Assoc. Prof. MUSTAFA AĞGÜL

Personal Information

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International Researcher IDs
ORCID: 0000-0003-4013-9907
Publons / Web Of Science ResearcherID: Z-4339-2019
ScopusID: 57192439377
Yoksis Researcher ID: 304436

Education Information

Doctorate, Michigan Technological University, College Of Sciences And Arts, Computational And Applied Mathematics, United States Of America 2016 - 2018
Postgraduate, Michigan Technological University, College Of Sciences And Arts, Computational And Applied Mathematics, United States Of America 2014 - 2016
Undergraduate, Hacettepe University, Fen Fakültesi, Matematik, Turkey 2006 - 2012

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, HIGH ACCURACY METHODS AND REGULARIZATION TECHNIQUES FOR FLUID FLOWS AND FLUID-FLUID INTERACTION, Michigan Technological University, Computational And Applied Mathematics, 2018
Postgraduate, A HIGH ACCURACY MINIMALLY INVASIVE REGULARIZATION TECHNIQUE FOR NAVIER-STOKES EQUATIONS AT HIGH REYNOLDS NUMBER, Michigan Technological University, Computational And Applied Mathematics, 2016

Research Areas

Mathematics, Differential Equations, Numerical Analysis, Natural Sciences

Academic Titles / Tasks

Associate Professor, Hacettepe University, Fen Fakültesi, Matematik Bölümü, 2021 - Continues
Assistant Professor, Hacettepe University, Fen Fakültesi, Matematik Bölümü, 2021 - Continues
Lecturer PhD, Hacettepe University, Fen Fakültesi, Matematik Bölümü, 2019 - 2021
Lecturer, Michigan Technological University, College of Sciences and Arts, Mathematical Sciences, 2015 - 2018

Academic and Administrative Experience

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Deferred correction method for the continuous data assimilation model**
AĞGÜL M., Çıbık A., Eroglu F. G., KAYA MERDAN S.
Computer Methods in Applied Mechanics and Engineering, vol.415, 2023 (SCI-Expanded)

II. **Artificial compression method for MHD system in Elsässer variables**
AĞGÜL M., Eroglu F. G., KAYA MERDAN S.
Applied Numerical Mathematics, vol.185, pp.72-87, 2023 (SCI-Expanded)

III. **FLUID-FLUID INTERACTION PROBLEMS AT HIGH REYNOLDS NUMBERS: REDUCING THE MODELING ERROR WITH LES-C**
AĞGÜL M., Labovsky A. E., Onal E., Schwiebert K. J.
SIAM Journal on Numerical Analysis, vol.61, no.2, pp.707-732, 2023 (SCI-Expanded)

IV. **Approximate deconvolution models for a fluid-fluid interaction problem with high Reynolds numbers**
AĞGÜL M., Labovsky A. E.
COMPUTERS & MATHEMATICS WITH APPLICATIONS, vol.117, pp.113-126, 2022 (SCI-Expanded)

V. **NS-? model for fluid-fluid interaction problems at high Reynolds numbers
**
AĞGÜL M., Labovsky A. E., Schwiebert K. J.
COMPUTER METHODS IN APPLIED MECHANICS AND ENGINEERING, vol.395, 2022 (SCI-Expanded)

VI. **A grad-div stabilized penalty projection algorithm for fluid-fluid interaction**
AĞGÜL M.
APPLIED MATHEMATICS AND COMPUTATION, vol.414, 2022 (SCI-Expanded)

VII. **Defect-deferred correction method based on a subgrid artificial viscosity modeling**
AĞGÜL M.
JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS, vol.497, no.2, 2021 (SCI-Expanded)

VIII. **Defect-deferred correction method based on a subgrid artificial viscosity model for fluid-fluid interaction**
AĞGÜL M., Kaya S.
APPLIED NUMERICAL MATHEMATICS, vol.160, pp.178-191, 2021 (SCI-Expanded)

IX. **Defect correcting extrapolation technique for Oseen and Navier–Stokes Flows**
AĞGÜL M.
Computers and Mathematics with Applications, vol.80, no.5, pp.1029-1049, 2020 (SCI-Expanded)

X. **A projection based variational multiscale method for a fluid–fluid interaction problem**
Ağgül M., Eroglu F. G., Kaya S., Labovsky A. E.
Computer Methods in Applied Mechanics and Engineering, vol.365, 2020 (SCI-Expanded)

XI. **Two approaches to creating a turbulence model with increased temporal accuracy**
Aggul M., Kaya S., Labovsky A. E.
APPLIED MATHEMATICS AND COMPUTATION, vol.358, pp.25-36, 2019 (SCI-Expanded)

XII. **A DEFECT-DEFERRED CORRECTION METHOD FOR FLUID-FLUID INTERACTION**
Aggul M., Connors J. M., Erkmen D., Labovsky A. E.
SIAM JOURNAL ON NUMERICAL ANALYSIS, vol.56, no.4, pp.2484-2512, 2018 (SCI-Expanded)

XIII. **A high accuracy minimally invasive regularization technique for navier-stokes equations at high reynolds number**
Aggul M., Labovsky A.
NUMERICAL METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS, vol.33, no.3, pp.814-839, 2017 (SCI-Expanded)

Scientific Refereeing

INTERNATİONAL JOURNAL OF AUTOMOTİVE ENGİNEERİNG AND TECHNOLOGİES, National Scientific Refreed Journal, June 2020
COMMUNICATIONS IN COMPUTATIONAL PHYSICS, SCI Journal, June 2020
BOUNDARY VALUE PROBLEMS, SCI Journal, March 2020

Metrics

Publication: 14
Citation (WoS): 10
Citation (Scopus): 96
H-Index (WoS): 2
H-Index (Scopus): 5

Congress and Symposium Activities

WOPAM 2019: Workshop on Pure and Applied Mathematics, Invited Speaker, Erzurum, Turkey, 2019
BEYOND 2019: Computational Science and Engineering Conference, Attendee, Ankara, Turkey, 2019
3rd National Polar Sciences Workshop, Attendee, Ankara, Turkey, 2019
Palandöken Uygulamalı Matematik ve Mühendislik Günleri, Invited Speaker, Erzurum, Turkey, 2019
International Conference on Applied Analysis and Mathematical Modeling, Attendee, İstanbul, Turkey, 2018
SIAM Great Lake Section Annual Meeting, Attendee, Michigan, United States Of America, 2018
MAA UP Regional Meeting at NMU, Attendee, Michigan, United States Of America, 2017
SIAM Great Lake Section Spring Meeting, Attendee, Michigan, United States Of America, 2017
12. ANKARA MATEMATİK GÜNLERİ, Attendee, Ankara, Turkey, 2017
The 2nd Annual Meeting of SIAM Central States Section, Attendee, Arkansas, United States Of America, 2016
ICAA-2016, Attendee, Kırşehir, Turkey, 2016
Numerical Analysis and Predictability of Fluid Motion, Attendee, Pennsylvania, United States Of America, 2016

Invited Talks

WOPAM 2019: Workshop on Pure and Applied Mathematics , Workshop, Atatürk Üniversitesi, Turkey, November 2019
Palandöken Uygulamalı Matematik ve Mühendislik Günleri , Conference, Atatürk Üniversitesi, Turkey, January 2019

Scholarships

Graduate Fellowship, University, 2015 - 2019
1416 Sayılı Kanun, Ministry of Education, 2013 - 2018

Awards

AĞGÜL M., Outstanding Research Award, Michigan Technological University, April 2018

Non Academic Experience