

## Prof. BÜLENT KARASÖZEN

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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., 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

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

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, Postgraduate, S.YILDIZ(Student), 2016

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

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., 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, Postgraduate, T.AKMAN(Student), 2011

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

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

KARASÖZEN B., ULUDAĞ Y., 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 hamiltonian 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 differential-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

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

- I. **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 (Journal Indexed in SCI)
- II. **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 (Journal Indexed in SCI)
- III. **Reduced order modelling of nonlinear cross-diffusion systems**  
KARASÖZEN B., Mülayim G., Uzunca M., Yıldız S.  
Applied Mathematics and Computation, vol.401, 2021 (Journal Indexed in SCI)
- IV. **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 (Journal Indexed in SCI)
- V. **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 (Journal Indexed in SCI)
- VI. **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 (Journal Indexed in SCI)
- VII. **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 (Journal Indexed in SCI)
- VIII. **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 (Journal Indexed in SCI)
- IX. **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 (Journal Indexed in SCI)
- X. **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 (Journal Indexed in SCI)
- XI. **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 (Journal Indexed in SCI)
- XII. **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 (Journal Indexed in SCI)
- XIII. **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 (Journal Indexed in SCI)
- XIV. **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 (Journal Indexed in SCI)
- XV. **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 (Journal Indexed in SCI)
- XVI. **Model order reduction for nonlinear Schrodinger equation**  
KARASÖZEN B., Akkoyunlu C., Uzunca M.  
APPLIED MATHEMATICS AND COMPUTATION, vol.258, pp.509-519, 2015 (Journal Indexed in SCI)
- XVII. **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 (Journal Indexed in SCI)
- XVIII. **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 (Journal Indexed in SCI)
- XIX. **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 (Journal Indexed in SCI)
- XX. **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 (Journal Indexed in SCI)
- XXI. **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 (Journal Indexed in SCI)
- XXII. **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 (Journal Indexed in SCI)
- XXIII. **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 (Journal Indexed in SCI)
- XXIV. **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 (Journal Indexed in SCI)
- XXV. **Energy preserving integration of bi-Hamiltonian partial differential equations**  
KARASÖZEN B., Simsek G.

- APPLIED MATHEMATICS LETTERS, vol.26, no.12, pp.1125-1133, 2013 (Journal Indexed in SCI)
- XXVI. **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 (Journal Indexed in SCI)
- XXVII. **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 (Journal Indexed in SCI)
- XXVIII. **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 (Journal Indexed in SCI)
- XXIX. **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 (Journal Indexed in SCI)
- XXX. **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 (Journal Indexed in SCI)
- XXXI. **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 (Journal Indexed in SCI)
- XXXII. **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 (Journal Indexed in SCI)
- XXXIII. **Multisymplectic box schemes for the complex modified Korteweg-de Vries equation**  
AYDIN A., KARASÖZEN B.  
JOURNAL OF MATHEMATICAL PHYSICS, vol.51, no.8, 2010 (Journal Indexed in SCI)
- XXXIV. **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 (Journal Indexed in SCI)
- XXXV. **Hybrid systems: Modeling, simulation and optimization**  
TÜRKAY M., KARASÖZEN B., BIEGLER L. T., MCAVOY T. J.  
JOURNAL OF PROCESS CONTROL, vol.19, no.8, pp.1217, 2009 (Journal Indexed in SCI)
- XXXVI. **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 (Journal Indexed in SCI)
- XXXVII. **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 (Journal Indexed in SSCI)
- XXXVIII. **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 (Journal Indexed in SCI)
- XXXIX. **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 (Journal Indexed in SCI)
- XL. **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 (Journal Indexed in SCI)
- XLI. **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 (Journal Indexed in SCI)
- XLII. **Symplectic and multisymplectic Lobatto methods for the "good" Boussinesq equation**  
AYDIN A., KARASÖZEN B.  
JOURNAL OF MATHEMATICAL PHYSICS, vol.49, no.8, 2008 (Journal Indexed in SCI)
- XLIII. **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 (Journal Indexed in SCI)
- XLIV. **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 (Journal Indexed in SCI)
- XLV. **Challenges of continuous optimization in theory and applications**  
DÜER M., KARASÖZEN B., WEBER G.  
EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, vol.181, no.3, pp.1065-1068, 2007 (Journal Indexed in SCI)
- XLVI. **Survey of trust-region derivative free optimization methods**  
KARASÖZEN B.  
JOURNAL OF INDUSTRIAL AND MANAGEMENT OPTIMIZATION, vol.3, no.2, pp.321-334, 2007 (Journal Indexed in SCI)
- XLVII. **Optimization in data mining**  
KARASÖZEN B., RUBINOV A., WEBER G.  
EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, vol.173, no.3, pp.701-704, 2006 (Journal Indexed in SCI)
- XLVIII. **Selection of steady states in planar Darcy convection**  
TSYBULIN V. G., KARASÖZEN B., ERGENC I.  
PHYSICS LETTERS A, vol.356, no.3, pp.189-194, 2006 (Journal Indexed in SCI)
- XLIX. **Poisson integrators for Volterra lattice equations**  
ERGENC T., KARASÖZEN B.  
APPLIED NUMERICAL MATHEMATICS, vol.56, no.6, pp.879-887, 2006 (Journal Indexed in SCI)
- L. **Feature cluster "Advances in continuous optimization"**  
KARASÖZEN B., WEBER G., PINAR M., TERLAKY T.  
EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, vol.169, no.3, pp.1077-1078, 2006 (Journal Indexed in SCI)
- LI. **Numerical method for optimizing stirrer configurations**  
SCHAFFER M., KARASÖZEN B., ULUDAĞ Y., YAPICI K., UĞUR O.  
COMPUTERS & CHEMICAL ENGINEERING, vol.30, no.2, pp.183-190, 2005 (Journal Indexed in SCI)
- LII. **Cosymmetry preserving finite-difference methods for convection equations in a porous medium**  
KARASÖZEN B., TSYBULIN V.  
APPLIED NUMERICAL MATHEMATICS, vol.55, no.1, pp.69-82, 2005 (Journal Indexed in SCI)
- LIII. **Mimetic discretization of two-dimensional Darcy convection**  
KARASÖZEN B., TSYBULIN V.  
COMPUTER PHYSICS COMMUNICATIONS, vol.167, no.3, pp.203-213, 2005 (Journal Indexed in SCI)
- LIV. **Poisson integrators**  
KARASÖZEN B.  
MATHEMATICAL AND COMPUTER MODELLING, vol.40, pp.1225-1244, 2004 (Journal Indexed in SCI)
- LV. **Cosymmetric families of steady states in Darcy convection and their collision**  
KARASÖZEN B., TSYBULIN V.  
PHYSICS LETTERS A, vol.323, pp.67-76, 2004 (Journal Indexed in SCI)
- LVI. **Invariant reduction of partially potential branching equations and iterative methods in the problem on a bifurcation point with a symmetry**  
KARASÖZEN B., LOGINOV B.  
DIFFERENTIAL EQUATIONS, vol.40, no.3, pp.410-419, 2004 (Journal Indexed in SCI)
- LVII. **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 (Journal Indexed in SCI)
- LVIII. **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 (Journal Indexed in SCI)
- LIX. **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 (Journal Indexed in SCI)
- LX. **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 (Journal Indexed in SCI)
- LXI. **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 (Journal Indexed in SCI)
- LXII. **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 (Journal Indexed in SCI)
- LXIII. **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 (Journal Indexed in SCI)

## Articles Published in Other Journals

- I. **Earthquake location methods**  
 Karasozen E., KARASÖZEN B.  
 GEM-INTERNATIONAL JOURNAL ON GEOMATHEMATICS, vol.11, no.1, 2020 (Journal Indexed in 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 (Journal Indexed in 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 (Journal Indexed in ESCI)
- IV. **ANKOS with Hilmi Celik**  
 KARASÖZEN B.  
 TURKISH LIBRARIANSHIP, vol.30, no.1, pp.120-122, 2016 (Journal Indexed in ESCI)
- V. **DERIVATIVE FREE MULTILEVEL OPTIMIZATION**  
 KARASÖZEN B.  
 TWMS JOURNAL OF APPLIED AND ENGINEERING MATHEMATICS, vol.5, no.1, pp.46-60, 2015 (Journal Indexed in ESCI)
- VI. **Approximation of Abstract Differential Equations**  
 KARASÖZEN B., Piskarev S., Guidetti D.  
 Journal of Mathematical Sciences, vol.122, no.2, pp.3013-3054, 2004 (Refereed Journals of Other Institutions)

## Books & Book Chapters

- I. **Model Order Reduction for Pattern Formation in FitzHugh-Nagumo Equations .**  
KARASÖZEN B., UZUNCA M., KUCUKSEYHAN T.  
in: Numerical Mathematics and Advanced Applications ENUMATH 2015, B. Karasözen, M. Tezer-Sezgin, O. Ugur, M. Manguoglu, S. Goktepe, Editor, Springer, pp.369-378, 2016
- II. **Time-Space Adaptive Method of Time Layers for the Advective Allen-Cahn Equation**  
KARASÖZEN B., SARIAYDIN FİLİBELİOĞLU A., UZUNCA M.  
in: Numerical Mathematics and Advanced Applications ENUMATH 2015, B. Karasözen, M. Tezer-Sezgin. O. Ugur, S. Goktepe, Murat Manguoglu , Editor, Springer, pp.175-184, 2016

## Refereed Congress / Symposium Publications in Proceedings

- I. **Reduced order optimal control of the convective FitzHugh-Nagumo equation.**  
KARASÖZEN B.  
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- II. **Model Order Reduction for Pattern Formation in Reaction-Diffusion Systems**  
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