

## Prof. HAMDULLAH YÜCEL

### Personal Information

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### International Researcher IDs

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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. **A strategy based on statistical modelling and multi-objective optimization to design a dishwasher cleaning cycle**  
Anapa K, YÜCEL H.  
Expert Systems with Applications, vol.249, 2024 (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 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)
- IV. **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)
- V. **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)
- VI. **Goal-oriented a posteriori error estimation for Dirichlet boundary control problems**  
YÜCEL H.  
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.381, 2021 (SCI-Expanded)
- VII. **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)
- VIII. **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)
- IX. **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)
- X. **ADAPTIVE SYMMETRIC INTERIOR PENALTY GALERKIN METHOD FOR BOUNDARY CONTROL PROBLEMS**  
BENNER P., Yücel H.  
SIAM JOURNAL ON NUMERICAL ANALYSIS, vol.55, no.2, pp.1101-1133, 2017 (SCI-Expanded)
- XI. **A discontinuous Galerkin method for optimal control problems governed by a system of convection-diffusion PDEs with nonlinear reaction terms**  
Yücel H., STOLL M., BENNER P.  
COMPUTERS & MATHEMATICS WITH APPLICATIONS, vol.70, no.10, pp.2414-2431, 2015 (SCI-Expanded)
- XII. **Adaptive discontinuous Galerkin methods for state constrained optimal control problems governed by convection diffusion equations**  
Yücel H., BENNER P.  
COMPUTATIONAL OPTIMIZATION AND APPLICATIONS, vol.62, no.1, pp.291-321, 2015 (SCI-Expanded)
- XIII. **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)
- XIV. **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., Yücel H., KARASÖZEN B.

COMPUTATIONAL OPTIMIZATION AND APPLICATIONS, vol.57, no.3, pp.703-729, 2014 (SCI-Expanded)

- XV. **Adaptive Symmetric Interior Penalty Galerkin (SIPG) method for optimal control of convection diffusion equations with control constraints**

Yücel H., Karasozen B.

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

- XVI. **Discontinuous Galerkin finite element methods with shock-capturing for nonlinear convection dominated models**

Yücel 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: 44

Citation (WoS): 135

Citation (Scopus): 148

H-Index (WoS): 8

H-Index (Scopus): 8

## Awards

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