Prof. HAMDULLAH YÜCEL

Personal Information

Office Phone: +90 312 210 5607
Email: yucelh@metu.edu.tr
Web: https://blog.metu.edu.tr/yucelh/
Address: Uygulamalı Matematik Enst. S231

International Researcher IDs
ScholarID: bpkVrb0AAAAJ
ORCID: 0000-0002-0313-9767
Publons / Web Of Science ResearcherID: J-5488-2017
ScopusID: 55762734500
Yoksis Researcher ID: 164565

Education Information

Doctorate, Middle East Technical University, Institute of Applied Mathematics, Bilimsel Hesaplama (Dr), Turkey 2007 - 2012
Undergraduate, Middle East Technical University, Faculty of Arts and Sciences, Department of Mathematics, Turkey 2002 - 2007

Dissertations

Doctorate, Adaptive discontinuous Galerkin methods for convection dominated optimal control problems, Middle East Technical University, Institute of Applied Mathematics, 2012

Research Areas

Partial Differential Equations, Optimization, Numerical Analysis

Academic Titles / Tasks

Researcher, Max Planck Institute For Dynamics Of Complex Technical Systems, 2012 - 2015
Research Assistant, Middle East Technical University, Faculty of Arts and Sciences, Department of Mathematics, 2007 - 2012
Researcher, Rice University, Department Of Computational And Applied Mathematics, 2010 - 2011
Researcher, Technische Universitaet Darmstadt, Department Of Mathematics, 2008 - 2008

Courses

FINITE ELEMENT METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS: THEORY AND APPLICATIONS, Postgraduate, 2023 - 2024, 2021 - 2022, 2020 - 2021, 2017 - 2018, 2016 - 2017

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Stochastic discontinuous Galerkin methods for robust deterministic control of convection-diffusion equations with uncertain coefficients**
Çiloğlu P., Yücel H.
ADVANCES IN COMPUTATIONAL MATHEMATICS, vol.49, pp.16, 2023 (SCI-Expanded)

II. **A stochastic gradient algorithm with momentum terms for optimal control problems governed by a convection–diffusion equation with random diffusivity**
TORAMAN S. C., YÜCEL H.
Journal of Computational and Applied Mathematics, vol.422, 2023 (SCI-Expanded)

III. **Stochastic discontinuous Galerkin methods with low–rank solvers for convection diffusion equations**
ÇİLOĞLU P., YÜCEL H.
Applied Numerical Mathematics, vol.172, pp.157-185, 2022 (SCI-Expanded)

IV. **Intra- and inter-cluster link scheduling in CUPS-based ad hoc networks**
Eksert M. L., Yücel H., Onur E.
Computer Networks, vol.185, 2021 (SCI-Expanded)

V. **Goal-oriented a posteriori error estimation for Dirichlet boundary control problems**
YÜCEL H.
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.381, 2021 (SCI-Expanded)

VI. **Energy Stable Discontinuous Galerkin Finite Element Method for the Allen-Cahn Equation**
KARASÖZEN B., Uzunca M., Sariaydin-Filibelioglu A., YÜCEL H.
INTERNATIONAL JOURNAL OF COMPUTATIONAL METHODS, vol.15, no.3, 2018 (SCI-Expanded)

VII. **ADAPTIVE DISCONTINUOUS GALERKIN APPROXIMATION OF OPTIMAL CONTROL PROBLEMS GOVERNED BY TRANSIENT CONVECTION-DIFFUSION EQUATIONS**
YÜCEL H., Stoll M., Benner P.
ELECTRONIC TRANSACTIONS ON NUMERICAL ANALYSIS, vol.48, pp.407-434, 2018 (SCI-Expanded)

VIII. **Optimal control of convective FitzHugh-Nagumo equation**
Uzunca M., Kucukseyhan T., YÜCEL H., KARASÖZEN B.
COMPUTERS & MATHEMATICS WITH APPLICATIONS, vol.73, no.9, pp.2151-2169, 2017 (SCI-Expanded)

IX. **ADAPTIVE SYMMETRIC INTERIOR PENALTY GALERKIN METHOD FOR BOUNDARY CONTROL PROBLEMS**
BENNER P., Yuecel H.
SIAM JOURNAL ON NUMERICAL ANALYSIS, vol.55, no.2, pp.1101-1133, 2017 (SCI-Expanded)

X. **A discontinuous Galerkin method for optimal control problems governed by a system of convection-diffusion PDEs with nonlinear reaction terms**
Yuecel H., STOLL M., BENNER P.
COMPUTERS & MATHEMATICS WITH APPLICATIONS, vol.70, no.10, pp.2414-2431, 2015 (SCI-Expanded)

XI. **Adaptive discontinuous Galerkin methods for state constrained optimal control problems governed by convection diffusion equations**
Yuecel H., BENNER P.
COMPUTATIONAL OPTIMIZATION AND APPLICATIONS, vol.62, no.1, pp.291-321, 2015 (SCI-Expanded)

XII. **Distributed optimal control of time-dependent diffusion-convection-reaction equations using space-time discretization**
Seymen Z. K., YÜCEL H., KARASÖZEN B.
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.261, pp.146-157, 2014 (SCI-Expanded)

XIII. **A priori error analysis of the upwind symmetric interior penalty Galerkin (SIPG) method for the optimal control problems governed by unsteady convection diffusion equations**
AKMAN T., Yucel H., KARASÖZEN B.
COMPUTATIONAL OPTIMIZATION AND APPLICATIONS, vol.57, no.3, pp.703-729, 2014 (SCI-Expanded)

XIV. **Adaptive Symmetric Interior Penalty Galerkin (SIPG) method for optimal control of convection diffusion equations with control constraints**
Yucel H., Karasozen B.

OPTIMIZATION, vol.63, no.1, pp.145-166, 2014 (SCI-Expanded)

XV. **Discontinuous Galerkin finite element methods with shock-capturing for nonlinear convection dominated models**
Yucel H., STOLL M., BENNER P.
COMPUTERS & CHEMICAL ENGINEERING, vol.58, pp.278-287, 2013 (SCI-Expanded)

Articles Published in Other Journals

I. **Symmetric interior penalty Galerkin method for fractional-in-space phase-field equations**
Stoll M., YÜCEL H.
AIMS MATHEMATICS, vol.3, no.1, pp.66-95, 2018 (ESCI)

II. **Distributed optimal control problems governed by coupled convection dominated PDEs with control constraints**
Yücel H., Benner P.
Lecture Notes in Computational Science and Engineering, vol.103, pp.469-478, 2015 (Scopus)

Tasks In Event Organizations

Yücel H., BEYOND 2019: Computational Science and Engineering Conference, Workshop Organization, Ankara, Turkey, Eylül 2019

Yücel H., BEYOND: Workshop on Computational Science and Engineering, Workshop Organization, Ankara, Turkey, Ekim 2018

Metrics

Publication: 43
Citation (WoS): 120
Citation (Scopus): 132
H-Index (WoS): 8
H-Index (Scopus): 8

Awards

Yücel H., Bilim Akademisi Genç Bilim İnsanı Ödülü, Bilim Akademisi, March 2022