

Prof. BÜLENT KARASÖZEN

Personal Information

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Advising Theses

- KARASÖZEN B., Electricity load and price forecasting of Turkish electricity markets, Post Graduate, O.KALAY(Student), 2018
- KARASÖZEN B., Optimal control and reduced order modelling of fitzhugh-nagumo equation, Doctorate, T.KÜÇÜKSEYHAN(Student), 2017
- KARASÖZEN B., Numerical solution of semi-linear advection-diffusion-reaction equations by discontinuous Galerkin methods, Post Graduate, S.YILDIZ(Student), 2016
- RAFATOV İ., KARASÖZEN B., Numerical modelling of spatio-temporal patterns in a DC-driven gas discharge-semiconductor system, Post Graduate, G.ÖZDEN(Student), 2015
- KARASÖZEN B., Discontinuous Galerkin finite elements method with structure preserving time integrators for gradient flow equations, Doctorate, A.SARIAYDIN(Student), 2015
- KARASÖZEN B., Local improvements to reduced-order approximations of pde-constrained optimization problems, Doctorate, T.AKMAN(Student), 2015
- KARASÖZEN B., Numerical simulation of advective Lotka-Volterra systems by discontinuous Galerkin method, Post Graduate, S.AKTAŞ(Student), 2015
- KARASÖZEN B., Numerical solution of the fisher's equation with discontinuous galerkin method, Post Graduate, F.ÖZSOY(Student), 2015
- YÜCEL H., KARASÖZEN B., Multigrid methods for optimal control problems governed by convection-diffusion equations, Post Graduate, Ö.MURAT(Student), 2015
- KARASÖZEN B., Adaptive discontinuous Galerkin methods for non-linear reactive flows, Doctorate, M.UZUNCA(Student), 2014
- KARASÖZEN B., Solving optimal control time-dependent diffusion-convection-reaction equations by space time discretization, Doctorate, Z.SEYEMEN(Student), 2013
- KARASÖZEN B., Derivative free algorithms for large scale non-smooth optimization and their applications, Doctorate, A.HAKAN(Student), 2013
- KARASÖZEN B., Adaptive discontinuous Galerkin methods for convection dominated optimal control problems, Doctorate, H.YÜCEL(Student), 2012
- KARASÖZEN B., Discontinuous Galerkin methods for time-dependent convection dominated optimal control problems, Post Graduate, T.AKMAN(Student), 2011
- KARASÖZEN B., Space-time discretization of optimal control of Burgers equation using both discretize-then-optimize and optimize-then-discretize approaches, Doctorate, F.NURAY(Student), 2011
- KARASÖZEN B., Energy preserving methods for Kortewe de Vries type equations, Post Graduate, G.ŞİMŞEK(Student), 2011
- KARASÖZEN B., A semismooth newton method for generalized semi-infinite programming problems, Doctorate, A.TEZEL(Student), 2010
- KARASÖZEN B., Parameter estimation in generalized partial linear models with tikhanov regularization, Post Graduate, B.KAYHAN(Student), 2010
- KARASÖZEN B., Computation and analysis of spectra of large networks with directed graphs, Post Graduate, A.SARIAYDIN(Student), 2010
- KARASÖZEN B., Parameter estimation in generalized partial linear models with conic quadratic programming, Post Graduate, G.ÇELİK(Student), 2010

KARASÖZEN B., Computation and analysis of spectra of large undirected networks, Post Graduate, Ö.ERDEM(Student), 2010

UĞUR Ö., KARASÖZEN B., Derivative free multilevel optimization methods, Post Graduate, B.PEKMEN(Student), 2009

ULUDAĞ Y., KARASÖZEN B., Numerical investigation of the viscoelastic fluids, Doctorate, K.YAPICI(Student), 2008

KARASÖZEN B., Statistical learning and optimization methods for improving the efficiency in landscape image clustering and classification problems, Post Graduate, S.GÜROL(Student), 2005

KARASÖZEN B., Geometric integrators for coupled nonlinear Schrödinger equation, Doctorate, A.AYDIN(Student), 2005

KARASÖZEN B., Smooth and nonsmooth newton methods for solving semi-infinite programming, Post Graduate, A.TEZEL(Student), 2005

KARASÖZEN B., Mathematical modelling of enzymatic reactions, simulation and parameter estimation, Post Graduate, S.ÖZÖĞÜR(Student), 2005

KARASÖZEN B., Derivative free optimization methods: Application in stirrer configuration and data clustering, Post Graduate, B.AKTEKE(Student), 2005

KARASÖZEN B., Analysis and prediction of gene expression patterns by dynamical systems, and by a combinatorial algorithm, Post Graduate, M.TAŞTAN(Student), 2005

KARASÖZEN B., Numerical bifurcation analysis of cosymmetric dynamical systems, Post Graduate, Ö.CANER(Student), 2003

KARASÖZEN B., Multi-symplectic pseudospectral methods for nonlinear Schrödinger equation, Post Graduate, Z.GEÇMEN(Student), 2002

KARASÖZEN B., Numerical integration of constrained hamiltonian systems, Post Graduate, B.GÜRTUNCA(Student), 1999

KARASÖZEN B., Poisson integrators for completely integrable hamiltonian systems, Post Graduate, A.AYDIN(Student), 1998

KARASÖZEN B., Modified stationary iterative for linear systems of equations, Doctorate, A.YAŞAR(Student), 1996

KARASÖZEN B., Numerical solutions of hamiltonian systems in normal form, Post Graduate, C.ÇELİK(Student), 1993

KARASÖZEN B., Multigrid methods for the solutions of vector equations, Post Graduate, U.SALİH(Student), 1992

KARASÖZEN B., Iterated defect correction methods for semi-explicit differential-algebraic equations, Doctorate, Ş.SOMALI(UZUNER)(Student), 1990

KARASÖZEN B., Adaptive moving grid methods quasilinear parabolic systems, Post Graduate, A.AL(Student), 1989

KARASÖZEN B., Collocation methods for linear two point boundary value problems by using monomial basis, Post Graduate, A.ABUSAMAN(Student), 1987

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **Pricing European and American options under Heston model using discontinuous Galerkin finite elements**
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- **Structure preserving model order reduction of shallow water equations**
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- **Reduced order optimal control of the convective FitzHugh-Nagumo equations**
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- **Distributed optimal control of viscous Burgers' equation via a high-order, linearization, integral, nodal discontinuous Gegenbauer-Galerkin method**
Elgindy K. T. , KARASÖZEN B.
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- **High-order integral nodal discontinuous Gegenbauer-Galerkin method for solving viscous Burgers' equation**
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- APPLIED MATHEMATICS AND COMPUTATION, vol.347, pp.194-209, 2019 (Journal Indexed in SCI)
Energy preserving model order reduction of the nonlinear Schrodinger equation
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- ADVANCES IN COMPUTATIONAL MATHEMATICS, vol.44, pp.1769-1796, 2018 (Journal Indexed in SCI)
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- ADVANCED HEALTHCARE MATERIALS, vol.5, pp.2972-2982, 2016 (Journal Indexed in SCI)
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- JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.261, pp.146-157, 2014 (Journal Indexed in SCI)
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- COMPUTATIONAL OPTIMIZATION AND APPLICATIONS, vol.57, pp.703-729, 2014 (Journal Indexed in SCI)

- **Aggregate codifferential method for nonsmooth DC optimization**
Tor A. H. , Bagirov A., KARASÖZEN B.
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- **An all-at-once approach for the optimal control of the unsteady Burgers equation**
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- **Adaptive Symmetric Interior Penalty Galerkin (SIPG) method for optimal control of convection diffusion equations with control constraints**
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- **Energy preserving integration of bi-Hamiltonian partial differential equations**
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- **Staggered grids for three-dimensional convection of a multicomponent fluid in a porous medium**
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- **Numerical Analysis of Viscoelastic Fluids in Steady Pressure-Driven Channel Flow**
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- **Natural convection in porous annular domains: Mimetic scheme and family of steady states**
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- **Optimization of Supply Chain Systems with Price Elasticity of Demand**
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- **Multisymplectic box schemes for the complex modified Korteweg-de Vries equation**
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- **Finite volume simulation of viscoelastic laminar flow in a lid-driven cavity**
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- **Hybrid systems: Modeling, simulation and optimization**
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- **A model of angiogenesis by hybrid systems with delay on the piecewise constant part**
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- **Portrait of a Consortium: ANKOS (Anatolian University Libraries Consortium)**
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- **Modeling and simulation of metabolic networks for estimation of biomass accumulation parameters**
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- **Multi-symplectic integration of coupled non-linear Schrodinger system with soliton solutions**
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- **Destruction of the family of steady states in the planar problem of Darcy convection**
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- **Numerical investigation of the effect of the Rushton type turbine design factors on agitated tank flow characteristics**
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- **Symplectic and multisymplectic Lobatto methods for the "good" Boussinesq equation**
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- **Discrete gradient method: Derivative-free method for nonsmooth optimization**
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- **Survey of trust-region derivative free optimization methods**
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- **Optimization in data mining**
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- **Poisson integrators for Volterra lattice equations**
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- **Feature cluster "Advances in continuous optimization"**
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- **Numerical method for optimizing stirrer configurations**
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- **Cosymmetry preserving finite-difference methods for convection equations in a porous medium**
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Articles Published in Other Journals

- **Earthquake location methods**
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- GEM-INTERNATIONAL JOURNAL ON GEOMATHEMATICS, vol.11, 2020 (Journal Indexed in ESCI)
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Refereed Congress / Symposium Publications in Proceedings

- **Model Order Reduction for Pattern Formation in FitzHugh-Nagumo Equations**
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- **Time-Space Adaptive Method of Time Layers for the Advective Allen-Cahn Equation**
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- **Convection in a Porous Medium and Mimetic Scheme in Polar Coordinates**
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- **Computation of Graph Spectra of Protein-Protein Interaction Networks**
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- **Energy preserving methods for lattice equations**
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- **Institute of Applied Mathematics at Middle East Technical University, Ankara (Panel Discussion Contribution)**
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- KARASÖZEN B., Arslantaş Ö. M. , Project Supported by Higher Education Institutions, Taşımın Ağırlıklı Eniyilemeli Kontrol Problemleri için Çoklu Ağ Yöntemleri, 2014 - 2014
- KARASÖZEN B., Murat U., Akman T., Project Supported by Higher Education Institutions, Doğrusal Olmayan Difüzyon-Konveksiyon-Reaksiyon Denklemlerinin ve Eniyilemeli Kontrol Problemlerinin Uyarlamalı, Kesintili Galerkin Yöntemleriyle Çözümü, 2013 - 2013
- KARASÖZEN B., MANGUOĞLU M., Project Supported by Higher Education Institutions, Eyer noktası doğrusal sistemlerin çözümü için parallel algoritmalar ve bunların PDE-kısıtlı optimizasyon probleminde uygulanması, 2013 - 2013
- KARASÖZEN B., Project Supported by Higher Education Institutions, Adveksiyon Ağırlıklı Eniyilemeli Kontrol Problemlerinin Model İndirgeme Yöntemleriyle Çözümü, 2012 - 2012
- KARASÖZEN B., Project Supported by Higher Education Institutions, Adveksiyon Ağırlıklı Eniyilemeli Kontrol Problemlerinin Kesintili Galerkin Yöntemleriyle Çözümü, 2011 - 2011
- KARASÖZEN B., Project Supported by Higher Education Institutions, Çok Katmanlı Eniyileme Problemlerinin Türev Gerektirmeyen Yöntemlerle Çözümü, 2009 - 2009

Citations

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