

# Prof. Murat SUBAŐI

## Personal Information

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Address: Atatürk Üniversitesi, Fen Fakóltesi, Matematik Bölümü

## International Researcher IDs

ScholarID: H9X9AqgAAAAJ

ORCID: 0000-0001-5895-143X

ScopusID: 7007022473

Yoksis Researcher ID: 10112

## Education Information

Doctorate, Ataturk University, Fen Bilimleri Enstitüsü, Uygulamalı Matematik, Turkey 1999 - 2001

Postgraduate, Ataturk University, Fen Bilimleri Enstitüsü, Uygulamalı Matematik, Turkey 1996 - 1999

Undergraduate, Ataturk University, Fen Fakóltesi, Matematik Bölümü, Turkey 1992 - 1996

## Foreign Languages

English, B2 Upper Intermediate

## Certificates, Courses and Trainings

Vocational Training, UZAKTAN ÖĐRETİCİLİK SERTİFİKASI, ATATÜRK ÜNİVERSİTESİ, 2021

## Dissertations

Doctorate, Quasi-linear schrödinger denkleminin katsayısıyla yönetilen optimal kontrol problemi, Atatürk Üniversitesi, Fen Bilimleri Enstitüsü, Uygulamalı Matematik, 2001

Postgraduate, Linear schrödinger denkleminin için uygulanmış optimal kontrol problemi, Atatürk Üniversitesi, Fen Bilimleri Enstitüsü, Uygulamalı Matematik, 1999

## Research Areas

Mathematics, Differential Equations, Partial Differential Equations, Optimization, Natural Sciences

## Academic Titles / Tasks

Professor, Ataturk University, Fen Fakóltesi, Matematik, 2013 - Continues

Associate Professor, Ataturk University, Fen Fakóltesi, Matematik, 2007 - 2013

Assistant Professor, Ataturk University, Fen Fakóltesi, Matematik, 2001 - 2007

Research Assistant, Ataturk University, Fen Fakültesi, Matematik, 1996 - 2001

## Courses

Discrete Mathematics, Undergraduate, 2023 - 2024  
Linear Algebra, Undergraduate, 2023 - 2024  
Ayrık Matematik, Undergraduate, 2023 - 2024  
Bilgisayar Destekli Matematik, Undergraduate, 2023 - 2024  
İleri Diferansiyel Denklemler-II, Postgraduate, 2023 - 2024  
Ayrık Matematik, Undergraduate, 2023 - 2024  
Ayrık Matematik, Undergraduate, 2023 - 2024  
Diferansiyel Denklemler-II, Undergraduate, 2023 - 2024  
İnvers Problemler-I, Postgraduate, 2023 - 2024  
Sayısal Yöntemler, Undergraduate, 2023 - 2024  
Differential Equations, Undergraduate, 2023 - 2024  
Linear Algebra, Undergraduate, 2022 - 2023  
Discrete Mathematics, Undergraduate, 2022 - 2023  
Matematiksel Modelleme, Undergraduate, 2022 - 2023  
Differential Equations-I, Undergraduate, 2023 - 2024  
Ayrık Matematik, Undergraduate, 2022 - 2023  
Advanced Differential Equations-I, Postgraduate, 2023 - 2024  
Öğretmenlik Uygulaması, Undergraduate, 2023 - 2024  
İLERİ DİFERANSİYEL DENKLEMLER II, Postgraduate, 2022 - 2023  
Calculus-II, Undergraduate, 2022 - 2023  
Calculus-I, Undergraduate, 2023 - 2024  
Ayrık Matematik, Undergraduate, 2022 - 2023  
Sayısal Yöntemler, Undergraduate, 2022 - 2023  
Matematiksel Modelleme, Undergraduate, 2022 - 2023  
Matematiksel Simülasyon, Undergraduate, 2022 - 2023  
Linear Algebra, Undergraduate, 2021 - 2022  
Calculus-I, Undergraduate, 2022 - 2023  
Mathematics-I, Undergraduate, 2021 - 2022  
Differential Equations, Undergraduate, 2021 - 2022  
İNVERS PROBLEMLER-II, Postgraduate, 2016 - 2017  
İNVERS PROBLEMLER-I, Postgraduate, 2016 - 2017  
MAKİNE MÜHENDİSLİĞİNDE MATEMATİK UYGULAMALARI, Undergraduate, 2016 - 2017

## Advising Theses

Subaşı M., Tomografinin Bir Ters Problem Olarak İncelenmesi, Postgraduate, M.ÖZACET(Student), 2024  
Subaşı M., Isı Geçirgenliği İçin Optimal Kontrol Problemi, Postgraduate, C.YAŞAR(Student), 2019  
Subaşı M., İkinci Mertebeden Adi Diferansiyel Denklemler İçin Tanımlanmış Sınır Değer Problemlerinde Sonlu Elemanlar Yöntemi, Postgraduate, B.ATEŞ(Student), 2019  
SUBAŞI M., Bir Titreşim Probleminde Uç Noktalardaki Hız İçin Optimal Kontrol Problemi, Doctorate, H.GÜNGÖR(Student), 2017  
SUBAŞI M., HİPERBOLİK BİR KISMİ DİFERANSİYEL DENKLEMDE KATSAYI FONKSİYONU İÇİN OPTİMAL KONTROL PROBLEMİ, Doctorate, S.İĞRET(Student), 2017  
SUBAŞI M., Parabolik bir problemde Neumann sınır kontrolü, Doctorate, S.Şule(Student), 2016  
SUBAŞI M., Schrödinger denklemi için verilmiş bir optimal kontrol probleminde düzgün çözüm incelemesi, Doctorate,

H.Durur(Student), 2014  
SUBAŞI M., Konvolüsyon ve uygulamaları, Postgraduate, M.ŞAN(Student), 2013  
SUBAŞI M., Hiperbolik bir problemde başlangıç şartının optimal kontrolü, Atatürk Üniversitesi, Doctorate, Y.Saraç(Student), 2012  
SUBAŞI M., Diferansiyellenemeyen optimizasyon için bazı subgradyent metotlar, Postgraduate, E.ÜNAL(Student), 2012  
SUBAŞI M., İki boyutlu Schrödinger denklemi için optimal kontrol problemleri ve onların nümerik çözümü, Doctorate, F.Toyoğlu(Student), 2012  
SUBAŞI M., Hiperbolik bir başlangıç sınır değer probleminin zayıf çözümü için nümerik hesaplamalar, Postgraduate, S.ŞULE(Student), 2011  
SUBAŞI M., Birinci mertebeden lineer diferansiyel denklemler için bir optimal kontrol problemi, Postgraduate, O.HASANPAŞAOĞLU(Student), 2009  
SUBAŞI M., Lineer hiperbolik bir problemde final kriterinden kaynak terimlerinin eşzamanlı belirlenmesi, Doctorate, T.Yeloğlu(Student), 2009  
SUBAŞI M., L[u] eliptik operatörü için varyasyonel prensibi ve Dirichlet, Neumann ve karışık sınır değer problemlerinin elde edilişi, Postgraduate, M.TUNÇ(Student), 2007

## Jury Memberships

Competition, 2204-A Lise Öğrencileri Araştırma Projeleri Yarışması, Tübitak, April, 2023  
Competition, 2204-A Lise Öğrencileri Araştırma Projeleri Yarışması, Tübitak, March, 2023  
Associate Professor Exam, Associate Professor Exam, Atatürk Üniversitesi, December, 2022  
Associate Professor Exam, Associate Professor Exam, Atatürk Üniversitesi, December, 2022  
Appointment to Academic Staff-Assistant Professorship, Appointment Academic Staff, Akdeniz Üniversitesi, December, 2021  
Appointment to Academic Staff-Assistant Professorship, Appointment Academic Staff, Bursa Teknik Üniversitesi, April, 2021  
Associate Professor Exam, Doçentlik Sınav Jürisi, Üniversitelerarası Kurul, Aralık 2016., Doçentlik Sözlü Sınavı, April, 2017  
Associate Professor Exam, Doçentlik Sınav Jürisi, Üniversitelerarası Kurul, Ekim 2015., Doçentlik Sözlü Sınavı, March, 2017

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

- I. **An inverse source identification by nonlinear optimization in a two-dimensional hyperbolic problem**  
SUBAŞI M., ŞENDUR F. D., Yasar C.  
INVERSE PROBLEMS IN SCIENCE AND ENGINEERING, vol.29, no.12, pp.2110-2130, 2021 (SCI-Expanded)
- II. **Numerical Regularization of Optimal Control for the Coefficient Function in a Wave Equation**  
Subaşı M., Araz S. I.  
IRANIAN JOURNAL OF SCIENCE AND TECHNOLOGY TRANSACTION A-SCIENCE, vol.43, pp.2325-2333, 2019 (SCI-Expanded)
- III. **On a Neumann boundary control in a parabolic system**  
Sener S. Ş., SUBAŞI M.  
BOUNDARY VALUE PROBLEMS, 2015 (SCI-Expanded)
- IV. **On the stability of the solution in an optimal control problem for a Schrödinger equation**  
SUBAŞI M., Durur H.  
Applied Mathematics and Computation, vol.249, pp.521-526, 2014 (SCI-Expanded)
- V. **OPTIMAL BOUNDARY CONTROL FOR A SCHRÖDINGER EQUATION**  
SUBAŞI M., ŞENER S. Ş.  
PACIFIC JOURNAL OF OPTIMIZATION, vol.10, no.1, pp.243-254, 2014 (SCI-Expanded)

- VI. **Weak solutions to hyperbolic problems with inhomogeneous Dirichlet and Neumann boundary conditions**  
Şener S. Ş., SARAÇ Y., SUBAŞI M.  
Applied Mathematical Modelling, vol.37, no.5, pp.2623-2629, 2013 (SCI-Expanded)
- VII. **A minimizer for optimizing the initial velocity in a wave equation**  
SUBAŞI M., SARAÇ Y.  
Optimization, vol.61, no.3, pp.327-333, 2012 (SCI-Expanded)
- VIII. **An optimal control problem for two-dimensional Schrödinger equation**  
Yagubov G., TOYOGLU F., SUBAŞI M.  
Applied Mathematics and Computation, vol.218, no.11, pp.6177-6187, 2012 (SCI-Expanded)
- IX. **A variational technique for optimal boundary control in a hyperbolic problem**  
Subai M., Sara Y., Kaar A.  
APPLIED MATHEMATICS AND COMPUTATION, vol.218, no.12, pp.6629-6636, 2012 (SCI-Expanded)
- X. **On the Regularized Solutions of Optimal Control Problem in a Hyperbolic System**  
SARAÇ Y., SUBAŞI M.  
ABSTRACT AND APPLIED ANALYSIS, 2012 (SCI-Expanded)
- XI. **A procedure for the Galerkin method for a vibrating system**  
Subaşı M., Şener S. Ş., Saraç Y.  
Computers and Mathematics with Applications, vol.61, no.9, pp.2854-2862, 2011 (SCI-Expanded)
- XII. **On the computation of the solution of perturbed nonlinear schrödinger equations**  
SUBAŞI M.  
Numerical Methods for Partial Differential Equations, vol.26, no.4, pp.843-851, 2010 (SCI-Expanded)
- XIII. **On the optimal control problem for Schrödinger equation with complex potential**  
Yetişkin H., SUBAŞI M.  
Applied Mathematics and Computation, vol.216, no.7, pp.1896-1902, 2010 (SCI-Expanded)
- XIV. **Reply to the Comment of E. Kahya on "An improvement on Fibonacci search method in optimization theory by Murat Subasi, Necmettin Yildirim, Bunyamin Yildiz" [An improvement on Fibonacci search method in optimization theory, Applied Mathematics and Computation 147 (2004) 893-901]**  
Subasi M.  
APPLIED MATHEMATICS AND COMPUTATION, vol.188, no.1, pp.1059-1060, 2007 (SCI-Expanded)
- XV. **An improvement on Fibonacci search method in optimization theory**  
SUBAŞI M., YILDIRIM N., YILDIZ B.  
Applied Mathematics and Computation, vol.147, no.3, pp.893-901, 2004 (SCI-Expanded)
- XVI. **Approximations to the solution of boundary value problems of high order**  
SUBAŞI M.  
Applied Numerical Mathematics, vol.48, no.1, pp.103-111, 2004 (SCI-Expanded)
- XVII. **A variational method of optimal control problems for nonlinear Schrodinger equations**  
Subasi M.  
NUMERICAL METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS, vol.20, no.1, pp.82-89, 2004 (SCI-Expanded)
- XVIII. **A stability estimate for an elliptic problem**  
Subasi M., YILDIZ B.  
ISRAEL JOURNAL OF MATHEMATICS, vol.144, pp.151-155, 2004 (SCI-Expanded)
- XIX. **A difference method for solving parabolic equations of order 2n**  
Subasi M., YILDIZ B., KACAR A.  
APPLIED MATHEMATICS AND COMPUTATION, vol.140, pp.475-484, 2003 (SCI-Expanded)
- XX. **Two approximation methods for multipoint boundary value problem of order 2N**  
Subasi M., YILDIZ B.  
APPLIED MATHEMATICS AND COMPUTATION, vol.137, pp.511-524, 2003 (SCI-Expanded)
- XXI. **Numerical solution and convergence speed of variational formulation for linear Schrödinger equation**  
SUBAŞI M., YILDIZ B.

- Turkish Journal of Mathematics, vol.26, no.4, pp.397-420, 2002 (SCI-Expanded)
- XXII. **On the finite-differences schemes for the numerical solution of two dimensional Schrödinger equation**  
SUBAŞI M.  
Numerical Methods for Partial Differential Equations, vol.18, no.6, pp.752-758, 2002 (SCI-Expanded)
- XXIII. **An optimal control problem governed by the potential of a linear Schrodinger equation**  
Subasi M.  
APPLIED MATHEMATICS AND COMPUTATION, vol.131, no.1, pp.95-106, 2002 (SCI-Expanded)
- XXIV. **A stability estimate for convolution equation**  
Subasi M.  
APPLIED MATHEMATICS AND COMPUTATION, vol.131, no.1, pp.195-200, 2002 (SCI-Expanded)
- XXV. **An estimate for the solution of a perturbed nonlinear quantum-mechanical problem**  
SUBAŞI M.  
Chaos, Solitons and Fractals, vol.14, no.3, pp.397-402, 2002 (SCI-Expanded)
- XXVI. **An interpreter for the Boolean derivative**  
YILDIZ B., Subasi M.  
APPLIED MATHEMATICS AND COMPUTATION, vol.129, no.1, pp.43-54, 2002 (SCI-Expanded)
- XXVII. **Optimal control of heat source in a heat conductivity problem**  
SUBAŞI M.  
Optimization Methods and Software, vol.17, no.2, pp.239-250, 2002 (SCI-Expanded)
- XXVIII. **On the analytical solution of private boundary value problem**  
YILDIZ B., SUBAŞI M.  
INDIAN JOURNAL OF PURE & APPLIED MATHEMATICS, vol.33, no.2, pp.151-159, 2002 (SCI-Expanded)
- XXIX. **On the optimal control problem for linear Schrödinger equation**  
YILDIZ B., SUBAŞI M.  
Applied Mathematics and Computation, vol.121, pp.373-381, 2001 (SCI-Expanded)
- XXX. **On a regularization problem**  
YILDIZ B., Subasi M., SEVER A.  
APPLIED MATHEMATICS AND COMPUTATION, vol.109, no.1, pp.67-72, 2000 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Refraction simulation of nonlinear wave for Shallow Water-Like equation**  
Subaşı M.  
Celal Bayar Üniversitesi Fen Bilimleri Dergisi, vol.19, no.1, pp.47-52, 2023 (Peer-Reviewed Journal)
- II. **On the Control of Coefficient Function in a Hyperbolic Problem with Dirichlet Conditions**  
Araz S. I., SUBAŞI M.  
INTERNATIONAL JOURNAL OF DIFFERENTIAL EQUATIONS, vol.2018, 2018 (ESCI)
- III. **On the Numerical Solution of Two Dimensional Schrodinger Equation**  
SUBAŞI M., İğret Araz S., Güngör H.  
International Journal of Mathematical Research, vol.6, no.1, pp.1-12, 2017 (Peer-Reviewed Journal)
- IV. **A REGULARIZED OPTIMAL CONTROL PROBLEM FOR FIRST ORDER LINEAR DIFFERENTIAL EQUATIONS**  
SARAÇ Y., SUBAŞI M.  
Advances and Applications in Mathematical Sciences, vol.3, pp.17-29, 2010 (ESCI)
- V. **On the Solution of Linear Ordinary Differential Equations**  
YILDIZ B., SUBAŞI M.  
Marmara University Journal of Sciences and Technology, vol.15, pp.45-58, 1999 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **DISCRETE AND CONTINUOUS TIME, CONVOLUTION SUM AND CONVOLUTION INTEGRAL ON TIME-INVARIANT LINEAR SYSTEM**  
ŞAN M., SUBAŞI M.  
4. INTERNATIONAL CONFERENCE ON COMPUTATIONAL MATHEMATICS AND ENGINEERING SCIENCES, Antalya, Turkey, 20 - 22 April 2019, pp.104
- II. **INVERSE PROBLEM OF TENSION DETERMINATION IN A WAVE EQUATION**  
SUBAŞI M.  
3rd International Conference on Computational Mathematics and Engineering Sciences, Girne, Cyprus (Kkct), 3 - 06 May 2018, pp.179
- III. **CONTROL OF THERMAL CONDUCTIVITY BY DESIRED FINAL TIME HEAT**  
SUBAŞI M.  
3rd International Conference on Computational Mathematics and Engineering Sciences, Girne, Cyprus (Kkct), 3 - 06 May 2018, pp.249
- IV. **CONTROL OF THERMAL CONDUCTIVITY BY DESIRED FINAL TIME HEAT**  
SUBAŞI M.  
3rd International Conference on Computational Mathematics and Engineering Sciences, Girne, Cyprus (Kkct), 3 - 06 May 2018, pp.249
- V. **INVERSE PROBLEM OF TENSION DETERMINATION IN A WAVE EQUATION**  
SUBAŞI M.  
3rd International Conference on Computational Mathematics and Engineering Sciences, Girne, Cyprus (Kkct), 3 - 06 May 2018, pp.179
- VI. **On Investigating Stable Solution for Vibrational Problem for a String with Transverse Elastic Force**  
İĞRET ARAZ S., SUBAŞI M.  
International Conference on Advances in Natural and Applied Sciences, 21 - 23 April 2016
- VII. **On Regular Solution of Optimal Control Problem for a Time Dependent Schrödinger Equation**  
SUBAŞI M., DURUR H.  
International Conference on Advances in Natural and Applied Sciences, 21 - 23 April 2016
- VIII. **On obtaining stable solution for a hyperbolic coefficient control problem**  
İĞRET ARAZ S., SUBAŞI M., GÜNGÖR H., DURUR H.  
INTERNATIONAL CONFERENCE ON PURE AND APPLIED MATHEMATICS, 25 - 28 August 2015
- IX. **Neumann Boundary Control in a Parabolic System**  
ŞENER S. Ş., SUBAŞI M.  
2nd International Eurasian Conference on Mathematics Science and Applications (IECMSA), 26 August 2013
- X. **Hiperbolik bir problemde başlangıç şartının optimal kontrolü**  
SARAÇ Y., SUBAŞI M.  
23. Ulusal Matematik Sempozyumu, Turkey, 4 - 07 August 2010

## Supported Projects

YILDIRIM F., KAPLAN A., AKBULUT K., CENGİZ N., SUBAŞI M., UĞUR T., KARAMAN Ç., TAŞ S., ŞENER KILIÇ S. Ş., KARABACAK M., et al., Project Supported by Higher Education Institutions, II. Uluslararası Temel ve Uygulamalı Matematik Bilimlerindeki Güncel Gelişmeler Sempozyumu, 2023 - 2024

SUBAŞI M., TUBITAK Project, Kalkülüs-I E-Kitap, 2015 - 2018

SUBAŞI M., YORGANCI S., Project Supported by Higher Education Institutions, MATEMATİK DERSİNDE WEB 2.0 TEKNOLOJİLERİNİN KULLANIMINA YÖNELİK ÖĞRENCİ İNANÇLARI, 2015 - 2016

SUBAŞI M., TUBITAK Project, KOMPLEKS POTANSİYELLİ SCHRÖDİNGER DENKLEMLERİ İÇİN OPTİMAL KONTROL PROBLEMLERİNDE ÇÖZÜMLERİN VARLIĞI VE TEKLİĞİ, 2007 - 2009

## **Scientific Refereeing**

Project Supported by Higher Education Institutions, BAP PhD, Akdeniz University, Turkey, November 2022  
Applied Mathematics and Computation, SCI Journal, September 2017

## **Scientific Consultations**

Tübitak, Scientific Consultancy, Ataturk University, Fen Fakültesi, Matematik, Turkey, 2023 - 2023  
Tübitak, Scientific Consultancy, Ataturk University, Fen Fakültesi, Matematik, Turkey, 2023 - 2023

## **Tasks In Event Organizations**

Kaplan A., Aydın M., Subaşı M., Akbulut K., 2nd International Symposium on Current Developments in Fundamental and Applied Mathematics Sciences, Scientific Congress, Ankara, Turkey, Kasım 2023

## **Metrics**

Publication: 47  
Citation (WoS): 184  
Citation (Scopus): 218  
H-Index (WoS): 7  
H-Index (Scopus): 8

## **Congress and Symposium Activities**

3rd International Conference on Computational Mathematics and Engineering Sciences, Attendee, Girne, Cyprus (Kktc), 2018