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Publons / Web Of Science ResearcherID: AAZ-8905-2020

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Education Information

Doctorate, Istanbul Technical University, Gemi İnşaatı Ve Deniz Bilimleri Fakültesi, Gemi İnşaatı Ve Gemi Makineleri Mühendisliği Bölümü, Turkey 1983 - 1987

Dissertations

Doctorate, Stokes Akımlarında Viskoz Direncin Teorik olarak Hesaplanması ve Direnci Minimum olan Formların belirlenmesi, İstanbul Teknik Üniversitesi, Gemi İnşaatı Ve Deniz Bilimleri Fakültesi, Gemi İnşaatı Ve Gemi Makineleri Mühendisliği Bölümü, 1987

Research Areas

Natural Sciences

Academic Titles / Tasks

Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Mathematics, 1991 - Continues

Academic and Administrative Experience

Middle East Technical University, Faculty of Arts and Sciences, Department of Mathematics, 1995 - 2000

Advising Theses

TAŞELİ H., An Application of the rayleigh-ritz method to the integral-equation representation of the one-dimensional schrödinger equation, Postgraduate, R.Kaya(Student), 2019

TAŞELİ H., Calculations of the roots of classical orthogonal polynomials: An application to Gaussian quadrature,

Postgraduate, G.SHAIDOLDA(Student), 2019

TAŞELİ H., A general pseudospectral formulation of a class of Sturm-Liouville Systems, Doctorate, H.Alıcı(Student), 2010

TAŞELİ H., On the q-analysis of q-hypergeometric difference equation, Doctorate, R.Sevindik(Student), 2010

TAŞELİ H., Inverse Sturm-Liouville Systems over the whole Real Line, Doctorate, H.Altundağ(Student), 2010

TAŞELİ H., Studies on the generalized and reverse generalized Bessel polynomials, Postgraduate, Z.Sonay(Student), 2004

TAŞELİ H., Studies on the perturbation problems in quantum mechanics, Postgraduate, B.Koca(Student), 2004

TAŞELİ H., On the WKB asymptotic solution of differential equations of the hypergeometric type, Postgraduate, B.Aksoy(Student), 2004

TAŞELİ H., Quantum mechanical computation of billiard systems with arbitrary shapes, Doctorate, İ.Erhan(Student), 2003

TAŞELİ H., Pseudospectral methods for differential equations : application to the Schrödinger type eigenvalue problems, Postgraduate, H.Alıcı(Student), 2003

TAŞELİ H., Effect of basis functions in numerical solutions of eigenvalue problems, Postgraduate, G.Alp(Student), 2000

TAŞELİ H., Applications of the scaled Hermite-Weber basis for solving the Schrödinger equation, Postgraduate, M.Bahar(Student), 1998

TAŞELİ H., Hypervirial analysis of enclosed quantum mechanical systems., Postgraduate, Ö.Uğur(Student), 1998

TAŞELİ H., Series solutions of two simultaneous vector differential equations originated from classical Stokes flow problem, Doctorate, R.Eid(Student), 1994

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **A Rayleigh–Ritz Method for Numerical Solutions of Linear Fredholm Integral Equations of the Second Kind**
Kaya R., TAŞELİ H.
Journal of Mathematical Chemistry, vol.60, no.6, pp.1107-1129, 2022 (SCI-Expanded)
- II. **Singular inverse Sturm-Liouville problems with Hermite pseudospectral methods**
Altundag H., TAŞELİ H.
EUROPEAN PHYSICAL JOURNAL PLUS, vol.136, no.10, 2021 (SCI-Expanded)
- III. **Unification of Stieltjes-Calogero type relations for the zeros of classical orthogonal polynomials**
ALICI H., TAŞELİ H.
MATHEMATICAL METHODS IN THE APPLIED SCIENCES, vol.38, no.14, pp.3118-3129, 2015 (SCI-Expanded)
- IV. **Inverse Sturm-Liouville problems with pseudospectral methods**
Altundag H., Boeckmann C., TAŞELİ H.
INTERNATIONAL JOURNAL OF COMPUTER MATHEMATICS, vol.92, no.7, pp.1373-1384, 2015 (SCI-Expanded)
- V. **The Laguerre pseudospectral method for the radial Schrodinger equation**
ALICI H., TAŞELİ H.
APPLIED NUMERICAL MATHEMATICS, vol.87, pp.87-99, 2015 (SCI-Expanded)
- VI. **On the Orthogonality of q-Classical Polynomials of the Hahn Class**
Alvarez-Nodarse R., Adiguzel R. S., TAŞELİ H.
SYMMETRY INTEGRABILITY AND GEOMETRY-METHODS AND APPLICATIONS, vol.8, 2012 (SCI-Expanded)
- VII. **Pseudospectral methods for solving an equation of hypergeometric type with a perturbation**
Alici H., TAŞELİ H.
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.234, no.4, pp.1140-1152, 2010 (SCI-Expanded)
- VIII. **On the special values of monic polynomials of hypergeometric type**
TAŞELİ H.
JOURNAL OF MATHEMATICAL CHEMISTRY, vol.43, no.1, pp.237-251, 2008 (SCI-Expanded)
- IX. **The Laguerre pseudospectral method for the reflection symmetric Hamiltonians on the real line**
Taseli H., Alici H.
JOURNAL OF MATHEMATICAL CHEMISTRY, vol.41, no.4, pp.407-416, 2007 (SCI-Expanded)
- X. **A model for the computation of quantum billiards with arbitrary shapes**

Erhan I. M., Taseli H.

JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.194, no.2, pp.227-244, 2006 (SCI-Expanded)

- XI. **The scaled Hermite-Weber basis in the spectral and pseudospectral pictures**
Taseli H., Alici H.
JOURNAL OF MATHEMATICAL CHEMISTRY, vol.38, no.3, pp.367-378, 2005 (SCI-Expanded)
- XII. **A class of orthogonal polynomials suggested by a trigonometric Hamiltonian: Antisymmetric states**
Taseli H.
JOURNAL OF MATHEMATICAL CHEMISTRY, vol.37, no.4, pp.377-388, 2005 (SCI-Expanded)
- XIII. **Upflow column reactor design for dechlorination of chlorinated pulping wastes by *Penicillium camemberti***
Taseli B., Gokcay C., Taseli H.
JOURNAL OF ENVIRONMENTAL MANAGEMENT, vol.72, no.3, pp.175-179, 2004 (SCI-Expanded)
- XIV. **A class of orthogonal polynomials suggested by a trigonometric Hamiltonian : Symmetric states**
Taseli H.
JOURNAL OF MATHEMATICAL CHEMISTRY, vol.36, no.1, pp.1-12, 2004 (SCI-Expanded)
- XV. **Accurate numerical bounds for the spectral points of singular Sturm-Liouville problems over $0 < x < \infty$**
Taseli H.
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.164, pp.707-722, 2004 (SCI-Expanded)
- XVI. **The scaled Hermite-Weber basis still highly competitive**
Taseli H., Ersecen M.
JOURNAL OF MATHEMATICAL CHEMISTRY, vol.34, pp.177-187, 2003 (SCI-Expanded)
- XVII. **Exact analytical solutions of the Hamiltonian with a squared tangent potential**
Taseli H.
JOURNAL OF MATHEMATICAL CHEMISTRY, vol.34, pp.243-251, 2003 (SCI-Expanded)
- XVIII. **An eigenfunction expansion for the Schrodinger equation with arbitrary non-central potentials**
TASELI H., Erhan I., Ugur O.
JOURNAL OF MATHEMATICAL CHEMISTRY, vol.32, no.4, pp.323-338, 2002 (SCI-Expanded)
- XIX. **Accurate numerical bounds for the spectral points of singular Sturm-Liouville problems over $-\infty < x < \infty$**
Taseli H.
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.115, pp.535-546, 2000 (SCI-Expanded)
- XX. **Two-sided eigenvalue bounds for the spherically symmetric states of the Schrodinger equation**
Zafer A., Taseli H.
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.95, pp.83-100, 1998 (SCI-Expanded)
- XXI. **The confined system approximation for solving non-separable potentials in three dimensions**
TAŞELİ H., Eid R.
JOURNAL OF PHYSICS A-MATHEMATICAL AND GENERAL, vol.31, no.13, pp.3095-3114, 1998 (SCI-Expanded)
- XXII. **Exact solutions for vibrational levels of the Morse potential**
Taseli H.
JOURNAL OF PHYSICS A-MATHEMATICAL AND GENERAL, vol.31, no.2, pp.779-788, 1998 (SCI-Expanded)
- XXIII. **Strongly convergent method to solve one-dimensional quantum problems**
TAŞELİ H.
PHYSICAL REVIEW E, vol.56, no.1, pp.1280-1282, 1997 (SCI-Expanded)
- XXIV. **Modified Laguerre basis for hydrogen-like systems**
Taseli H.
INTERNATIONAL JOURNAL OF QUANTUM CHEMISTRY, vol.63, no.5, pp.949-959, 1997 (SCI-Expanded)
- XXV. **Bessel basis with applications: N-dimensional isotropic polynomial oscillators**
Taseli H., Zafer A.
INTERNATIONAL JOURNAL OF QUANTUM CHEMISTRY, vol.63, no.5, pp.935-947, 1997 (SCI-Expanded)
- XXVI. **A new approach to the classical Stokes flow problem .1. Methodology and first-order analytical**

results

Taseli H., Demiralp M.

JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.78, no.2, pp.213-232, 1997 (SCI-Expanded)

- XXVII. **A new approach to the classical Stokes flow problem .2. Series solutions and higher-order applications**
Taseli H., Eid R.
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.78, no.2, pp.233-254, 1997 (SCI-Expanded)
- XXVIII. **A Fourier-Bessel expansion for solving radial Schrodinger equation in two dimensions**
Taseli H., Zafer A.
INTERNATIONAL JOURNAL OF QUANTUM CHEMISTRY, vol.61, no.5, pp.759-768, 1997 (SCI-Expanded)
- XXIX. **Converging bounds for the eigenvalues of multimimima potentials in two-dimensional space**
TAŞELİ H., Eid R.
JOURNAL OF PHYSICS A-MATHEMATICAL AND GENERAL, vol.29, no.21, pp.6967-6982, 1996 (SCI-Expanded)
- XXX. **Eigenvalues of the two-dimensional Schrodinger equation with nonseparable potentials**
Taseli H., Eid R.
INTERNATIONAL JOURNAL OF QUANTUM CHEMISTRY, vol.59, no.3, pp.183-201, 1996 (SCI-Expanded)
- XXXI. **On the exact solution of the Schrodinger equation with a quartic anharmonicity**
Taseli H.
INTERNATIONAL JOURNAL OF QUANTUM CHEMISTRY, vol.57, no.1, pp.63-71, 1996 (SCI-Expanded)
- XXXII. **An alternative series solution to the isotropic quartic oscillator in N dimensions**
Taseli H.
JOURNAL OF MATHEMATICAL CHEMISTRY, vol.20, pp.235-245, 1996 (SCI-Expanded)
- XXXIII. **Accurate lower and upper bounds of the energy spectrum for the asymmetrical two-well potentials**
TAŞELİ H.
International Journal of Quantum Chemistry, vol.60, no.2, pp.641-648, 1996 (SCI-Expanded)
- XXXIV. **ACCURATE COMPUTATION OF THE ENERGY-SPECTRUM FOR POTENTIALS WITH MULTIMINIMA**
TASELI H.
INTERNATIONAL JOURNAL OF QUANTUM CHEMISTRY, vol.46, no.2, pp.319-334, 1993 (SCI-Expanded)
- XXXV. **THE INFLUENCE OF THE BOUNDEDNESS OF POLYNOMIAL POTENTIALS ON THE SPECTRUM OF THE SCHRODINGER-EQUATION**
TAŞELİ H.
JOURNAL OF COMPUTATIONAL PHYSICS, vol.101, no.2, pp.252-255, 1992 (SCI-Expanded)
- XXXVI. **A BASIS SET COMPARISON IN A VARIATIONAL SCHEME FOR THE YUKAWA POTENTIAL**
DEMIRALP M., BAYKARA N., TAŞELİ H.
JOURNAL OF MATHEMATICAL CHEMISTRY, vol.11, no.4, pp.311-323, 1992 (SCI-Expanded)
- XXXVII. **DRAG MINIMIZATION IN STOKES-FLOW**
TAŞELİ H., DEMIRALP M., KAFALI K.
INTERNATIONAL JOURNAL OF ENGINEERING SCIENCE, vol.27, no.6, pp.633-640, 1989 (SCI-Expanded)
- XXXVIII. **STUDIES ON ALGEBRAIC METHODS TO SOLVE LINEAR EIGENVALUE PROBLEMS - GENERALIZED ANHARMONIC-OSCILLATORS**
TAŞELİ H., DEMIRALP M.
JOURNAL OF PHYSICS A-MATHEMATICAL AND GENERAL, vol.21, no.20, pp.3903-3919, 1988 (SCI-Expanded)
- XXXIX. **CONVERGENT PERTURBATION STUDIES IN SCREENED COULOMB POTENTIAL SYSTEMS - A HIGH-PRECISION NUMERICAL ALGORITHM VIA LAGUERRE BASIS SET**
DEMIRALP M., BAYKARA N., TAŞELİ H.
THEORETICA CHIMICA ACTA, vol.74, no.1, pp.39-54, 1988 (SCI-Expanded)
- XL. **CONVERGENT PERTURBATION STUDIES IN SCREENED COULOMB POTENTIAL SYSTEMS .1. ANALYTIC EVALUATIONS UP TO 3RD ORDER FOR THE YUKAWA CASE**
TAŞELİ H., DEMIRALP M.
THEORETICA CHIMICA ACTA, vol.71, no.4, pp.315-325, 1987 (SCI-Expanded)

Articles Published in Other Journals

I. **On the numerical solution of the Schrödinger equation**

TASELI H.

Bulletin of the Technical University of Istanbul, vol.48, pp.159-163, 1995 (Peer-Reviewed Journal)

II. **A note on the trial function structure for the Wronskian approach**

TASELI H.

Bulletin of the Technical University of Istanbul, vol.42, pp.365-369, 1989 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

I. **The Laguerre Pseudospectral Method for the M Dimensional Radial Schrödinger Equation**

ALICI H., TASELI H.

26. Ulusal Matematik Sempozyumu (Özet metni yayımlanmış ulusal bildiri), Diyarbakır, Turkey, 4 - 07 September 2013

Metrics

Publication: 43

Citation (WoS): 371

Citation (Scopus): 356

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H-Index (Scopus): 13

Non Academic Experience

METU

TÜBİTAK Gebze Araştırma Merkezi