

Prof. Dr. BÜLENT KARASÖZEN

Kişisel Bilgiler

İş Telefonu: [+90 312 210 2987](tel:+903122102987)

Fax Telefonu: [+90 312 210 2985](tel:+903122102985)

E-posta: bulent@metu.edu.tr

Web: <https://avesis.metu.edu.tr/bulent>

Uluslararası Araştırmacı ID'leri

ScholarID: R906kj0AAAAJ

ORCID: 0000-0003-1037-5431

Publons / Web Of Science ResearcherID: K-1879-2014

ScopusID: 6603369633

Yoksis Araştırmacı ID: 1233

Araştırma Alanları

Temel Bilimler

Akademik Unvanlar / Görevler

Prof. Dr., Orta Doğu Teknik Üniversitesi, Fen Edebiyat Fakültesi, Matematik Bölümü, 1996 - Devam Ediyor

Yönetilen Tezler

KARASÖZEN B., Reduced-order modeling of cross-diffusion systems, Doktora, G.MÜLAYİM(Öğrenci), 2022

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- I. **Reduced-order modeling for Ablowitz–Ladik equation**
Uzunca M., KARASÖZEN B.
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- II. **Linearly implicit methods for Allen-Cahn equation**
Uzunca M., KARASÖZEN B.
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- III. **Global energy preserving model reduction for multi-symplectic PDEs**
Uzunca M., KARASÖZEN B., Aydın A.
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- IV. **Nonintrusive model order reduction for cross-diffusion systems**
KARASÖZEN B., Mülayim G., Uzunca M.
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KARASÖZEN B., Yildiz S., Uzunca M.
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- VII. **Structure-preserving reduced-order modeling of Korteweg–de Vries equation**
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- VIII. **Learning reduced-order dynamics for parametrized shallow water equations from data**
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- IX. **Reduced order modelling of nonlinear cross-diffusion systems**
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- XI. **Pricing European and American options under Heston model using discontinuous Galerkin finite elements**
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- XII. **Reduced order optimal control of the convective FitzHugh-Nagumo equations**
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- XIII. **Distributed optimal control of viscous Burgers' equation via a high-order, linearization, integral, nodal discontinuous Gegenbauer-Galerkin method**
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- XIV. **High-order integral nodal discontinuous Gegenbauer-Galerkin method for solving viscous Burgers' equation**
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- XVII. **Structure preserving integration and model order reduction of skew-gradient reaction-diffusion systems**
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- XVIII. **Energy Stable Interior Penalty Discontinuous Galerkin Finite Element Method for Cahn-Hilliard Equation**
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- XXII. **Model order reduction for nonlinear Schrodinger equation**
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- XXIII. **Variational time discretization methods for optimal control problems governed by diffusion-convection-reaction equations**
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- XXIV. **Adaptive discontinuous Galerkin methods for non-linear diffusion-convection-reaction equations**

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- XXXI. **Energy preserving integration of bi-Hamiltonian partial differential equations**
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- XL. **Finite volume simulation of viscoelastic laminar flow in a lid-driven cavity**
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- XLI. **Hybrid systems: Modeling, simulation and optimization**
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- XLIII. **Portrait of a Consortium: ANKOS (Anatolian University Libraries Consortium)**
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- XLIV. **Modeling and simulation of metabolic networks for estimation of biomass accumulation parameters**
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- XLVI. **Destruction of the family of steady states in the planar problem of Darcy convection**
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- L. **Discrete gradient method: Derivative-free method for nonsmooth optimization**
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- LI. **Challenges of continuous optimization in theory and applications**
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- LII. **Survey of trust-region derivative free optimization methods**
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- LIII. **Optimization in data mining**
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- LIV. **Selection of steady states in planar Darcy convection**
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- LV. **Poisson integrators for Volterra lattice equations**
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- LX. **Poisson integrators**
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- LXII. **Invariant reduction of partially potential branching equations and iterative methods in the problem on a bifurcation point with a symmetry**
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