Res. Asst. ATAKAN AYGÜN

Personal Information

Email: atakana@metu.edu.tr
Web: https://avesis.metu.edu.tr/atakana

International Researcher IDs
ScholarID: 8frZpL8AAAAJ
ORCID: 0000-0003-4399-1935
Publons / Web Of Science ResearcherID: HKE-1389-2023
ScopusID: 57768826000
Yoksis Researcher ID: 367473

Education Information

Doctorate, Middle East Technical University, Turkey 2023 - Continues
Postgraduate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Mechanical
Engineering, Turkey 2020 - 2023
Undergraduate, Middle East Technical University, Faculty of Engineering, Department of Mechanical Engineering, Turkey
2015 - 2020

Dissertations

Postgraduate, Physics Informed Neural Networks for Computational Fluid Dynamics, Middle East Technical University,
2023

Research Areas

Fluid Mechanics, Heat and Mass Transfer, Computational fluid dynamics

Academic Titles / Tasks

Research Assistant, Middle East Technical University, Faculty of Engineering, Department of Mechanical Engineering,
2022 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Physics-informed neural networks for mesh deformation with exact boundary enforcement**
AYGÜN A., Maulik R., KARAKUŞ A.
Engineering Applications of Artificial Intelligence, vol.125, 2023 (SCI-Expanded)

II. **PHYSICS INFORMED NEURAL NETWORKS FOR TWO DIMENSIONAL INCOMPRESSIBLE THERMAL
CONVECTION PROBLEMS**
Aygün A., Karakus A.
ISI BILIMI VE TEKNIGI DERGISI/ JOURNAL OF THERMAL SCIENCE AND TECHNOLOGY, vol.42, no.2, pp.221-232,

2022 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

I. **Remin: A Physics-Informed Neural Network Framework and Its Application to Thermal Convection Problems**
    Taşdelen A. S., Aygün A., Karakuş A.
    24th Congress on Thermal Science and Technology, Ankara, Turkey, 6 - 08 September 2023, pp.1-7

II. **Physics-Informed Neural Networks for Boltzmann-BGK Equations with Absorbing Boundary Layers**
    Aygün A., Karakuş A.
    SIAM Conference on Computational Science and Engineering 2023, Amsterdam, Netherlands, 27 February - 03 March 2023

III. **Sıkıştırılabilir Euler Denklemlerinin Fizikle Öğrenen Yapay Sinir Ağları ile Çözümü**
    AYGÜN A.
    9. Ulusal Havacılık ve Uzay Konferansı 2022, İzmir, Turkey, 14 September 2022

Metrics

Publication: 5
Citation (WoS): 4
Citation (Scopus): 5
H-Index (WoS): 2
H-Index (Scopus): 2