

# Prof. BÜLENT KARASÖZEN

## Personal Information

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## International Researcher IDs

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ScopusID: 6603369633

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## Research Areas

Natural Sciences

## Academic Titles / Tasks

Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Mathematics, 1996 - Continues

## Advising Theses

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

KARASÖZEN B., Reduced-order modelling of shallow water equations, Doctorate, S.YILDIZ(Student), 2021

KARASÖZEN B., Electricity load and price forecasting of Turkish electricity markets, Postgraduate, O.KALAY(Student), 2018

KARASÖZEN B., Optimal control and reduced order modelling of Fitzhugh–Nagumo equation, Doctorate, T.Küçükseyhan(Student), 2017

KARASÖZEN B., Optimal control and reduced order modelling of fitzhugh-nagumo equation, Doctorate, T.KÜÇÜKSEYHAN(Student), 2017

YOLCU OKUR Y., KARASÖZEN B., Algorithmic trading strategies using dynamic mode decomposition: applied to Turkish stock market, Postgraduate, M.Can(Student), 2017

KARASÖZEN B., Numerical solution of semi-linear advection-diffusion-reaction equations by discontinuous Galerkin methods, Postgraduate, S.YILDIZ(Student), 2016

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 solution of the fisher's equation with discontinuous galerkin method, Postgraduate, F.ÖZSOY(Student), 2015

KARASÖZEN B., Numerical solution of the Fisher's equation with discontinuous Galerkin method, Postgraduate, F.Özsoy(Student), 2015

KARASÖZEN B., Numerical simulation of advective Lotka-Volterra systems by discontinuous Galerkin method, Postgraduate, S.AKTAŞ(Student), 2015

KARASÖZEN B., RAFATOV İ., Numerical modelling of spatio-temporal patterns in a DC-driven gas discharge-semiconductor system, Postgraduate, G.ÖZDEN(Student), 2015

KARASÖZEN B., YÜCEL H., Multigrid methods for optimal control problems governed by convection-diffusion equations, Postgraduate, Ö.MURAT(Student), 2015

KARASÖZEN B., Adaptive discontinuous Galerkin methods for non-linear reactive flows, Doctorate, M.UZUNCA(Student), 2014

KARASÖZEN B., Derivative free algorithms for large scale non-smooth optimization and their applications, Doctorate, A.HAKAN(Student), 2013

KARASÖZEN B., Solving optimal control time-dependent diffusion-convection-reaction equations by space time discretization, Doctorate, Z.SEYMEN(Student), 2013

KARASÖZEN B., Solving optimal control time-dependent diffusion-convection-reaction equations by space time discretizations, Doctorate, Z.Seymen(Student), 2013

KARASÖZEN B., Adaptive discontinuous Galerkin methods for convection dominated optimal control problems, Doctorate, H.YÜCEL(Student), 2012

KARASÖZEN B., Energy preserving methods for Korteweg de Vries type equations, Postgraduate, G.ŞİMŞEK(Student), 2011

KARASÖZEN B., Energy preserving methods for Kortewe de Vries type equations, Postgraduate, G.ŞİMŞEK(Student), 2011

KARASÖZEN B., Discontinuous Galerkin methods for time-dependent convection dominated optimal control problems, Postgraduate, 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., 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 tikhonov regularization, Postgraduate, B.KAYHAN(Student), 2010

KARASÖZEN B., Computation and analysis of spectra of large networks with directed graphs, Postgraduate, A.SARIYDIN(Student), 2010

KARASÖZEN B., Parameter estimation in generalized partial linear models with conic quadratic programming, Postgraduate, G.ÇELİK(Student), 2010

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

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

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

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

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

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

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

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

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

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

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

KARASÖZEN B., Multi-symplectic pseudospectral methods for nonlinear schrödinger equation., Postgraduate, Z.Geçmen(Student), 2002

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

KARASÖZEN B., Numerical integration of constrained Hamiltonian systems, Postgraduate, B.Gürtunca(Student), 1999

KARASÖZEN B., Poisson integrators for completely integrable Hamiltonian systems, Postgraduate, A.Aydın(Student), 1998

KARASÖZEN B., Poisson integrators for completely integrable hamiltanion systems, Postgraduate, A.AYDIN(Student), 1998

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

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, Postgraduate, C.ÇELİK(Student), 1993

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

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

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

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

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

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Reduced-order modeling for Ablowitz–Ladik equation**  
Uzunca M., KARASÖZEN B.  
Mathematics and Computers in Simulation, vol.213, pp.261-273, 2023 (SCI-Expanded)
- II. **Linearly implicit methods for Allen-Cahn equation**  
Uzunca M., KARASÖZEN B.  
Applied Mathematics and Computation, vol.450, 2023 (SCI-Expanded)
- III. **Global energy preserving model reduction for multi-symplectic PDEs**  
Uzunca M., KARASÖZEN B., Aydın A.  
Applied Mathematics and Computation, vol.436, 2023 (SCI-Expanded)
- IV. **Nonintrusive model order reduction for cross-diffusion systems**  
KARASÖZEN B., Mülayim G., Uzunca M.  
Communications in Nonlinear Science and Numerical Simulation, vol.115, 2022 (SCI-Expanded)
- V. **Intrusive and data-driven reduced order modelling of the rotating thermal shallow water equation**  
KARASÖZEN B., Yıldız S., Uzunca M.  
Applied Mathematics and Computation, vol.421, 2022 (SCI-Expanded)
- VI. **Energy preserving reduced-order modeling of the rotating thermal shallow water equation**  
KARASÖZEN B., Yİldız S., Uzunca M.  
Physics of Fluids, vol.34, no.5, 2022 (SCI-Expanded)
- VII. **Structure-preserving reduced-order modeling of Korteweg–de Vries equation**  
Uzunca M., KARASÖZEN B., Yıldız S.  
Mathematics and Computers in Simulation, vol.188, pp.193-211, 2021 (SCI-Expanded)
- VIII. **Learning reduced-order dynamics for parametrized shallow water equations from data**  
Yildiz S., Goyal P., Benner P., Karasözen B.  
INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN FLUIDS, vol.93, no.8, pp.2803-2821, 2021 (SCI-Expanded)
- IX. **Reduced order modelling of nonlinear cross-diffusion systems**  
KARASÖZEN B., Mülayim G., Uzunca M., Yıldız S.  
Applied Mathematics and Computation, vol.401, 2021 (SCI-Expanded)

- X. **Structure preserving model order reduction of shallow water equations**  
KARASÖZEN B., Yildiz S., UZUNCA M.  
MATHEMATICAL METHODS IN THE APPLIED SCIENCES, vol.44, no.1, pp.476-492, 2021 (SCI-Expanded)
- XI. **Pricing European and American options under Heston model using discontinuous Galerkin finite elements**  
KOZPINAR S., UZUNCA M., KARASÖZEN B.  
MATHEMATICS AND COMPUTERS IN SIMULATION, vol.177, pp.568-587, 2020 (SCI-Expanded)
- XII. **Reduced order optimal control of the convective FitzHugh-Nagumo equations**  
KARASÖZEN B., UZUNCA M., KÜÇÜKSEYHAN T.  
COMPUTERS & MATHEMATICS WITH APPLICATIONS, vol.79, no.4, pp.982-995, 2020 (SCI-Expanded)
- XIII. **Distributed optimal control of viscous Burgers' equation via a high-order, linearization, integral, nodal discontinuous Gegenbauer-Galerkin method**  
Elgindy K. T., KARASÖZEN B.  
OPTIMAL CONTROL APPLICATIONS & METHODS, vol.41, no.1, pp.253-277, 2020 (SCI-Expanded)
- XIV. **High-order integral nodal discontinuous Gegenbauer-Galerkin method for solving viscous Burgers' equation**  
Elgindy K. T., KARASÖZEN B.  
INTERNATIONAL JOURNAL OF COMPUTER MATHEMATICS, vol.96, no.10, pp.2039-2078, 2019 (SCI-Expanded)
- XV. **Structure preserving reduced order modeling for gradient systems**  
Akman Yildiz T., UZUNCA M., KARASÖZEN B.  
APPLIED MATHEMATICS AND COMPUTATION, vol.347, pp.194-209, 2019 (SCI-Expanded)
- XVI. **Energy preserving model order reduction of the nonlinear Schrodinger equation**  
KARASÖZEN B., UZUNCA M.  
ADVANCES IN COMPUTATIONAL MATHEMATICS, vol.44, no.6, pp.1769-1796, 2018 (SCI-Expanded)
- XVII. **Structure preserving integration and model order reduction of skew-gradient reaction-diffusion systems**  
KARASÖZEN B., Kucukseyhan T., Uzunca M.  
ANNALS OF OPERATIONS RESEARCH, vol.258, no.1, pp.79-106, 2017 (SCI-Expanded)
- XVIII. **Energy Stable Interior Penalty Discontinuous Galerkin Finite Element Method for Cahn-Hilliard Equation**  
Sariaydin-Filibelioglu A., KARASÖZEN B., Uzunca M.  
INTERNATIONAL JOURNAL OF NONLINEAR SCIENCES AND NUMERICAL SIMULATION, vol.18, no.5, pp.303-314, 2017 (SCI-Expanded)
- XIX. **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)
- XX. **Moving mesh discontinuous Galerkin methods for PDEs with traveling waves**  
UZUNCA M., KARASÖZEN B., Kucukseyhan T.  
APPLIED MATHEMATICS AND COMPUTATION, vol.292, pp.9-18, 2017 (SCI-Expanded)
- XXI. **Quantification of Type, Timing, and Extent of Cell Body and Nucleus Deformations Caused by the Dimensions and Hydrophilicity of Square Prism Micropillars**  
Hasturk O., Sivas A., KARASÖZEN B., Demirci U., Hasirci N., HASIRCI V. N.  
ADVANCED HEALTHCARE MATERIALS, vol.5, no.23, pp.2972-2982, 2016 (SCI-Expanded)
- XXII. **Model order reduction for nonlinear Schrodinger equation**  
KARASÖZEN B., Akkoyunlu C., Uzunca M.  
APPLIED MATHEMATICS AND COMPUTATION, vol.258, pp.509-519, 2015 (SCI-Expanded)
- XXIII. **Variational time discretization methods for optimal control problems governed by diffusion-convection-reaction equations**  
Akman T., Karasozen B.  
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.272, pp.41-56, 2014 (SCI-Expanded)
- XXIV. **Adaptive discontinuous Galerkin methods for non-linear diffusion-convection-reaction equations**

- UZUNCA M., KARASÖZEN B., Manguoglu M.  
COMPUTERS & CHEMICAL ENGINEERING, vol.68, pp.24-37, 2014 (SCI-Expanded)
- XXV. **Optimal boundary control of the unsteady Burgers equation with simultaneous space-time discretization**  
KARASÖZEN B., YILMAZ F. N.  
OPTIMAL CONTROL APPLICATIONS & METHODS, vol.35, no.4, pp.423-434, 2014 (SCI-Expanded)
- XXVI. **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)
- XXVII. **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)
- XXVIII. **An all-at-once approach for the optimal control of the unsteady Burgers equation**  
Yilmaz F., KARASÖZEN B.  
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.259, pp.771-779, 2014 (SCI-Expanded)
- XXIX. **Aggregate codifferential method for nonsmooth DC optimization**  
Tor A. H., Bagirov A., KARASÖZEN B.  
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.259, pp.851-867, 2014 (SCI-Expanded)
- XXX. **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)
- XXXI. **Energy preserving integration of bi-Hamiltonian partial differential equations**  
KARASÖZEN B., Simsek G.  
APPLIED MATHEMATICS LETTERS, vol.26, no.12, pp.1125-1133, 2013 (SCI-Expanded)
- XXXII. **Staggered grids for three-dimensional convection of a multicomponent fluid in a porous medium**  
KARASÖZEN B., Nemtsev A. D., Tsybulin V. G.  
COMPUTERS & MATHEMATICS WITH APPLICATIONS, vol.64, no.6, pp.1740-1751, 2012 (SCI-Expanded)
- XXXIII. **Numerical Analysis of Viscoelastic Fluids in Steady Pressure-Driven Channel Flow**  
YAPICI K., KARASÖZEN B., ULUDAĞ Y.  
JOURNAL OF FLUIDS ENGINEERING-TRANSACTIONS OF THE ASME, vol.134, no.5, 2012 (SCI-Expanded)
- XXXIV. **Natural convection in porous annular domains: Mimetic scheme and family of steady states**  
KARASÖZEN B., Trofimova A. V., Tsybulin V. G.  
JOURNAL OF COMPUTATIONAL PHYSICS, vol.231, no.7, pp.2995-3005, 2012 (SCI-Expanded)
- XXXV. **Optimization of Supply Chain Systems with Price Elasticity of Demand**  
Kaplan U., TÜRKAY M., KARASÖZEN B., Biegler L. T.  
INFORMS JOURNAL ON COMPUTING, vol.23, no.4, pp.557-568, 2011 (SCI-Expanded)
- XXXVI. **Lobatto IIIA-IIIB discretization of the strongly coupled nonlinear Schrodinger equation**  
AYDIN A., KARASÖZEN B.  
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.235, no.16, pp.4770-4779, 2011 (SCI-Expanded)
- XXXVII. **Solving optimal control problems for the unsteady Burgers equation in COMSOL Multiphysics**  
YILMAZ F. N., KARASÖZEN B.  
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.235, no.16, pp.4839-4850, 2011 (SCI-Expanded)
- XXXVIII. **Classification through incremental max-min separability**  
Bagirov A. M., Ugon J., Webb D., KARASÖZEN B.  
PATTERN ANALYSIS AND APPLICATIONS, vol.14, no.2, pp.165-174, 2011 (SCI-Expanded)
- XXXIX. **Multisymplectic box schemes for the complex modified Korteweg-de Vries equation**  
AYDIN A., KARASÖZEN B.  
JOURNAL OF MATHEMATICAL PHYSICS, vol.51, no.8, 2010 (SCI-Expanded)

- XL. **Finite volume simulation of viscoelastic laminar flow in a lid-driven cavity**  
Yapici K., KARASÖZEN B., ULUDAĞ Y.  
JOURNAL OF NON-NEWTONIAN FLUID MECHANICS, vol.164, pp.51-65, 2009 (SCI-Expanded)
- XLI. **Hybrid systems: Modeling, simulation and optimization**  
Turkay M., KARASÖZEN B., Biegler L. T., McAvoy T. J.  
JOURNAL OF PROCESS CONTROL, vol.19, no.8, pp.1217, 2009 (SCI-Expanded)
- XLII. **A model of angiogenesis by hybrid systems with delay on the piecewise constant part**  
KARASÖZEN B., Oktem H., Kahraman M.  
JOURNAL OF PROCESS CONTROL, vol.19, no.8, pp.1257-1264, 2009 (SCI-Expanded)
- XLIII. **Portrait of a Consortium: ANKOS (Anatolian University Libraries Consortium)**  
ERDOĞAN P. L., KARASÖZEN B.  
JOURNAL OF ACADEMIC LIBRARIANSHIP, vol.35, no.4, pp.377-385, 2009 (SSCI)
- XLIV. **Modeling and simulation of metabolic networks for estimation of biomass accumulation parameters**  
Kaplan U., TÜRKAY M., Biegler L., KARASÖZEN B.  
DISCRETE APPLIED MATHEMATICS, vol.157, no.10, pp.2483-2493, 2009 (SCI-Expanded)
- XLV. **Multi-symplectic integration of coupled non-linear Schrodinger system with soliton solutions**  
AYDIN A., KARASÖZEN B.  
INTERNATIONAL JOURNAL OF COMPUTER MATHEMATICS, vol.86, no.5, pp.864-882, 2009 (SCI-Expanded)
- XLVI. **Destruction of the family of steady states in the planar problem of Darcy convection**  
Tsybulin V. G., KARASÖZEN B.  
PHYSICS LETTERS A, vol.372, no.35, pp.5639-5643, 2008 (SCI-Expanded)
- XLVII. **Numerical investigation of the effect of the Rushton type turbine design factors on agitated tank flow characteristics**  
Yapici K., KARASÖZEN B., Schaefer M., ULUDAĞ Y.  
CHEMICAL ENGINEERING AND PROCESSING, vol.47, no.8, pp.1346-1355, 2008 (SCI-Expanded)
- XLVIII. **Symplectic and multisymplectic Lobatto methods for the "good" Boussinesq equation**  
AYDIN A., KARASÖZEN B.  
JOURNAL OF MATHEMATICAL PHYSICS, vol.49, no.8, 2008 (SCI-Expanded)
- XLIX. **Staggered grids discretization in three-dimensional Darcy convection**  
KARASÖZEN B., Nemtsev A. D., Tsybulin V. G.  
COMPUTER PHYSICS COMMUNICATIONS, vol.178, no.12, pp.885-893, 2008 (SCI-Expanded)
- L. **Discrete gradient method: Derivative-free method for nonsmooth optimization**  
Bagirov A. M., KARASÖZEN B., Sezer M.  
JOURNAL OF OPTIMIZATION THEORY AND APPLICATIONS, vol.137, no.2, pp.317-334, 2008 (SCI-Expanded)
- LI. **Challenges of continuous optimization in theory and applications**  
Duer M., Karasozen B., Weber G.  
EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, vol.181, no.3, pp.1065-1068, 2007 (SCI-Expanded)
- LII. **Survey of trust-region derivative free optimization methods**  
Karasozen B.  
JOURNAL OF INDUSTRIAL AND MANAGEMENT OPTIMIZATION, vol.3, no.2, pp.321-334, 2007 (SCI-Expanded)
- LIII. **Optimization in data mining**  
Karasozen B., Rubinov A., Weber G.  
EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, vol.173, no.3, pp.701-704, 2006 (SCI-Expanded)
- LIV. **Selection of steady states in planar Darcy convection**  
Tsybulin V. G., Karasozen B., Ergenc I.  
PHYSICS LETTERS A, vol.356, no.3, pp.189-194, 2006 (SCI-Expanded)
- LV. **Poisson integrators for Volterra lattice equations**  
Ergenc T., Karasozen B.  
APPLIED NUMERICAL MATHEMATICS, vol.56, no.6, pp.879-887, 2006 (SCI-Expanded)
- LVI. **Feature cluster "Advances in continuous optimization"**  
Karasozen B., Weber G., Pinar M., Terlaky T.

- EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, vol.169, no.3, pp.1077-1078, 2006 (SCI-Expanded)
- LVII. **Numerical method for optimizing stirrer configurations**  
Schafer M., KARASOZEN B., ULUDAĞ Y., YAPICI K., Ugur O.  
COMPUTERS & CHEMICAL ENGINEERING, vol.30, no.2, pp.183-190, 2005 (SCI-Expanded)
- LVIII. **Cosymmetry preserving finite-difference methods for convection equations in a porous medium**  
Karasozen B., Tsybulin V.  
APPLIED NUMERICAL MATHEMATICS, vol.55, no.1, pp.69-82, 2005 (SCI-Expanded)
- LIX. **Mimetic discretization of two-dimensional Darcy convection**  
Karasozen B., Tsybulin V.  
COMPUTER PHYSICS COMMUNICATIONS, vol.167, no.3, pp.203-213, 2005 (SCI-Expanded)
- LX. **Poisson integrators**  
Karasozen B.  
MATHEMATICAL AND COMPUTER MODELLING, vol.40, pp.1225-1244, 2004 (SCI-Expanded)
- LXI. **Cosymmetric families of steady states in Darcy convection and their collision**  
Karasozen B., Tsybulin V.  
PHYSICS LETTERS A, vol.323, pp.67-76, 2004 (SCI-Expanded)
- LXII. **Invariant reduction of partially potential branching equations and iterative methods in the problem on a bifurcation point with a symmetry**  
Karasozen B., Loginov B.  
DIFFERENTIAL EQUATIONS, vol.40, no.3, pp.410-419, 2004 (SCI-Expanded)
- LXIII. **Invariant manifolds and Grobman-Hartman theorem for equations with degenerate operator at the derivative**  
Karasozen B., Konopleva I., Loginov B.  
COMPUTATIONAL SCIENCE - ICCS 2003, PT II, PROCEEDINGS, vol.2658, pp.533-541, 2003 (SCI-Expanded)
- LXIV. **Dynamics of numerical methods for cosymmetric ordinary differential equations**  
Govorukhin V., Tsybulin V., Karasozen B.  
INTERNATIONAL JOURNAL OF BIFURCATION AND CHAOS, vol.11, no.9, pp.2339-2357, 2001 (SCI-Expanded)
- LXV. **Runge-Kutta methods for Hamiltonian systems in non-standard symplectic two-form**  
Karasozen B.  
INTERNATIONAL JOURNAL OF COMPUTER MATHEMATICS, vol.66, pp.113-122, 1998 (SCI-Expanded)
- LXVI. **Modified iterative methods for linear systems of equations**  
Karasozen B., Ozban A.  
INTERNATIONAL JOURNAL OF COMPUTER MATHEMATICS, vol.70, no.2, pp.179-196, 1998 (SCI-Expanded)
- LXVII. **Approximations for semilinear Cauchy problems involving second order equations in separable Banach spaces**  
Ergenc T., Karasozen B., Piskarev S.  
NONLINEAR ANALYSIS-THEORY METHODS & APPLICATIONS, vol.28, no.7, pp.1157-1165, 1997 (SCI-Expanded)
- LXVIII. **Runge-Kutta collocation methods for rigid body Lie-Poisson equations**  
Ergenc T., Karasozen B.  
INTERNATIONAL JOURNAL OF COMPUTER MATHEMATICS, vol.62, pp.63-71, 1996 (SCI-Expanded)
- LXIX. **An error analysis of iterated defect correction methods for linear differential-algebraic equations**  
Karasozen B., Somali S.  
INTERNATIONAL JOURNAL OF COMPUTER MATHEMATICS, vol.60, pp.121-137, 1996 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Earthquake location methods**  
Karasozen E., KARASÖZEN B.  
GEM-INTERNATIONAL JOURNAL ON GEOMATHEMATICS, vol.11, no.1, 2020 (ESCI)
- II. **International conference on boundary element and meshless techniques XVII**

TEZER M., KARASÖZEN B.

EUROPEAN JOURNAL OF COMPUTATIONAL MECHANICS, vol.26, no.4, pp.351-352, 2017 (ESCI)

III. **STREAMLINE UPWIND/PETROV GALERKIN SOLUTION OF OPTIMAL CONTROL PROBLEMS GOVERNED BY TIME DEPENDENT DIFFUSION-CONVECTION-REACTION EQUATIONS**

Akman T., KARASÖZEN B., Kanar-Seymen Z.

TWMS JOURNAL OF APPLIED AND ENGINEERING MATHEMATICS, vol.7, no.2, pp.221-235, 2017 (ESCI)

IV. **ANKOS with Hilmi Celik**

KARASÖZEN B.

TURKISH LIBRARIANSHIP, vol.30, no.1, pp.120-122, 2016 (ESCI)

V. **DERIVATIVE FREE MULTILEVEL OPTIMIZATION**

KARASÖZEN B.

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VI. **Approximation of Abstract Differential Equations**

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I. **Reduced order optimal control of the convective FitzHugh-Nagumo equation.**

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## Metrics

Publication: 112

Citation (WoS): 617

Citation (Scopus): 615

H-Index (WoS): 13

H-Index (Scopus): 14

## Non Academic Experience

METU Department

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