techniques XVI, Valencia, Spain, 6 - 08 July 2015, vol.16, pp.138-143
- XI. **Biomagnetic fluid flow in a channel under the effect of a uniform localized magnetic field**  
TÜRK Ö., BOZKAYA C., TEZER M.  
Advances in Boundary Element and Meshless Techniques XV, Italy, 15 - 17 July 2014, pp.81-86
- XII. **Biofluidflow in a channel with stenosis**  
TÜRK Ö., TEZER M., BOZKAYA C.  
International Conference on Applied and Computational Mathematics, Ankara, Turkey, 3 - 06 October 2012, pp.87-88
- XIII. **FEM solution to unsteady biomagnetic fluid flow in a channel**  
TEZER M., TÜRK Ö., BOZKAYA C.  
Mathematical Modeling and Computational Topics in Biosciences, Vietri sul Mare, Italy, 4 - 08 June 2012, pp.163-164
- XIV. **FEM Solution of Diffusion-Convection-Reaction Equations in Air Pollution**  
TÜRK Ö., TEZER M.  
European Conference on Numerical Mathematics and Advanced Applications, ENUMATH 2009, Uppsala, Sweden, 29 June - 03 July 2009, pp.275

## Supported Projects

TEZER M., TÜRK Ö., Project Supported by Higher Education Institutions, İçinde Parçacıklar Bulunduran Sıvıların Zamana Bağımlı Magnetohidrodinamik Akışı Ve Isı Transferi, 2011 - 2011

TEZER M., TÜRK Ö., Project Supported by Higher Education Institutions, Numerical Solution Of Liquid Metal Magnetohydrodynamics(mhd) Flow With Heat Transfer., 2010 - 2010

## **Tasks In Event Organizations**

Bozkaya C., Küçüksakallı Ö., Türk Ö., Numerical Analysis and Computational Fluid Dynamics: Workshop in Honor of MÜNEVVER TEZER-SEZGİN's 67th Birthday, Workshop Organization, Ankara, Turkey, Nisan 2019

## **Citations**

Total Citations (WOS):49

h-index (WOS):5