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International Researcher IDs
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Education Information

Doctorate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Matematik, Turkey 2018 - 2024
Postgraduate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Matematik, Turkey 2015 - 2018
Undergraduate, Bogazici University, Faculty Of Arts And Sciences, Matematik, Turkey 2010 - 2015

Foreign Languages

English, C1 Advanced

Certificates, Courses and Trainings

Other, TEDx Istanbul 2018 Yeni Başlangıçlar, TEDx, 2018
Education Management and Planning, DergiPark ULAKBİM Dergi Sistemleri Eğitim Semineri, TÜBİTAK, 2018
Education Management and Planning, Pedagojik Formasyon Eğitimi, Yıldız Teknik Üniversitesi Eğitim Fakültesi, 2016

Dissertations

Doctorate, Capturing behaviours of the advection-dispersion-reaction models through neural networks, Yildiz Technical University, Faculty Of Arts & Science, Department Of Mathemeatics, 2024
Postgraduate, Behavior of First Order Differential Equations Through a Monte Carlo Based Algorithm, Yıldız Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, Matematik, 2018

Research Areas

Computer Science, Differential Equations, Dynamic Systems and Ergodic Theory, Statistics, Probability Theory, Stochastic Processes

Academic Titles / Tasks

Research Assistant, Yildiz Technical University, Faculty Of Arts & Science, Department Of Mathemeatics, 2017 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

I. **A discretization-free deep neural network-based approach for advection-dispersion-reaction mechanisms**
USLU TUNA H., Sarı M., Cosgun T.
Physica Scripta, vol.99, no.7, 2024 (SCI-Expanded)

II. **Unveiling advection–dominated interactions: Efficacy of neural networks in natural systems modelling**
USLU TUNA H., Sarı M., Cosgun T.
Numerical Heat Transfer, Part B: Fundamentals, 2024 (SCI-Expanded)

Articles Published in Other Journals

I. **Prediction of anemia with a particle swarm optimization-based approach**
AHMAD A., Alzaidi K. M. S., SARİ M., USLU H.
An International Journal of Optimization and Control: Theories & Applications (IJOCTA), vol.13, no.2, pp.214-223, 2023 (ESCI)

II. **Medical Model Estimation with Particle Swarm Optimization**
Sarı M., Ahmad A. A., Uslu H.
Communications Faculty of Sciences University of Ankara Series A1 Mathematics and Statistics, vol.70, no.1, pp.468-482, 2021 (ESCI)

III. **Advection-Diffusion Process through A Difference Scheme-Based Monte Carlo Simulation**
Ahmad A. A., Sarı M., Uslu H.
International Journal of Agricultural and Statistical Sciences, vol.16, pp.2027-2035, 2020 (ESCI)

IV. **Qualitative behavior of stiff ODEs through a stochastic approach**
Uslu H., Sarı M., Coşgun T.
An International Journal of Optimization and Control: Theories Applications (IJOCTA), vol.10, no.2, pp.181-187, 2020 (Scopus)

V. **Monte Carlo based stochastic approach for the first order nonlinear ODE systems**
Uslu H., Sarı M.
PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSITESI MUHENDISLIK BILIMLERI DERGISI, vol.26, no.1, pp.133-139, 2020 (ESCI)

VI. **A STOCHASTIC TREATMENT FOR OSCILLATORY BEHAVIOR WITH DAMPING**
Uslu H., Sarı M.
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI, vol.10, no.2, pp.179-186, 2019 (ESCI)

Books & Book Chapters

I. **A New Approach for the Solution of the Generalized Abel Integral Equation**
Coşgun T., Sarı M., Uslu H.
in: Numerical Solutions of Realistic Nonlinear Phenomena, Machado J.,Özdemir N.,Baleanu D., Editor, Springer, London/Berlin , Zug, pp.145-151, 2020

Refereed Congress / Symposium Publications in Proceedings

I. **A Discretization-Free Deep Neural Network-Based Approach for Advection-Dispersion-Reaction Processes**
USLU TUNA H., SARI M., COŞGUN T.
The Third International Conference on Applied Mathematics in Engineering (ICAME'24), Balıkesir, Turkey, 26 - 28 June 2024

II. **A Study of Predominant Advection with Dispersivity using Deep Neural Networks**
USLU TUNA H., SARI M., COŞGUN T.
International Conference on Modern Problems of Mathematics, Mechanics and their Applications, Baku, Azerbaijan, 20 - 22 June 2024

III. **Neural Network-Enhanced Analysis of Advection-Dominance including Dispersivity in Physical Perspective**
USLU TUNA H., SARI M., COŞGUN T.
The fifth International Congress of Applied Statistics (UYIK-2024), İstanbul, Turkey, 21 - 23 May 2024

IV. **Predicting Anemia in Medical Systems Using Artificial Neural Network Models**
SARI M., AHMAD A. A., DEMİR İ., AHMAD A. A., USLU H.
3rd International E-Conference on Mathematical Advances and Applications (ICOMAA-2020), 24 - 27 June 2020

V. **A stochastic approach for the nonlinear Duffing oscillator with damping term**
USLU H., SARI M.
2nd International Mathematical Developments and Applications Conference (ICOMAA-2019), 3 - 05 May 2019, pp.45

VI. **Behavior of Some Population Models through the Monte Carlo Method**
USLU H., SARI M.
International Conference on Applied Mathematics, Modeling and Life Science Problems (ICAMLS'xx18), İstanbul, Turkey, 3 - 05 October 2018

VII. **Monte Carlo Based Stochastic Approach for Some Nonlinear ODE Systems**
SARI M., USLU H.
Ninth International Conference on Numerical Methods and ApplicationsNMA'xx18, Borovets, Bulgaria, 20 - 24 August 2018, pp.51

VIII. **A Discussion of the Generalized Abel Integral Equation**
COŞGUN T., SARI M., USLU H.
The International Conference on Applied Mathematics in Engineering (ICAME'xx18), Balıkesir, Turkey, 27 - 29 June 2018, pp.89

IX. **The Qualitative Behavior of Some Stiff ODEs Through Stochastic Methods**
SARI M., USLU H., COŞGUN T.
The International Conference on Applied Mathematics in Engineering (ICAME'xx18), Balıkesir, Turkey, 27 - 29 June 2018, pp.102

X. **Solutions of Differential Equations through Monte Carlo Algorithms**
USLU H., SARI M.
The Second International Conference on Computational Mathematics and Engineering Sciences (CMES2017), 20 - 22 May 2017

XI. **Monte Carlo Solutions of Differential Equations**
USLU H., SARI M.
The Second International Conference on Modeling and Scientific Computing in Mathematical Engineering (MOCASIM2017), 17 - 20 April 2017

Memberships / Tasks in Scientific Organizations

Türk Matematik Derneği, Member, 2018 - Continues

Tasks In Event Organizations

Uslu H., 3rd International E-Conference on Mathematical Advances and Applications (ICOMAA-2020), Scientific Congress, Turkey, Haziran 2020

Uslu H., 2nd International Mathematical Developments and Applications Conference (ICOMAA-2019), Scientific Congress, İstanbul, Turkey, Mayıs 2019

Uslu H., International Conference on Mathematical Advances and Applications (ICOMAA2018), Scientific Congress, İstanbul, Turkey, Mayıs 2018

Metrics

Publication: 20
Citation (WoS): 1
Citation (Scopus): 4
H-Index (WoS): 1
H-Index (Scopus): 1

Congress and Symposium Activities

TMD Ankara Şubesi 2. Matematik Çalıştayı, Attendee, Ankara, Turkey, 2019

2nd International Mathematical Developments and Applications Conference (ICOMAA-2019), Working Group, İstanbul, Turkey, 2019

İstanbul Üniversitesi Fen Fakültesi Fizik Kulübü 9. Fizik Çalıştayı, Attendee, İstanbul, Turkey, 2019

TMD Ankara Şubesi 1. Matematik Çalıştayı, Attendee, Ankara, Turkey, 2019

International Conference on Applied Mathematics, Modeling and Life Science Problems (ICAMLS'18), Attendee, İstanbul, Turkey, 2018

Ninth International Conference on Numerical Methods and Applications (NMA'18), Attendee, Borovets, Bulgaria, 2018

The International Conference on Applied Mathematics in Engineering (ICAME'18), Attendee, Balıkesir, Turkey, 2018

International Conference on Mathematical Advances and Applications (ICOMAA2018), Attendee, İstanbul, Turkey, 2018

İstanbul Üniversitesi Fen Fakültesi Öğrenci Matematik Çalıştayı IV, Attendee, İstanbul, Turkey, 2018

Yapay Öğrenme Modelleri Geliştirirken Karşılaşılan Sorunlar ve Çözümleri Semineri, Attendee, İstanbul, Turkey, 2018

DergiPark ULAKBİM Dergi Sistemleri Eğitim Semineri, Attendee, İstanbul, Turkey, 2018

The Second International Conference on Computational Mathematics and Engineering Sciences (CMES2017), Attendee, İstanbul, Turkey, 2017

The Second International Conference on Modeling and Scientific Computing in Mathematical Engineering (MOCASIM2017), Attendee, Marrâkush, Morocco, 2017

Boğaziçi Üniversitesi Matematik Topluluğu II. Matematik ve Toplum Çalıştayı, Attendee, İstanbul, Turkey, 2017

First International Computational Science Research Workshop (CompSciResearch-2016/1), Attendee, İstanbul, Turkey, 2016

Scholarships

TÜBİTAK 2211 Yurt İçi Doktora Burs Programı, TUBITAK, 2018 - Continues
TÜBİTAK 2210 Yurt İçi Yüksek Lisans Burs Programı, TUBITAK, 2015 - 2017
TÜBİTAK 2205 Yurt İçi Lisans Burs Program, TUBITAK, 2014 - 2015