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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

Academic and Administrative Experience

Hacettepe Üniversitesi, Fen Fakültesi, Matematik Bölümü, 2003 - 2006

Hacettepe Üniversitesi, Fen Fakültesi, Matematik Bölümü, 2001 - 2004

Hacettepe Üniversitesi, Fen Fakültesi, Matematik Bölümü, 1999 - 2004

Advising Theses

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

TÜRKYILMAZOĞLU M., Sıkıştırılabilir 3-boyutlu dönen-disk akışındaki kararsızlık mekanizmaları, Doctorate,

N.UYGUN(Student), 2006

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Long wavelength analysis amendment on the cilia beating assisted peristalsis in a tube**
TÜRKYILMAZOĞLU M.

THEORETICAL AND COMPUTATIONAL FLUID DYNAMICS, vol.39, no.1, 2025 (SCI-Expanded)

- II. **Exact momentum layer and thermal field solutions for the fluid flow due to a moving/deforming Riga plate**
TÜRKYILMAZOĞLU M.
INTERNATIONAL JOURNAL OF THERMAL SCIENCES, vol.208, 2025 (SCI-Expanded)
- III. **Rheology of Bingham viscoplastic flow triggered by a rotating and radially stretching disk**
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- IV. **Slip flow between corotating disks with heat transfer**
TÜRKYILMAZOĞLU M.
INTERNATIONAL JOURNAL OF NUMERICAL METHODS FOR HEAT & FLUID FLOW, no.1, pp.257-276, 2025 (SCI-Expanded)
- V. **The operational matrices methods for solving the Poisson equation with nonlocal boundary conditions**
Enadi M. O., AL-Jawary M. A., TÜRKYILMAZOĞLU M.
JOURNAL OF APPLIED MATHEMATICS AND COMPUTING, 2024 (SCI-Expanded)
- VI. **Fluid flow between two active**
TÜRKYILMAZOĞLU M., Alotaibi A.
PHYSICA D-NONLINEAR PHENOMENA, vol.470, 2024 (SCI-Expanded)
- VII. **Soret and Dufour effects for unsteady flow with shapes and $(\text{Cu}+\text{Fe})_{30}\text{O}_{40}$ /(ethelene-glycol plus methanol) between two stretchable rotating disks**
Rahman M., TÜRKYILMAZOĞLU M., Mushtaq Z.
PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART E-JOURNAL OF PROCESS MECHANICAL ENGINEERING, 2024 (SCI-Expanded)
- VIII. **Two Models on the Unsteady Heat and Fluid Flow Induced by Stretching or Shrinking Sheets and Novel Time-Dependent Solutions**
TÜRKYILMAZOĞLU M.
ASME JOURNAL OF HEAT AND MASS TRANSFER, vol.146, no.10, 2024 (SCI-Expanded)
- IX. **Evidence of stretching/moving sheet-triggered nonlinear similarity flows: atomization and electrospinning with/without air resistance**
TÜRKYILMAZOĞLU M.
INTERNATIONAL JOURNAL OF NUMERICAL METHODS FOR HEAT & FLUID FLOW, vol.34, no.9, pp.3598-3614, 2024 (SCI-Expanded)
- X. **Fluid motion in a cavity driven by a four-sided moving lid with uniform velocity**
TÜRKYILMAZOĞLU M., Alotaibi A.
EUROPEAN JOURNAL OF MECHANICS B-FLUIDS, vol.107, pp.67-79, 2024 (SCI-Expanded)
- XI. **Buckling phenomenon of vertical beam/column of variable density carrying a top mass**
TÜRKYILMAZOĞLU M.
JOURNAL OF ENGINEERING MATHEMATICS, vol.147, no.1, 2024 (SCI-Expanded)
- XII. **Uniformly Loaded Logarithmic Beam Mode with Spatially Varying Flexural Rigidity**
TÜRKYILMAZOĞLU M.
ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, 2024 (SCI-Expanded)
- XIII. **Corrections to long wavelength approximation of peristalsis viscous fluid flow within a wavy channel**
TÜRKYILMAZOĞLU M.
Chinese Journal of Physics, vol.89, pp.340-354, 2024 (SCI-Expanded)
- XIV. **Flow and heat transfer in annuli owing to inner shrinking and outer stationary cylinder**
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CHINESE JOURNAL OF PHYSICS, vol.89, pp.1899-1907, 2024 (SCI-Expanded)
- XV. **Darcy-Brinkman porous medium for dusty fluid flow with steady boundary layer flow in the**

presence of slip effect

Rahman M., Waheed H., TÜRKYLMAZOĞLU M., Siddiqui M. S.

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- XVI. **Unsteady Fluid Flow in a Darcy–Brinkman Porous Medium with Slip Effect and Porous Dissipation**
Rahman M., Waheed H., TÜRKYLMAZOĞLU M., Siddiqui M. S.
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- XVII. **Liquid Vortex Formation in a Swirling Container Considering Fractional Time Derivative of Caputo**
TÜRKYLMAZOĞLU M., Alofi A. S.
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- XVIII. **Effects of multiple shapes for steady flow with transformer oil+Fe₃O₄+TiO₂ between two stretchable rotating disks**
Rahman M., TÜRKYLMAZOĞLU M., Mushtaq Z.
Applied Mathematics and Mechanics (English Edition), vol.45, no.2, pp.373-388, 2024 (SCI-Expanded)
- XIX. **RELIABLE COMPUTATIONAL METHODS FOR SOLVING JEFFERY-HAMEL FLOW PROBLEM BASED ON POLYNOMIAL FUNCTION SPACES**
Salih O., TÜRKYLMAZOĞLU M., Al-Jawary M.
Applied and Computational Mathematics, vol.23, no.1, pp.70-82, 2024 (SCI-Expanded)
- XX. **Generalized vortex flow of nanoparticle shapes over a permeable disc surface with generalized slip conditions**
Rahman M., Ali A., TÜRKYLMAZOĞLU M.
Modern Physics Letters B, 2024 (SCI-Expanded)
- XXI. **Film Flow of Nano-Micropolar Fluid with Dissipation Effect**
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CMES-COMPUTER MODELING IN ENGINEERING & SCIENCES, vol.140, no.3, pp.2487-2512, 2024 (SCI-Expanded)
- XXII. **Generalized mean state of the isothermal Darcy–Benard problem and its instability onset**
TÜRKYLMAZOĞLU M., Duraihem F. Z.
European Journal of Mechanics, B/Fluids, vol.103, pp.334-342, 2024 (SCI-Expanded)
- XXIII. **Advective flow in a magnetized layer of fluid between hydro-thermal slippery parallel walls**
TÜRKYLMAZOĞLU M.
Archive of Applied Mechanics, vol.93, no.12, pp.4351-4360, 2023 (SCI-Expanded)
- XXIV. **On heat transfer with unsteady MHD nanofluid von Karman flow with uniform suction**
Rahman M., TÜRKYLMAZOĞLU M., Bilal M., Sharif F.
Pramana - Journal of Physics, vol.97, no.4, 2023 (SCI-Expanded)
- XXV. **Darcy–Benard convection through a uniformly permeable porous slab**
TÜRKYLMAZOĞLU M.
Communications in Nonlinear Science and Numerical Simulation, vol.125, 2023 (SCI-Expanded)
- XXVI. **Impact of multiple shapes on Al₂O₃–Cu/ H₂O–C₂H₆O₂ towards a permeable surface of cylinder**
Rahman M., TÜRKYLMAZOĞLU M., Matloob K.
Journal of Magnetism and Magnetic Materials, vol.581, 2023 (SCI-Expanded)
- XXVII. **Hyperthermia therapy of cancerous tumor sitting in breast via analytical fractional model**
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Computers in Biology and Medicine, vol.164, 2023 (SCI-Expanded)
- XXVIII. **A highly accurate peak time formula of epidemic outbreak from the SIR model**
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Chinese Journal of Physics, vol.84, pp.39-50, 2023 (SCI-Expanded)
- XXIX. **Fully developed flow in a long triangular channel under an applied magnetic field**
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- XXX. **A Two-Parameter Family of Basic State in Porous Media Leading to Darcy–Bénard Convection**
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Transport in Porous Media, vol.148, no.3, pp.519-533, 2023 (SCI-Expanded)

- XXXI. **Towards an approximate solution of highly viscous electro-osmotic flows in inclined Channel: Applications in petroleum and gas engineering**
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- XXXII. **Induced flow and heat transfer due to inner stretching and outer stationary coaxial cylinders**
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- XXXIII. **Uniform magnetic field impact on absolute versus convective onset of Darcy–Benard convection with horizontal throughflow**
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International Journal of Numerical Methods for Heat and Fluid Flow, vol.33, no.8, pp.3056-3070, 2023 (SCI-Expanded)
- XXXIV. **The instability onset of generalized isoflux mean flow using Brinkman-Darcy-Bénard model in a fluid saturated porous channel**
TÜRKYILMAZOĞLU M., Siddiqui A. A.
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- XXXV. **The flow and heat in the conical region of a rotating cone and an expanding disk**
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International Journal of Numerical Methods for Heat and Fluid Flow, vol.33, no.6, pp.2181-2197, 2023 (SCI-Expanded)
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TÜRKYILMAZOĞLU M., Duraihem F. Z.
Micromachines, vol.14, no.4, 2023 (SCI-Expanded)
- XXXVII. **Three dimensional viscous flow due to a squeezing porous slider**
TÜRKYILMAZOĞLU M.
European Journal of Mechanics, B/Fluids, vol.98, pp.253-259, 2023 (SCI-Expanded)
- XXXVIII. **Transient and passage to steady state in fluid flow and heat transfer within fractional models**
TÜRKYILMAZOĞLU M.
INTERNATIONAL JOURNAL OF NUMERICAL METHODS FOR HEAT & FLUID FLOW, vol.33, pp.728-750, 2023 (SCI-Expanded)
- XXXIX. **Numerical solution of Al₂O₃-H₂O with shape effects and unsteady flow over a solid rotating disk**
Rahman M., TÜRKYILMAZOĞLU M., Bilal M.
International Journal of Modern Physics B, 2023 (SCI-Expanded)
- XL. **Fractional models of falling object with linear and quadratic frictional forces considering Caputo derivative**
TÜRKYILMAZOĞLU M., Altanji M.
Chaos, Solitons and Fractals, vol.166, 2023 (SCI-Expanded)
- XLI. **Prescribed Temperature Profiles of Longitudinal Convective-Radiative Fins Subject to Axially Distributed Thermal Conductivities**
TÜRKYILMAZOĞLU M.
ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, vol.47, no.12, pp.15689-15703, 2022 (SCI-Expanded)
- XLII. **Indoor transmission of airborne viral aerosol with a simplistic reaction-diffusion model**
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EUROPEAN PHYSICAL JOURNAL-SPECIAL TOPICS, vol.231, no.18-20, pp.3591-3601, 2022 (SCI-Expanded)
- XLIII. **Radially expanding/contracting and rotating sphere with suction**
TÜRKYILMAZOĞLU M.
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- XLIV. **Novel approximate solution for fractional differential equations by the optimal variational iteration method**
Ibraheem G. H., TÜRKYILMAZOĞLU M.

JOURNAL OF COMPUTATIONAL SCIENCE, vol.64, 2022 (SCI-Expanded)

- XLV. **Lid-Driven Butterfly Cavity for a Controllable Viscous Flow**
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JOURNAL OF FLUIDS ENGINEERING-TRANSACTIONS OF THE ASME, vol.144, no.9, 2022 (SCI-Expanded)
- XLVI. **Unsteady three-dimensional magnetohydrodynamics flow of nanofluids over a decelerated rotating disk with uniform suction**
Rahman M., Sharif F., TÜRKYILMAZOĞLU M., Siddiqui M. S.
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- XLVII. **A restricted epidemic SIR model with elementary solutions**
TÜRKYILMAZOĞLU M.
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- XLVIII. **Driven flow motion by a dually moving lid of a square cavity**
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- XLIX. **An extended epidemic model with vaccination: Weak-immune SIRVI**
TÜRKYILMAZOĞLU M.
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, vol.598, 2022 (SCI-Expanded)
- L. **Exponential nonuniform wall heating of a square cavity and natural convection**
TÜRKYILMAZOĞLU M.
CHINESE JOURNAL OF PHYSICS, vol.77, pp.2122-2135, 2022 (SCI-Expanded)
- LI. **Flow and heat over a rotating disk subject to a uniform horizontal magnetic field**
TÜRKYILMAZOĞLU M.
ZEITSCHRIFT FÜR NATURFORSCHUNG SECTION A-A JOURNAL OF PHYSICAL SCIENCES, vol.77, pp.329-337, 2022 (SCI-Expanded)
- LII. **Asymptotic Suction/Injection Flow Induced by a Uniform Magnetohydrodynamics Free Stream Couple Stress Fluid Over a Flat Plate**
TÜRKYILMAZOĞLU M.
JOURNAL OF FLUIDS ENGINEERING-TRANSACTIONS OF THE ASME, vol.144, no.3, 2022 (SCI-Expanded)
- LIII. **Slit flow and thermal analysis of micropolar fluids in a symmetric channel with dynamic and permeable**
Siddiqui A. A., TÜRKYILMAZOĞLU M.
INTERNATIONAL COMMUNICATIONS IN HEAT AND MASS TRANSFER, vol.132, 2022 (SCI-Expanded)
- LIV. **Thermal performance of optimum exponential fin profiles subjected to a temperature jump**
TÜRKYILMAZOĞLU M.
INTERNATIONAL JOURNAL OF NUMERICAL METHODS FOR HEAT & FLUID FLOW, vol.32, no.3, pp.1002-1011, 2022 (SCI-Expanded)
- LV. **MULTIPLE EXACT SOLUTIONS OF FREE CONVECTION FLOWS IN SATURATED POROUS MEDIA WITH VARIABLE HEAT FLUX**
TÜRKYILMAZOĞLU M.
JOURNAL OF POROUS MEDIA, vol.25, no.6, pp.53-63, 2022 (SCI-Expanded)
- LVI. **An Efficient Computational Method for Differential Equations of Fractional Type**
TÜRKYILMAZOĞLU M.
CMES-COMPUTER MODELING IN ENGINEERING & SCIENCES, vol.133, no.1, pp.47-65, 2022 (SCI-Expanded)
- LVII. **Maximum wave run-up over beaches of convex/concave bottom profiles**
TÜRKYILMAZOĞLU M.
CONTINENTAL SHELF RESEARCH, vol.232, 2022 (SCI-Expanded)
- LVIII. **Explicit formulae for the peak time of an epidemic from the SIR model. Which approximant to use?**
Kroeger M., TÜRKYILMAZOĞLU M., Schlickeiser R.
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- LIX. **Heat absorption due to falling film with imposed uniform mass fraction at the wall**
TÜRKYILMAZOĞLU M.

- INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER, vol.177, 2021 (SCI-Expanded)
- LX. **Heat Transfer Enhancement Feature of the Non-Fourier Cattaneo-Christov Heat Flux Model**
TÜRKYILMAZOĞLU M.
JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME, vol.143, no.9, 2021 (SCI-Expanded)
- LXI. **An analytic parametric study of rounded laser pulse heating**
TÜRKYILMAZOĞLU M.
OPTIK, vol.240, 2021 (SCI-Expanded)
- LXII. **Explicit formulae for the peak time of an epidemic from the SIR model**
TÜRKYILMAZOĞLU M.
PHYSICA D-NONLINEAR PHENOMENA, vol.422, 2021 (SCI-Expanded)
- LXIII. **Stagnation-point flow and heat transfer over stretchable plates and cylinders with an oncoming flow: Exact solutions**
TÜRKYILMAZOĞLU M.
CHEMICAL ENGINEERING SCIENCE, vol.238, 2021 (SCI-Expanded)
- LXIV. **Heat transport in shear-driven flow with axial conduction**
TÜRKYILMAZOĞLU M.
JOURNAL OF THE TAIWAN INSTITUTE OF CHEMICAL ENGINEERS, vol.123, pp.96-103, 2021 (SCI-Expanded)
- LXV. **Exact solutions concerning momentum and thermal fields induced by a long circular cylinder**
TÜRKYILMAZOĞLU M.
EUROPEAN PHYSICAL JOURNAL PLUS, vol.136, no.5, 2021 (SCI-Expanded)
- LXVI. **On the transparent effects of Buongiorno nanofluid model on heat and mass transfer**
TÜRKYILMAZOĞLU M.
EUROPEAN PHYSICAL JOURNAL PLUS, vol.136, no.4, 2021 (SCI-Expanded)
- LXVII. **Threshold for the generalized Non-Fourier heat flux model: Universal closed form analytic solution**
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- LXVIII. **Complete theory of the elastic wall jet: A new flow geometry with revisited two-phase nanofluids**
Jafarimoghaddam A., TÜRKYILMAZOĞLU M., Rocca A. V., Pop I.
EUROPEAN JOURNAL OF MECHANICS B-FLUIDS, vol.86, pp.25-36, 2021 (SCI-Expanded)
- LXIX. **Magnetohydrodynamic Moving Liquid Plug Within a Microchannel: Analytical Solutions**
TÜRKYILMAZOĞLU M.
JOURNAL OF BIOMECHANICAL ENGINEERING-TRANSACTIONS OF THE ASME, vol.143, no.1, 2021 (SCI-Expanded)
- LXX. **Nonlinear Problems via a Convergence Accelerated Decomposition Method of Adomian**
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CMES-COMPUTER MODELING IN ENGINEERING & SCIENCES, vol.127, no.1, pp.1-22, 2021 (SCI-Expanded)
- LXXI. **On the fluid flow and heat transfer between a cone and a disk both stationary or rotating**
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- LXXII. **Nanoliquid film flow due to a moving substrate and heat transfer**
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- LXXIII. **An optimum profile of a special pin fin: full solutions**
TÜRKYILMAZOĞLU M.
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- LXXIV. **Velocity Slip and Entropy Generation Phenomena in Thermal Transport Through Metallic Porous Channel**
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JOURNAL OF NON-EQUILIBRIUM THERMODYNAMICS, vol.45, no.3, pp.247-256, 2020 (SCI-Expanded)
- LXXV. **Exact and approximate solutions to projectile motion in air incorporating Magnus effect**
TÜRKYILMAZOĞLU M., Altundag T.

- EUROPEAN PHYSICAL JOURNAL PLUS, vol.135, no.7, 2020 (SCI-Expanded)
- LXXVI. **Single phase nanofluids in fluid mechanics and their hydrodynamic linear stability analysis**
TÜRKYILMAZOĞLU M.
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- LXXVII. **Natural convection in the ferrofluid enclosed in a porous and permeable cavity**
Siddiqui A. A., TÜRKYILMAZOĞLU M.
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- LXXVIII. **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, no.1, pp.497-507, 2020 (SCI-Expanded)
- LXXIX. **A simple algorithm for high order Newton iteration formulae and some new variants**
TÜRKYILMAZOĞLU M.
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.49, no.1, pp.425-438, 2020 (SCI-Expanded)
- LXXX. **Cooling of Particulate Solids and Fluid in a Moving Bed Heat Exchanger**
TÜRKYILMAZOĞLU M.
JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME, vol.141, no.11, 2019 (SCI-Expanded)
- LXXXI. **Fully developed slip flow in a concentric annuli via single and dual phase nanofluids models**
TÜRKYILMAZOĞLU M.
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- LXXXII. **Free and circular jets cooled by single phase nanofluids**
TÜRKYILMAZOĞLU M.
EUROPEAN JOURNAL OF MECHANICS B-FLUIDS, vol.76, pp.1-6, 2019 (SCI-Expanded)
- LXXXIII. **A New Theoretical Approach of Wall Transpiration in the Cavity Flow of the Ferrofluids**
Siddiqui A. A., TÜRKYILMAZOĞLU M.
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- LXXXIV. **Accelerating the convergence of Adomian decomposition method (ADM)**
TÜRKYILMAZOĞLU M.
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- LXXXV. **Equivalence of Ratio and Residual Approaches in the Homotopy Analysis Method and Some Applications in Nonlinear Science and Engineering**
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- LXXXVI. **A Note on the Induced Flow and Heat Transfer Due to a Deforming Cone Rotating in a Quiescent Fluid**
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- LXXXVII. **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 (SCI-Expanded)
- LXXXVIII. **Analytical solutions to mixed convection MHD fluid flow induced by a nonlinearly deforming permeable surface**
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- LXXXIX. **Fluid flow and heat transfer over a rotating and vertically moving disk**
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PHYSICS OF FLUIDS, vol.30, no.6, 2018 (SCI-Expanded)
- XC. **Stefan problems for moving phase change materials and multiple solutions**
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- INTERNATIONAL JOURNAL OF THERMAL SCIENCES, vol.126, pp.67-73, 2018 (SCI-Expanded)
- XCI. **Hyperbolic Partial Differential Equations with Nonlocal Mixed Boundary Values and their Analytic Approximate Solutions**
TÜRKYILMAZOĞLU M.
INTERNATIONAL JOURNAL OF COMPUTATIONAL METHODS, vol.15, no.2, 2018 (SCI-Expanded)
- XCII. **Unsteady flow over a decelerating rotating sphere**
TÜRKYILMAZOĞLU M.
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- XCIII. **Flow and heat due to a surface formed by a vortical source**
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EUROPEAN JOURNAL OF MECHANICS B-FLUIDS, vol.68, pp.76-84, 2018 (SCI-Expanded)
- XCIV. **A reliable convergent Adomian decomposition method for heat transfer through extended surfaces**
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- XCV. **Heat transfer from moving exponential fins exposed to heat generation**
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- XCVI. **Solution of Initial and Boundary Value Problems by an Effective Accurate Method**
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- XCVII. **Parametrized Adomian Decomposition Method with Optimum Convergence**
TÜRKYILMAZOĞLU M.
ACM TRANSACTIONS ON MODELING AND COMPUTER SIMULATION, vol.27, no.4, 2017 (SCI-Expanded)
- XCVIII. **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 (SCI-Expanded)
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