

Prof. IŞIK HAKAN TARMAN

Personal Information

Email: tarman@metu.edu.tr

Web: <https://avesis.metu.edu.tr/tarman>

International Researcher IDs

ScholarID: rq32UAUAAAAJ

ORCID: 0000-0003-0290-2529

Publons / Web Of Science ResearcherID: ABA-3339-2020

ScopusID: 6507552019

Yoksis Researcher ID: 167970

Education Information

Doctorate, Brown University, Applied Mathematics, United States Of America 1984 - 1988

Postgraduate, Bogazici University, Institute Of Science, Mechanical Engineering, Turkey 1982 - 1984

Undergraduate Double Major, Bogazici University, Engineering and Sciences, Mechanical Engineering & Mathematics, Turkey 1977 - 1982

Foreign Languages

English, C1 Advanced

Academic Titles / Tasks

Professor, Middle East Technical University, Faculty of Engineering, Department of Engineering Sciences, 2013 - Continues

Associate Professor, Middle East Technical University, Faculty of Engineering, Department of Engineering Sciences, 2002 - 2013

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Engineering Sciences, 1999 - 2002

Academic and Administrative Experience

Middle East Technical University, Graduate School of Natural and Applied Sciences, Biyomedikal Mühendisliği (YL) (Tezli), 2015 - Continues

Middle East Technical University, Graduate School of Natural and Applied Sciences, Biyomedikal Mühendisliği (YL) (Tezli), 2015 - 2017

Advising Theses

TARMAN I. H., A spectral approach for solving two-fluid flow stability problem, Postgraduate, M.EMİN(Student), 2022

TARMAN I. H., A Study of structural design based on optimality, Postgraduate, D.Tamkan(Student), 2019

TARMAN I. H., Mechanical reliability analysis using stress-strength interference model and engineering application of reliability: system safety assessment, Postgraduate, M.Bariş(Student), 2019

TARMAN I. H., An Exploration of numerical approaches to Boltzmann equation regarding hydrodynamics, Postgraduate, A.Şahin(Student), 2019

Tarman I. H., Dursunkaya Z., Multi-dimensional modelling of evaporation in the micro region of a micro grooved heat pipe, Doctorate, Y.AKKUŞ(Student), 2015

TARMAN I. H., GÜRSES S., Statistical analysis of force distribution on the plantar foot during quiet stance, Doctorate, O.ALKAN(Student), 2015

TARMAN I. H., Two dimensional modeling of electromagnetic radiation and scattering by spectral element method, Doctorate, I.MAHARIQ(Student), 2014

TARMAN I. H., Numerical modeling of general compressible multi-phase flows, Doctorate, B.KALPAKLI(Student), 2013

TARMAN I. H., Direct numerical simulation of pipe flow using a solenoidal spectral method, Doctorate, O.Tuğluk(Student), 2012

TARMAN I. H., Application of fully implicit coupled method for 2D incompressible flows on unstructured grids, Postgraduate, Ş.ZENGİN(Student), 2012

TARMAN I. H., Numerical study of Rayleigh Bènard thermal convection via solenoidal bases, Doctorate, C.Yıldırım(Student), 2011

TARMAN I. H., Numerical simulation of thermal convection under the influence of a magnetic field by using solenoidal bases, Doctorate, D.Yarımpabuç(Student), 2011

TARMAN I. H., Dynamic analysis of flow in two dimensional flow, Postgraduate, E.Engin(Student), 2008

TARMAN I. H., A study of natural convection in molten metal under a magnetic field, Doctorate, E.Güray(Student), 2006

TARMAN I. H., Dynamics of wall bounded turbulence /, Postgraduate, O.Tuğluk(Student), 2005

TARMAN I. H., Vibration exposure of front seat car passengers, Postgraduate, T.Erol(Student), 2004

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Two-dimensional computational modeling of thin film evaporation**
 Akkuş Y., Tarman H. I., Cetin B., Dursunkaya Z.
 INTERNATIONAL JOURNAL OF THERMAL SCIENCES, vol.121, pp.237-248, 2017 (SCI-Expanded)
- II. **Numerical simulations of thermal convection under the influence of an inclined magnetic field by using solenoidal bases**
 Yarimpabuc D., TARMAN I. H., Yildirim C.
 MATHEMATICAL METHODS IN THE APPLIED SCIENCES, vol.37, no.18, pp.2962-2971, 2014 (SCI-Expanded)
- III. **Photonic Nanojet Analysis by Spectral Element Method**
 Mahariq I., KUZUOĞLU M., TARMAN I. H., KURT H.
 IEEE PHOTONICS JOURNAL, vol.6, no.5, 2014 (SCI-Expanded)
- IV. **On the Attenuation of the Perfectly Matched Layer in Electromagnetic Scattering Problems with the Spectral Element Method**
 Mahariq I., KUZUOĞLU M., TARMAN I. H.
 APPLIED COMPUTATIONAL ELECTROMAGNETICS SOCIETY JOURNAL, vol.29, no.9, pp.701-710, 2014 (SCI-Expanded)
- V. **A Spectral Solenoidal-Galerkin Method for Rotating Thermal Convection between Rigid Plates**
 Yildirim C., YARIMPABUÇ D., Tarman H. I.
 MATHEMATICAL PROBLEMS IN ENGINEERING, vol.2013, 2013 (SCI-Expanded)
- VI. **The numerical study of pumping configurations on the lasing efficiency in photonic crystal fiber Raman laser**
 Berberoglu H., TARMAN I. H.
 OPTIK, vol.124, no.6, pp.522-525, 2013 (SCI-Expanded)
- VII. **Direct numerical simulation of pipe flow using a solenoidal spectral method**
 Tugluk O., TARMAN I. H.

- ACTA MECHANICA, vol.223, no.5, pp.923-935, 2012 (SCI-Expanded)
- VIII. **Solenoidal bases for numerical studies of transition in pipe flow**
Tugluk O., TARMAN I. H.
PHYSICA SCRIPTA, vol.T142, 2010 (SCI-Expanded)
- IX. **Variational Approach to Power Evolution in Cascaded Fiber Raman Laser**
TARMAN I. H., Berberoglu H.
JOURNAL OF LIGHTWAVE TECHNOLOGY, vol.28, no.21, pp.3136-3141, 2010 (SCI-Expanded)
- X. **Efficient Numerical Algorithm for Cascaded Raman Fiber Lasers Using a Spectral Method**
TARMAN I. H., Berberoglu H.
JOURNAL OF LIGHTWAVE TECHNOLOGY, vol.27, no.13, pp.2289-2295, 2009 (SCI-Expanded)
- XI. **A spectral collocation algorithm for two-point boundary value problem in fiber Raman amplifier equations**
TARMAN I. H., Berberoglu H.
OPTICS COMMUNICATIONS, vol.282, no.8, pp.1551-1556, 2009 (SCI-Expanded)
- XII. **Thermal convection in the presence of a vertical magnetic field**
Guray E., Tarman H. I.
ACTA MECHANICA, vol.194, no.1-4, pp.33-46, 2007 (SCI-Expanded)
- XIII. **Transitional dynamics in thermal convection between rigid plates**
Yildirim C., Yarimpabuc D., Tarman H. I.
JOURNAL OF VIBRATION AND CONTROL, vol.13, no.9-10, pp.1331-1342, 2007 (SCI-Expanded)
- XIV. **A Karhunen-Loeve-based approach to numerical simulation of transition in Rayleigh-Benard convection**
Tarman H.
NUMERICAL HEAT TRANSFER PART B-FUNDAMENTALS, vol.43, no.6, pp.567-586, 2003 (SCI-Expanded)
- XV. **The gravitational effect on induced charge density for an obliquely rotating neutron star**
De Paolis F., Qadir A., Tarman I. H.
NUOVO CIMENTO DELLA SOCIETA ITALIANA DI FISICA B-GENERAL PHYSICS RELATIVITY ASTRONOMY AND MATHEMATICAL PHYSICS AND METHODS, vol.114, no.11, pp.1281-1286, 1999 (SCI-Expanded)
- XVI. **Extensions to Karhunen-Loeve based approximation of complicated phenomena**
Tarman I. H., Sirovich L.
COMPUTER METHODS IN APPLIED MECHANICS AND ENGINEERING, vol.155, no.3-4, pp.359-368, 1998 (SCI-Expanded)
- XVII. **An improved dynamical approximation to Boussinesq equation using Karhunen-Loeve basis**
Tarman I. H.
COMPUTER METHODS IN APPLIED MECHANICS AND ENGINEERING, vol.144, no.1-2, pp.153-162, 1997 (SCI-Expanded)
- XVIII. **A Karhunen-Loeve based galerkin approximation to Boussinesq equation**
Tarman I. H.
COMPUTER METHODS IN APPLIED MECHANICS AND ENGINEERING, vol.137, no.3-4, pp.275-284, 1996 (SCI-Expanded)
- XIX. **A Karhunen-Loeve analysis of turbulent thermal convection**
Tarman I. H.
INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN FLUIDS, vol.22, no.1, pp.67-79, 1996 (SCI-Expanded)

Articles Published in Other Journals

- I. **Numerical simulation of duct flow in the presence of participating media radiation with total energy based entropic lattice Boltzmann method**
Gümüŝsu E., TARMAN I. H.
International Journal of Thermofluids, vol.20, 2023 (Scopus)

II. On the Accuracy of Spectral Element Method in Electromagnetic Scattering Problems

Mahariq İ., TARMAN I. H., KUZUOĞLU M.

International Journal of Computer Theory and Engineering, vol.6, no.6, pp.495-499, 2014 (Peer-Reviewed Journal)

Books & Book Chapters

I. Lecture Notes in Computational Science and Engineering

Tarman I. H.

Springer, London/Berlin , Bergen, 2019

Refereed Congress / Symposium Publications in Proceedings

I. A Spectral Solenoidal-Galerkin Method for Flow Past a Circular Cylinder

TARMAN I. H.

European Conference on Numerical Mathematics and Advanced Applications (ENUMATH 2017), 25 - 29 September 2017

II. A Solenoidal Galerkin Approach for the Numerical Simulation of Flow Past a Circular Cylinder

TARMAN I. H.

International Conference On Boundary Element And Meshless Techniques, 11 - 13 July 2016

III. POD based Models for Drag Reduction in Turbulent Pipe Flow

Tuğluk O., TARMAN I. H.

International Conference On Boundary Element And Meshless Techniques, 11 - 13 July 2016

IV. Drag Reduction via Phase Randomization in Turbulent Pipe Flow

Tugluk O., Tarman H. I.

European Conference on Numerical Mathematics and Advanced Applications (ENUMATH), Ankara, Turkey, 14 - 18 September 2015, vol.112, pp.463-470

V. A spectral Petrov-Galerkin method for thermal convection between rigid plates

YILDIRIM YÜCEL C., TARMAN I. H.

6th International Symposium on Turbulence, Heat and Mass Transfer, Rome, Italy, 14 - 18 September 2009, pp.213-216

VI. Numerical Simulation of Flow through Stenotic Artery

Tarman H. I.

14th National Biomedical Engineering Meeting, İzmir, Turkey, 20 - 22 May 2009, pp.531-533

VII. Vibration Exposure of Front Seat Car Passengers

Erol T., Birlik G., Sezgin Ö., TARMAN I. H.

39th Meeting of the UK Group on Human Response to Vibration, 15 - 17 September 2004

VIII. Heat transport in transitional regimes of thermal convection

Tarman H.

2nd Trabzon International Energy and Environment Symposium, Trabzon, Turkey, 26 - 29 July 1998, pp.375-379

IX. A parametric study of Rayleigh Benard convection using a Karhunen Loeve basis

TARMAN I. H., Sirovich L.

11th Symposium on Turbulent Shear Flow, Grenoble, France, 8 - 11 September 1997

X. Analysis of turbulent thermal convection

Sirovich L., Maxey M., TARMAN I. H.

6th symposium on turbulent shear flow, France, 7 - 09 September 1987

Metrics

Publication: 32
Citation (WoS): 161
Citation (Scopus): 187
H-Index (WoS): 6
H-Index (Scopus): 6

Non Academic Experience

METU

METU

METU

King Fahd University of Petroleum and Minerals

Brown University

Brown University

Boğaziçi University