

## **Prof. Murat SUBAŞI**

### **Personal Information**

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**Web:** <https://avesis.atauni.edu.tr/msubasi>

**Address:** Atatürk Üniversitesi, Fen Fakültesi, Matematik Bölümü

### **International Researcher IDs**

ScholarID: H9X9AqgAAAAJ

ORCID: 0000-0001-5895-143X

ScopusID: 7007022473

Yoksis Researcher ID: 10112

### **Education**

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 Fakültesi, Matematik Bölümü, Turkey 1992 - 1996

### **Foreign Languages**

English, B2 Upper Intermediate

### **Certificates, Courses and Trainings**

Vocational Training, UZAKTAN ÖĞRETİMİLK SERTİFİKASI, ATATÜRK ÜNİVERSİTESİ, 2021

### **Dissertations**

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

Postgraduate, Lineer schrödinger denklemi 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 Positions**

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

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

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

## Courses

### Postgraduate

İleri Diferansiyel Denklemler-II, Postgraduate, 2023 - 2024

İnvers Problemler-I, Postgraduate, 2023 - 2024

Advanced Differential Equations-I, Postgraduate, 2023 - 2024

İLERİ DİFERANSİYEL DENKLEMLER II, Postgraduate, 2022 - 2023

İNVERS PROBLEMLER-II, Postgraduate, 2016 - 2017

İNVERS PROBLEMLER-I, Postgraduate, 2016 - 2017

### Undergraduate

Discrete Mathematics, Undergraduate, 2023 - 2024

Linear Algebra, Undergraduate, 2023 - 2024

Ayrik Matematik, Undergraduate, 2023 - 2024

Bilgisayar Destekli Matematik, Undergraduate, 2023 - 2024

Ayrik Matematik, Undergraduate, 2023 - 2024

Ayrik Matematik, Undergraduate, 2023 - 2024

Diferansiyel Denklemler-II, Undergraduate, 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

Ayrik Matematik, Undergraduate, 2022 - 2023

Öğretmenlik Uygulaması, Undergraduate, 2023 - 2024

Calculus-II, Undergraduate, 2022 - 2023

Calculus-I, Undergraduate, 2023 - 2024

Ayrik 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

MAKİNE MÜHENDİSLİĞİNDE MATEMATİK UYGULAMALARI, Undergraduate, 2016 - 2017

## Supervised Theses

Subaşı M., İki Boyutlu Hiperbolik Bir Problemde Lineer Olmayan Optimizasyon ile Ters Katsayı Belirleme, Doctorate, F.DERYA(Student), 2024

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 Adı Diferansiyel Denklemler İçin Tanımlanmış Sınır Değer Problemlerinde Sonlu Elemanlar Yöntemi, Postgraduate, B.ATEŞ(Student), 2019

SUBAŞI M., HİPERBOLİK BİR KISMİ DİFERANSİYEL DENKLEMDE KATSAYI FONKSİYONU İÇİN OPTİMAL KONTROL PROBLEMİ, Doctorate, S.İĞRET(Student), 2017

SUBAŞI M., Bir Titreşim Probleminde Uç Noktalardaki Hız İçin Optimal Kontrol Problemi, Doctorate, H.GÜNGÖR(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.Yelioğlu(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

## Journal articles indexed in SCI, SSCI, and AHCI

- I. **Interactive GeoGebra applets to improving students' learning performance in e-book-based learning environment**  
Yorgancı S., Subaşı M.  
EDUCATION AND INFORMATION TECHNOLOGIES, vol.30, no.5, pp.5477-5500, 2025 (SSCI)
- II. **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)
- III. **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)
- IV. **On a Neumann boundary control in a parabolic system**

- Sener S. S., SUBAŞI M.  
BOUNDARY VALUE PROBLEMS, 2015 (SCI-Expanded)
- V. 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)
- VI. OPTIMAL BOUNDARY CONTROL FOR A SCHRODINGER EQUATION  
SUBAŞI M., ŞENER S. S.  
PACIFIC JOURNAL OF OPTIMIZATION, vol.10, no.1, pp.243-254, 2014 (SCI-Expanded)
- VII. Weak solutions to hyperbolic problems with inhomogeneous Dirichlet and Neumann boundary conditions  
Şener S. S., SARAÇ Y., SUBAŞI M.  
Applied Mathematical Modelling, vol.37, no.5, pp.2623-2629, 2013 (SCI-Expanded)
- VIII. 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)
- IX. 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)
- X. 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)
- XI. On the Regularized Solutions of Optimal Control Problem in a Hyperbolic System  
SARAÇ Y., SUBAŞI M.  
ABSTRACT AND APPLIED ANALYSIS, 2012 (SCI-Expanded)
- XII. A procedure for the Galerkin method for a vibrating system  
Subaşı M., Şener S. S., Sarac Y.  
Computers and Mathematics with Applications, vol.61, no.9, pp.2854-2862, 2011 (SCI-Expanded)
- XIII. 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)
- XIV. 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)
- XV. 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)
- XVI. 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)
- XVII. 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)
- 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 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)
- XX. 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)
- XXI. 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)
- XXII. 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)
- XXIII. 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)
- XXIV. 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)
- XXV. A stability estimate for convolution equation  
Subasi M.  
APPLIED MATHEMATICS AND COMPUTATION, vol.131, no.1, pp.195-200, 2002 (SCI-Expanded)
- XXVI. 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)
- XXVII. An interpreter for the Boolean derivative  
YILDIZ B., Subasi M.  
APPLIED MATHEMATICS AND COMPUTATION, vol.129, no.1, pp.43-54, 2002 (SCI-Expanded)
- XXVIII. 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)
- XXIX. 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)
- XXX. 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)
- XXXI. 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)

## **Papers Presented at Peer-Reviewed Scientific Conferences**

### **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, (Summary Text)

### **II. INVERSE PROBLEM OF TENSION DETERMINATION IN A WAVE EQUATION**

SUBAŞI M.

3rd International Conference on Computational Mathematics and Engineering Sciences, Girne, Cyprus (Kktc), 3 - 06 May 2018, pp.179, (Summary Text)

### **III. CONTROL OF THERMAL CONDUCTIVITY BY DESIRED FINAL TIME HEAT**

SUBAŞI M.

3rd International Conference on Computational Mathematics and Engineering Sciences, Girne, Cyprus (Kktc), 3 - 06 May 2018, pp.249, (Summary Text)

### **IV. CONTROL OF THERMAL CONDUCTIVITY BY DESIRED FINAL TIME HEAT**

SUBAŞI M.

3rd International Conference on Computational Mathematics and Engineering Sciences, Girne, Cyprus (Kktc), 3 - 06 May 2018, pp.249, (Summary Text)

### **V. INVERSE PROBLEM OF TENSION DETERMINATION IN A WAVE EQUATION**

SUBAŞI M.

3rd International Conference on Computational Mathematics and Engineering Sciences, Girne, Cyprus (Kktc), 3 - 06 May 2018, pp.179, (Summary Text)

### **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, (Summary Text)

### **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, (Summary Text)

### **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, (Summary Text)

### **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, (Summary Text)

### **X. Hiperbolik bir problemdede başlangıç şartının optimal kontrolü**

SARAÇ Y., SUBAŞI M.

23. Ulusal Matematik Sempozyumu, Turkey, 4 - 07 August 2010, (Summary Text)

## **Funded 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 SCHRÖDINGER DENKLEMLERİ İÇİN OPTİMAL KONTROL PROBLEMLERİNDE ÇÖZÜMLERİN VARLIĞI VE TEKLİĞİ, 2007 - 2009

## Peer Reviews in Scientific Publications

Applied Mathematics and Computation, SCI Journal, September 2017

## Scientific Project Refereeing

Project Supported by Higher Education Institutions, BAP PhD, November 2022

## Scientific Consultations

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

## Roles in Event Organizations

Kaplan A., Aydin M., Subası 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): 179  
Citation (Scopus): 223  
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