

Assoc. Prof. MUSTAFA TAYLAN ŐENGÜL

Personal Information

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Biography

Lisans eğitimimi 1995-2001 yılları arasında Boğaziçi Üniversitesi Matematik Bölümünde tamamladıktan sonra yüksek lisansımı Yeditepe Üniversitesinde, doktoramı da Indiana Üniversitesi'nde tamamladım. 2012-2014 yılları arasında Purdue Üniversitesi'nde ziyaretçi öğretim üyesi olarak bulundum. 2014-2015 arasında Yeditepe Üniversitesi'nde yardımcı doçent olarak görev aldım. 2015'den beri Marmara Üniversitesi Matematik Bölümünde çalışmaktayım.

Education Information

Doctorate, Indiana University Bloomington, Fen Bilimleri Enstitüsü/Matematik Bölümü, United States Of America 2007 - 2012

Post Graduate, Yeditepe Üniversitesi, Fen Bilimleri Enstitüsü, Matematik (YI) (Tezli), Turkey 2003 - 2006

Under Graduate, Boğaziçi Üniversitesi, Fen-Edebiyat Fakültesi, Matematik Bölümü, Turkey 1995 - 2001

Dissertations

Doctorate, Transitions and Pattern Formations in Problems of Hydrodynamic Instabilities, Indiana University Bloomington, Fen Bilimleri Enstitüsü/Matematik Bölümü, 2012

Post Graduate, Doğrusal Olmayan Dalga Denkleminde Global Çekicinin Varlığı, Yeditepe Üniversitesi, Fen Bilimleri Enstitüsü, Matematik (YI) (Tezli), 2006

Research Areas

Mathematics, Differential Equations, Natural Sciences

Academic Titles / Tasks

Associate Professor, Marmara University, Faculty of Arts and Sciences, Mathematics, 2016 - Continues

Assistant Professor, Yeditepe Üniversitesi, Fen-Edebiyat Fakültesi, Matematik Bölümü, 2015 - Continues

Assistant Professor, Marmara University, Faculty of Arts and Sciences, Mathematics, 2015 - Continues

Lecturer PhD, Purdue University, Fen-Edebiyat Fakültesi, Matematik Bölümü, 2012 - 2014

Research Assistant, Indiana University Bloomington, Fen-Edebiyat Fakültesi, Matematik Bölümü, 2007 - 2012

Research Assistant, Yeditepe Üniversitesi, Fen-Edebiyat Fakültesi, Matematik Bölümü, 2001 - 2007

Professional Experience

Deputy Head of Department, Marmara University, Faculty of Arts and Sciences, Mathematics, 2018 - Continues

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

- I. **Dynamical transition theory of hexagonal pattern formations**
ŞENGÜL M. T.
COMMUNICATIONS IN NONLINEAR SCIENCE AND NUMERICAL SIMULATION, vol.91, 2020 (Journal Indexed in SCI)
- II. **INTERIOR STRUCTURAL BIFURCATION OF 2D SYMMETRIC INCOMPRESSIBLE FLOWS**
Bozkurt D., DELİCEOĞLU A., ŞENGÜL M. T.
DISCRETE AND CONTINUOUS DYNAMICAL SYSTEMS-SERIES B, vol.25, no.7, pp.2775-2791, 2020 (Journal Indexed in SCI)
- III. **On the spectral instability and bifurcation of the 2D-quasi-geostrophic potential vorticity equation with a generalized Kolmogorov forcing**
Lu C., Mao Y., Sengul T., Wang Q.
Physica D: Nonlinear Phenomena, vol.403, 2020 (Journal Indexed in SCI)
- IV. **On the nonlinear stability and the existence of selective decay states of 3D quasi-geostrophic potential vorticity equation**
Esen O., Han D., Şengül T., Wang Q.
Mathematical Methods in the Applied Sciences, vol.43, no.2, pp.822-846, 2020 (Journal Indexed in SCI)
- V. **On the viscous instabilities and transitions of two-layer model with a layered topography**
Pan Z., Sengul T., Wang Q.
Communications in Nonlinear Science and Numerical Simulation, vol.80, 2020 (Journal Indexed in SCI)
- VI. **MULTIPLE EQUILIBRIA AND TRANSITIONS IN SPHERICAL MHD EQUATIONS**
Ozer S., Sengul T., Wang Q.
COMMUNICATIONS IN MATHEMATICAL SCIENCES, vol.17, no.6, pp.1531-1555, 2019 (Journal Indexed in SCI)
- VII. **On the Hopf (double Hopf) bifurcations and transitions of two-layer western boundary currents**
Kieu C., Sengul T., Wang Q., Yan D.
COMMUNICATIONS IN NONLINEAR SCIENCE AND NUMERICAL SIMULATION, vol.65, pp.196-215, 2018 (Journal Indexed in SCI)
- VIII. **Dynamic Transitions and Baroclinic Instability for 3D Continuously Stratified Boussinesq Flows**
Sengul T., Wang S.
JOURNAL OF MATHEMATICAL FLUID MECHANICS, vol.20, no.3, pp.1173-1193, 2018 (Journal Indexed in SCI)
- IX. **Transitions of Spherical Thermohaline Circulation to Multiple Equilibria**
ÖZER S. S., ŞENGÜL M. T.
Journal Of Mathematical Fluid Mechanics, vol.20, pp.499-515, 2018 (Journal Indexed in SCI Expanded)
- X. **Stability and transitions of the second grade Poiseuille flow**
Ozer S., Sengul T.
PHYSICA D-NONLINEAR PHENOMENA, vol.331, pp.71-80, 2016 (Journal Indexed in SCI)
- XI. **Pattern formations of 2D Rayleigh-Benard convection with no-slip boundary conditions for the velocity at the critical length scales**
ŞENGÜL M. T., Shen J., Wang S.
MATHEMATICAL METHODS IN THE APPLIED SCIENCES, vol.38, no.17, pp.3792-3806, 2015 (Journal Indexed in SCI)
- XII. **DYNAMIC TRANSITIONS AND PATTERN FORMATIONS FOR A CAHN-HILLIARD MODEL WITH LONG-RANGE REPULSIVE INTERACTIONS**
Liu H., Şengül T., Wang S., Zhang P.
COMMUNICATIONS IN MATHEMATICAL SCIENCES, vol.13, no.5, pp.1289-1315, 2015 (Journal Indexed in SCI)
- XIII. **DYNAMIC TRANSITIONS OF QUASI-GEOSTROPHIC CHANNEL FLOW**
Dijkstra H., Sengul T., Shen J., Wang S.
SIAM JOURNAL ON APPLIED MATHEMATICS, vol.75, no.5, pp.2361-2378, 2015 (Journal Indexed in SCI)
- XIV. **PATTERN FORMATION AND DYNAMIC TRANSITION FOR MAGNETOHYDRODYNAMIC CONVECTION**
ŞENGÜL M. T., Wang S.
COMMUNICATIONS ON PURE AND APPLIED ANALYSIS, vol.13, no.6, pp.2609-2639, 2014 (Journal Indexed in SCI)

- XV. **Dynamic transitions of surface tension driven convection**
Dijkstra H., Sengul T., Wang S.
PHYSICA D-NONLINEAR PHENOMENA, vol.247, no.1, pp.7-17, 2013 (Journal Indexed in SCI)
- XVI. **Pattern formation in Rayleigh Bénard convection**
ŞENGÜL M. T. , Shouhong W.
Communications In Mathematical Sciences, vol.11, pp.315-343, 2013 (Journal Indexed in SCI Expanded)
- XVII. **Dynamic transitions for quasilinear systems and Cahn-Hilliard equation with Onsager mobility**
Liu H., Sengul T., Wang S.
JOURNAL OF MATHEMATICAL PHYSICS, vol.53, no.2, 2012 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **An effective method for the existence of the global attractor of a nonlinear wave equation**
ŞENGÜL M. T.
Applied Mathematics E-Notes, vol.7, pp.179-185, 2007 (Refereed Journals of Other Institutions)

Refereed Congress / Symposium Publications in Proceedings

- I. **Stability and Transitions of Quasi-Geostrophic Equations**
ŞENGÜL M. T.
International Conference on Recent Advances in Fluid Dynamics and Nonlinear Dynamics, 2 - 05 June 2019
- II. **On the stability and transitions of quasi-geostrophic equations**
ŞENGÜL M. T.
ICAMLS'18, 3 - 05 October 2018
- III. **Baroclinic Instability for 3D Boussinesq Flows**
ŞENGÜL M. T.
Workshop on Nonlinear PDEs in Applied Mathematics, 9 - 12 August 2017
- IV. **Dynamic Transitions of the Baroclinicity for Continuously Stratified Boussinesq Flow**
ŞENGÜL M. T.
Conference on Classical and Geophysical Fluid Dynamics: Modeling, Reduction and Simulation, 26 - 29 June 2017
- V. **Dynamic Transitions in a Shear Flow Model**
ŞENGÜL M. T.
The 8th International Workshop on Differential Equations and Applications, 3 - 05 June 2017
- VI. **Dynamic Transitions of Quasi Geostrophic Channel Flow**
ŞENGÜL M. T.
The 11th AIMS Conference on Dynamical Systems, Differential Equations and Applications, 1 - 05 July 2016
- VII. **Dynamic transitions of quasi geostrophic equations**
ŞENGÜL M. T.
The 7th International Workshop on Differential Equations and Applications, İzmir, Turkey, 28 - 31 July 2015
- VIII. **Dynamic Transitions and Hexagonal Patterns in Surface Tension Driven Convection**
ŞENGÜL M. T.
AMS Joint Mathematics Meeting, Boston, 5 - 09 January 2012
- IX. **Dynamic Transitions of Surface Tension Driven Convection**
ŞENGÜL M. T.
Incompressible Fluids, Turbulence and Mixing, In honor of Peter Constantin's 60th birthday, 13 - 16 October 2011
- X. **Dynamic Transitions and Hexagonal Patterns in Surface Tension Driven Convection**
ŞENGÜL M. T.
European Geosciences Union General Assembly, 3 - 08 April 2011

XI. Phase transition of binary systems

ŞENGÜL M. T.

2010 Fall Central Section Meeting, 5 - 08 November 2010

XII. Dynamic Transitions for the MHD Equations

ŞENGÜL M. T.

2009 AMS Fall Central Section Meeting, 17 - 20 October 2009

Supported Projects

Şengül M. T. , TUBITAK Project, Jeofiziksel akışlarda dinamik geçişlerin belirlenmesi, 2014 - 2016

Activities in Scientific Journals

Mathematical Methods In The Applied Sciences, Committee Member, 2021 - Continues

International journal of advances in engineering and pure sciences (Online), Committee Member, 2017 - Continues

Citations

Total Citations (WOS):94

h-index (WOS):7