

# Prof. MUSTAFA TÜRKYILMAZOĞLU

## Personal Information

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## Education Information

Doctorate, Fen, Matematik, United Kingdom 1994 - 1998

## Foreign Languages

English, B2 Upper Intermediate

## Dissertations

Doctorate, Doktora Tezi, Hacettepe Üniversitesi, Fen Fakültesi, Matematik Bölümü, 1998

## Research Areas

Mathematics, Computer Science, Differential Equations, Approximations and Expansions, Natural Sciences

## Professional Experience

Deputy Head of Department, Hacettepe Üniversitesi, Fen Fakültesi, Matematik Bölümü, 2003 - 2006

Head of Department, Hacettepe Üniversitesi, Fen Fakültesi, Matematik Bölümü, 2001 - 2004

Head of Department, Hacettepe Üniversitesi, Fen Fakültesi, Matematik Bölümü, 1999 - 2004

## Advising Theses

TÜRKYILMAZOĞLU M., Dönen akışkanlar ve bazı uygulamaları, Post Graduate, P.ŞENEL(Student), 2012

TÜRKYILMAZOĞLU M., Sıkıştırılabilir 3-boyutlu dönen-disk akışındaki kararsızlık mekanizmaları, Doctorate, N.UYGUN(Student), 2006

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

- I. **On the fluid flow and heat transfer between a cone and a disk both stationary or rotating**  
TÜRKYILMAZOĞLU M.  
MATHEMATICS AND COMPUTERS IN SIMULATION, vol.177, pp.329-340, 2020 (Journal Indexed in SCI)
- II. **Nanoliquid film flow due to a moving substrate and heat transfer**  
TÜRKYILMAZOĞLU M.  
EUROPEAN PHYSICAL JOURNAL PLUS, vol.135, 2020 (Journal Indexed in SCI)
- III. **Exact and approximate solutions to projectile motion in air incorporating Magnus effect**

TÜRKYILMAZOĞLU M., Altundag T.

EUROPEAN PHYSICAL JOURNAL PLUS, vol.135, 2020 (Journal Indexed in SCI)

- IV. **Velocity Slip and Entropy Generation Phenomena in Thermal Transport Through Metallic Porous Channel**  
TÜRKYILMAZOĞLU M.  
JOURNAL OF NON-EQUILIBRIUM THERMODYNAMICS, vol.45, pp.247-256, 2020 (Journal Indexed in SCI)
- V. **Single phase nanofluids in fluid mechanics and their hydrodynamic linear stability analysis**  
TÜRKYILMAZOĞLU M.  
COMPUTER METHODS AND PROGRAMS IN BIOMEDICINE, vol.187, 2020 (Journal Indexed in SCI)
- VI. **Natural convection in the ferrofluid enclosed in a porous and permeable cavity**  
Siddiqui A. A. , TÜRKYILMAZOĞLU M.  
INTERNATIONAL COMMUNICATIONS IN HEAT AND MASS TRANSFER, vol.113, 2020 (Journal Indexed in SCI)
- VII. **An optimum profile of a special pin fin: full solutions**  
TÜRKYILMAZOĞLU M.  
INTERNATIONAL JOURNAL OF NUMERICAL METHODS FOR HEAT & FLUID FLOW, 2020 (Journal Indexed in SCI)
- VIII. **Analytical and stability analysis of MHD flow past a nonlinearly deforming vertical surface in Carbon Nanotubes**  
Anuar N. S. , Bachok N., TÜRKYILMAZOĞLU M., Arifin N. M. , Rosali H.  
ALEXANDRIA ENGINEERING JOURNAL, vol.59, pp.497-507, 2020 (Journal Indexed in SCI)
- IX. **A simple algorithm for high order Newton iteration formulae and some new variants**  
TÜRKYILMAZOĞLU M.  
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.49, pp.425-438, 2020 (Journal Indexed in SCI)
- X. **Cooling of Particulate Solids and Fluid in a Moving Bed Heat Exchanger**  
TÜRKYILMAZOĞLU M.  
JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME, vol.141, 2019 (Journal Indexed in SCI)
- XI. **Fully developed slip flow in a concentric annuli via single and dual phase nanofluids models**  
TÜRKYILMAZOĞLU M.  
COMPUTER METHODS AND PROGRAMS IN BIOMEDICINE, vol.179, 2019 (Journal Indexed in SCI)
- XII. **Free and circular jets cooled by single phase nanofluids**  
TÜRKYILMAZOĞLU M.  
EUROPEAN JOURNAL OF MECHANICS B-FLUIDS, vol.76, pp.1-6, 2019 (Journal Indexed in SCI)
- XIII. **A New Theoretical Approach of Wall Transpiration in the Cavity Flow of the Ferrofluids**  
Siddiqui A. A. , TÜRKYILMAZOĞLU M.  
MICROMACHINES, vol.10, 2019 (Journal Indexed in SCI)
- XIV. **Accelerating the convergence of Adomian decomposition method (ADM)**  
TÜRKYILMAZOĞLU M.  
JOURNAL OF COMPUTATIONAL SCIENCE, vol.31, pp.54-59, 2019 (Journal Indexed in SCI)
- XV. **Equivalence of Ratio and Residual Approaches in the Homotopy Analysis Method and Some Applications in Nonlinear Science and Engineering**  
TÜRKYILMAZOĞLU M.  
CMES-COMPUTER MODELING IN ENGINEERING & SCIENCES, vol.120, pp.63-81, 2019 (Journal Indexed in SCI)
- XVI. **A Note on the Induced Flow and Heat Transfer Due to a Deforming Cone Rotating in a Quiescent Fluid**  
TÜRKYILMAZOĞLU M.  
JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME, vol.140, 2018 (Journal Indexed in SCI)
- XVII. **Buongiorno model in a nanofluid filled asymmetric channel fulfilling zero net particle flux at the walls**  
TÜRKYILMAZOĞLU M.  
INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER, vol.126, pp.974-979, 2018 (Journal Indexed in SCI)
- XVIII. **Analytical solutions to mixed convection MHD fluid flow induced by a nonlinearly deforming permeable surface**

TÜRKYILMAZOĞLU M.

COMMUNICATIONS IN NONLINEAR SCIENCE AND NUMERICAL SIMULATION, vol.63, pp.373-379, 2018 (Journal Indexed in SCI)

- XIX. **Fluid flow and heat transfer over a rotating and vertically moving disk**  
TÜRKYILMAZOĞLU M.  
PHYSICS OF FLUIDS, vol.30, 2018 (Journal Indexed in SCI)
- XX. **Stefan problems for moving phase change materials and multiple solutions**  
TÜRKYILMAZOĞLU M.  
INTERNATIONAL JOURNAL OF THERMAL SCIENCES, vol.126, pp.67-73, 2018 (Journal Indexed in SCI)
- XXI. **Flow and heat due to a surface formed by a vortical source**  
TÜRKYILMAZOĞLU M.  
EUROPEAN JOURNAL OF MECHANICS B-FLUIDS, vol.68, pp.76-84, 2018 (Journal Indexed in SCI)
- XXII. **Unsteady flow over a decelerating rotating sphere**  
TÜRKYILMAZOĞLU M.  
PHYSICS OF FLUIDS, vol.30, 2018 (Journal Indexed in SCI)
- XXIII. **Hyperbolic Partial Differential Equations with Nonlocal Mixed Boundary Values and their Analytic Approximate Solutions**  
TÜRKYILMAZOĞLU M.  
INTERNATIONAL JOURNAL OF COMPUTATIONAL METHODS, vol.15, 2018 (Journal Indexed in SCI)
- XXIV. **Heat transfer from moving exponential fins exposed to heat generation**  
TÜRKYILMAZOĞLU M.  
INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER, vol.116, pp.346-351, 2018 (Journal Indexed in SCI)
- XXV. **A reliable convergent Adomian decomposition method for heat transfer through extended surfaces**  
TÜRKYILMAZOĞLU M.  
INTERNATIONAL JOURNAL OF NUMERICAL METHODS FOR HEAT & FLUID FLOW, vol.28, pp.2551-2566, 2018 (Journal Indexed in SCI)
- XXVI. **Parametrized Adomian Decomposition Method with Optimum Convergence**  
TÜRKYILMAZOĞLU M.  
ACM TRANSACTIONS ON MODELING AND COMPUTER SIMULATION, vol.27, 2017 (Journal Indexed in SCI)
- XXVII. **Solution of Initial and Boundary Value Problems by an Effective Accurate Method**  
TÜRKYILMAZOĞLU M.  
INTERNATIONAL JOURNAL OF COMPUTATIONAL METHODS, vol.14, 2017 (Journal Indexed in SCI)
- XXVIII. **Condensation of laminar film over curved vertical walls using single and two-phase nanofluid models**  
TÜRKYILMAZOĞLU M.  
EUROPEAN JOURNAL OF MECHANICS B-FLUIDS, vol.65, pp.184-191, 2017 (Journal Indexed in SCI)
- XXIX. **Algebraic solutions of flow and heat for some nanofluids over deformable and permeable surfaces**  
TÜRKYILMAZOĞLU M.  
INTERNATIONAL JOURNAL OF NUMERICAL METHODS FOR HEAT & FLUID FLOW, vol.27, pp.2259-2267, 2017 (Journal Indexed in SCI)
- XXX. **Magnetohydrodynamic two-phase dusty fluid flow and heat model over deforming isothermal surfaces**  
TÜRKYILMAZOĞLU M.  
PHYSICS OF FLUIDS, vol.29, 2017 (Journal Indexed in SCI)
- XXXI. **Unsteady MHD rear stagnationpoint flow over off-centred deformable surfaces**  
TÜRKYILMAZOĞLU M., Naganthran K., Pop I.  
INTERNATIONAL JOURNAL OF NUMERICAL METHODS FOR HEAT & FLUID FLOW, vol.27, pp.1554-1570, 2017 (Journal Indexed in SCI)
- XXXII. **Numerical study of nanofluid flow and heat transfer over a rotating disk using Buongiorno's model**  
Khan J. A. , Mustafa M., Hayat T., TÜRKYILMAZOĞLU M., Alsaedi A.  
INTERNATIONAL JOURNAL OF NUMERICAL METHODS FOR HEAT & FLUID FLOW, vol.27, pp.221-234, 2017

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- XXXIII. **A direct solution of temperature field and physical quantities for the nonlinear porous fin problem**  
TÜRKYILMAZOĞLU M.  
INTERNATIONAL JOURNAL OF NUMERICAL METHODS FOR HEAT & FLUID FLOW, vol.27, pp.516-529, 2017  
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- XXXIV. **Approximate Analytical Solution of the Nonlinear System of Differential Equations Having Asymptotically Stable Equilibrium**  
TÜRKYILMAZOĞLU M.  
FILOMAT, vol.31, pp.2633-2641, 2017 (Journal Indexed in SCI)
- XXXV. **Determination of the Correct Range of Physical Parameters in the Approximate Analytical Solutions of Nonlinear Equations Using the Adomian Decomposition Method**  
TÜRKYILMAZOĞLU M.  
MEDITERRANEAN JOURNAL OF MATHEMATICS, vol.13, pp.4019-4037, 2016 (Journal Indexed in SCI)
- XXXVI. **Flow of nanofluid plane wall jet and heat transfer**  
TÜRKYILMAZOĞLU M.  
EUROPEAN JOURNAL OF MECHANICS B-FLUIDS, vol.59, pp.18-24, 2016 (Journal Indexed in SCI)
- XXXVII. **Magnetic Field and Slip Effects on the Flow and Heat Transfer of Stagnation Point Jeffrey Fluid over Deformable Surfaces**  
TÜRKYILMAZOĞLU M.  
ZEITSCHRIFT FÜR NATURFORSCHUNG SECTION A-A JOURNAL OF PHYSICAL SCIENCES, vol.71, pp.549-556, 2016  
(Journal Indexed in SCI)
- XXXVIII. **Highly accurate analytic formulae for projectile motion subjected to quadratic drag**  
TÜRKYILMAZOĞLU M.  
EUROPEAN JOURNAL OF PHYSICS, vol.37, 2016 (Journal Indexed in SCI)
- XXXIX. **Equivalences and correspondences between the deforming body induced flow and heat in two-three dimensions**  
TÜRKYILMAZOĞLU M.  
PHYSICS OF FLUIDS, vol.28, 2016 (Journal Indexed in SCI)
- XL. **Flow and heat simultaneously induced by two stretchable rotating disks**  
TÜRKYILMAZOĞLU M.  
PHYSICS OF FLUIDS, vol.28, 2016 (Journal Indexed in SCI)
- XLI. **Performance of direct absorption solar collector with nanofluid mixture**  
TÜRKYILMAZOĞLU M.  
ENERGY CONVERSION AND MANAGEMENT, vol.114, pp.1-10, 2016 (Journal Indexed in SCI)
- XLII. **Heat transfer from warm water to a moving foot in a footbath**  
TÜRKYILMAZOĞLU M.  
APPLIED THERMAL ENGINEERING, vol.98, pp.280-287, 2016 (Journal Indexed in SCI)
- XLIII. **Convergent optimal variational iteration method and applications to heat and fluid flow problems**  
TÜRKYILMAZOĞLU M.  
INTERNATIONAL JOURNAL OF NUMERICAL METHODS FOR HEAT & FLUID FLOW, vol.26, pp.790-804, 2016  
(Journal Indexed in SCI)
- XLIV. **Air blast response of compaction foam having a deformable front face panel incorporating fluid structure interactions**  
TÜRKYILMAZOĞLU M.  
INTERNATIONAL JOURNAL OF MECHANICAL SCIENCES, vol.105, pp.340-347, 2016 (Journal Indexed in SCI)
- XLV. **An Effective Approach for Evaluation of the Optimal Convergence Control Parameter in the Homotopy Analysis Method**  
TÜRKYILMAZOĞLU M.  
FILOMAT, vol.30, pp.1633-1650, 2016 (Journal Indexed in SCI)
- XLVI. **An analytical treatment for the exact solutions of MHD flow and heat over two-three dimensional deforming bodies**

TÜRKYILMAZOĞLU M.

INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER, vol.90, pp.781-789, 2015 (Journal Indexed in SCI)

- XLVII. **Exact Multiple Solutions for the Slip Flow and Heat Transfer in a Converging Channel**  
Turkyilmazoglu M.  
JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME, vol.137, 2015 (Journal Indexed in SCI)
- XLVIII. **Analytical solutions of single and multi-phase models for the condensation of nanofluid film flow and heat transfer**  
Turkyilmazoglu M.  
EUROPEAN JOURNAL OF MECHANICS B-FLUIDS, vol.53, pp.272-277, 2015 (Journal Indexed in SCI)
- XLIX. **Anomalous heat transfer enhancement by slip due to nanofluids in circular concentric pipes**  
Turkyilmazoglu M.  
INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER, vol.85, pp.609-614, 2015 (Journal Indexed in SCI)
- L. **Slip flow and heat transfer over a specific wedge: an exactly solvable Falkner-Skan equation**  
Turkyilmazoglu M.  
JOURNAL OF ENGINEERING MATHEMATICS, vol.92, pp.73-81, 2015 (Journal Indexed in SCI)
- LI. **A Note on the Correspondence Between Certain Nanofluid Flows and Standard Fluid Flows**  
Turkyilmazoglu M.  
JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME, vol.137, 2015 (Journal Indexed in SCI)
- LII. **Bodewadt flow and heat transfer over a stretching stationary disk**  
Turkyilmazoglu M.  
INTERNATIONAL JOURNAL OF MECHANICAL SCIENCES, vol.90, pp.246-250, 2015 (Journal Indexed in SCI)
- LIII. **Effective Computation of Solutions for Nonlinear Heat Transfer Problems in Fins**  
Turkyilmazoglu M.  
JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME, vol.136, 2014 (Journal Indexed in SCI)
- LIV. **Extending the traditional Jeffery-Hamel flow to stretchable convergent/divergent channels**  
Turkyilmazoglu M.  
COMPUTERS & FLUIDS, vol.100, pp.196-203, 2014 (Journal Indexed in SCI)
- LV. **A note on the exact temperatures of free two-dimensional and circular jets**  
Turkyilmazoglu M.  
EUROPEAN PHYSICAL JOURNAL PLUS, vol.129, 2014 (Journal Indexed in SCI)
- LVI. **Nanofluid flow and heat transfer due to a rotating disk**  
Turkyilmazoglu M.  
COMPUTERS & FLUIDS, vol.94, pp.139-146, 2014 (Journal Indexed in SCI)
- LVII. **MHD fluid flow and heat transfer due to a shrinking rotating disk**  
Turkyilmazoglu M.  
COMPUTERS & FLUIDS, vol.90, pp.51-56, 2014 (Journal Indexed in SCI)
- LVIII. **Lie group analysis of flow and heat transfer over a stretching rotating disk**  
Asghar S., Jalil M., Hussan M., TÜRKYILMAZOĞLU M.  
INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER, vol.69, pp.140-146, 2014 (Journal Indexed in SCI)
- LIX. **Three dimensional MHD stagnation flow due to a stretchable rotating disk**  
Turkyilmazoglu M.  
INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER, vol.55, pp.6959-6965, 2012 (Journal Indexed in SCI)
- LX. **Multiple Analytic Solutions of Heat and Mass Transfer of Magnetohydrodynamic Slip Flow for Two Types of Viscoelastic Fluids Over a Stretching Surface**  
Turkyilmazoglu M.  
JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME, vol.134, 2012 (Journal Indexed in SCI)
- LXI. **MHD fluid flow and heat transfer with varying Prandtl numbers due to a rotating disk subject to a uniform radial electric field (Retracted article. See vol. 140, pg. 830. 2018)**  
Turkyilmazoglu M.  
APPLIED THERMAL ENGINEERING, vol.35, pp.127-133, 2012 (Journal Indexed in SCI)
- LXII. **Effects of uniform radial electric field on the MHD heat and fluid flow due to a rotating disk**

(Retracted article. See vol. 140, pg. 830, 2018)

Turkyilmazoglu M.

INTERNATIONAL JOURNAL OF ENGINEERING SCIENCE, vol.51, pp.233-240, 2012 (Journal Indexed in SCI)

- LXIII. **AN IMPLICIT SPECTRAL METHOD FOR THE NUMERICAL SOLUTION OF UNSTEADY FLOWS WITH AN APPLICATION TO ROTATING DISK FLOW AND HEAT TRANSFER**

Turkyilmazoglu M.

ISI BILIMI VE TEKNIGI DERGISI-JOURNAL OF THERMAL SCIENCE AND TECHNOLOGY, vol.32, pp.99-106, 2012 (Journal Indexed in SCI)

- LXIV. **MHD fluid flow and heat transfer due to a stretching rotating disk**

Turkyilmazoglu M.

INTERNATIONAL JOURNAL OF THERMAL SCIENCES, vol.51, pp.195-201, 2012 (Journal Indexed in SCI)

- LXV. **Effects of Partial Slip on the Analytic Heat and Mass Transfer for the Incompressible Viscous Fluid of a Porous Rotating Disk Flow**

Turkyilmazoglu M.

JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME, vol.133, 2011 (Journal Indexed in SCI)

- LXVI. **An Optimal Analytic Approximate Solution for the Limit Cycle of Duffing-van der Pol Equation**

Turkyilmazoglu M.

JOURNAL OF APPLIED MECHANICS-TRANSACTIONS OF THE ASME, vol.78, 2011 (Journal Indexed in SCI)

- LXVII. **Heat and Mass Transfer on the MHD Fluid Flow Due to a Porous Rotating Disk With Hall Current and Variable Properties**

Turkyilmazoglu M.

JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME, vol.133, 2011 (Journal Indexed in SCI)

- LXVIII. **Heat and Mass Transfer on the Unsteady Magnetohydrodynamic Flow Due to a Porous Rotating Disk Subject to a Uniform Outer Radial Flow**

Turkyilmazoglu M.

JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME, vol.132, 2010 (Journal Indexed in SCI)

- LXIX. **NUMERICAL COMPUTATION OF UNSTEADY FLOWS WITH AN IMPLICIT SPECTRAL METHOD OVER A DISK IN STILL AIR**

Turkyilmazoglu M.

NUMERICAL HEAT TRANSFER PART A-APPLICATIONS, vol.57, pp.40-53, 2010 (Journal Indexed in SCI)

- LXX. **Exact Solutions Corresponding to the Viscous Incompressible and Conducting Fluid Flow Due to a Porous Rotating Disk**

Turkyilmazoglu M.

JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME, vol.131, 2009 (Journal Indexed in SCI)

## Supported Projects

TÜRKYILMAZOĞLU M., Project Supported by Higher Education Institutions, Optimum yakınsamalı parametre içeren Adomian Ayrıştırma Metodu, 2017 - 2017

TÜRKYILMAZOĞLU M., Project Supported by Higher Education Institutions, Lineer Olmayan Sistem denklemlerinin Homotopi yöntemi ile çözümü, 2016 - 2017

TÜRKYILMAZOĞLU M., Project Supported by Higher Education Institutions, Püskürtmeli ısı geçirgen plakanın ısı transferi analizi, 2016 - 2017

TÜRKYILMAZOĞLU M., Project Supported by Higher Education Institutions, Akışkanlar Mekaniğindeki Güncel Gelişmeler Üzerine 6. Uluslararası Konferans, 2015 - 2016

## Citations

Total Citations (WOS):1767

h-index (WOS):24