Prof. HALİL ORUÇ

Personal Information

Office Phone: +90 301 857 7
Email: halil.oruc@deu.edu.tr
Web: https://avesis.deu.edu.tr/halil.oruc
Address: DEÜ Fen Fakültesi Matematik Bölümü B205 Tınaztepe Kampüsü Buca Izmir

International Researcher IDs
ScholarID: JtxuPioAAAAJ
ORCID: 0000-0002-8262-1892
Publons / Web Of Science ResearcherID: P-2029-2019
ScopusID: 6603149436
Yoksis Researcher ID: 43807

Education Information

Doctorate, University of St. Andrews, Mathematical Institute, Applied Mathematics, England 1996 - 1999
Undergraduate, Middle East Technical University, Faculty Of Education, Mathematics And Science Education, Turkey 1987 - 1993

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Generalized Bernstein Polynomials and Total Positivity, University of St Andrews, Mathematical Institute, 1999

Research Areas

Linear and Multilinear Algebra: Matrix Theory, Combinatorics, Numerical Analysis, Approximations and Expansions, Natural Sciences

Academic Titles / Tasks

Professor, Dokuz Eylul University, Fen Fakültesi, Matematik Bölümü, 2012 - Continues
Associate Professor, Dokuz Eylul University, Fen Fakültesi, Matematik Bölümü, 2006 - 2012
Assistant Professor, Dokuz Eylul University, Fen Fakültesi, Matematik Bölümü, 1999 - 2006
Research Assistant, Dokuz Eylul University, Fen Fakültesi, Matematik Bölümü, 1994 - 1999

Academic and Administrative Experience

Head of Department, Dokuz Eylul University, Fen Fakültesi, Matematik Bölümü, 2021 - Continues
Head of Department, Dokuz Eylul University, Fen Fakültesi, Matematik Bölümü, 2023 - 2023
Head of Department, Dokuz Eylul University, Fen Fakültesi, Matematik Bölümü, 2012 - 2015

Courses

Thesis, Postgraduate, 2023 - 2024, 2022 - 2023
Research, Postgraduate, 2023 - 2024, 2022 - 2023
Linear Algebra, Undergraduate, 2022 - 2023
Intoduction to Linear Algebra, Undergraduate, 2023 - 2024, 2022 - 2023
Mathematical Methods in Computer Aided Geometric Design, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019
Approximation Theory, Postgraduate, 2020 - 2021, 2019 - 2020

Advising Theses

ORUÇ H., Legendre-Bernstein baz değişimlerinin uygulamaları, Postgraduate, S.AVŞAR(Student), 2016
ORUÇ H., q-B-spline foksiyonları ile interpolasyon ve yaklaşım, Doctorate, G.BUDAKÇI(Student), 2015
ORUÇ H., [a,b] aralığında Q-Bernstein polinomları, Postgraduate, B.KORKMAZ(Student), 2014
ORUÇ H., Bernstein-Schoenberg operatörü üzerine, Postgraduate, G.BUDAKÇI(Student), 2010
ORUÇ H., Simetrik fonksiyonlar ve Q-Bernstein polinomları, Postgraduate, A.GÖCÜMOĞLU(Student), 2009
ORUÇ H., Rasyonel Bezier yüzeylerinin bir genelleştirmesi, Doctorate, Ç.DİŞİBÜYÜK(Student), 2009
ORUÇ H., Q-Bernstein Bézier eğrileri, Postgraduate, V.FUAT(Student), 2007
ORUÇ H., Rasyonel Bezier eğrileri, Postgraduate, Ç.DİŞİBÜYÜK(Student), 2005
ORUÇ H., Vandermonde matrisi üzerine, Postgraduate, H.KASIM(Student), 2002
ORUÇ H., q-bernstein polinomlarının yakınsaklığı ve iterasyonu, Postgraduate, N.TUNCER(Student), 2001

Jury Memberships

Doctoral Examination, Doctoral Examination, Izmir Institute Of Technology, December, 2022
Doctorate, Doctorate, Izmir Institute Of Technology, December, 2022
Doctoral Examination, Doctoral Examination, Izmir Institute Of Technology, November, 2022
Doctorate, Doctorate, Izmir Institute Of Technology, August, 2022
Doctorate, Doctorate, Dokuz Eylul University, July, 2022
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Dokuz Eylul University, January, 2022

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Further Properties of Quantum Spline Spaces**
Budakçı G., Oruç H.
MATHEMATICS, vol.8, no.10, 2020 (SCI-Expanded)

II. **Extending fundamental formulas from classical B-splines to quantum B-splines**
Budakçı G., Dişibüyük Ç., Goldman R., Oruç H.
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.282, pp.17-33, 2015 (SCI-Expanded)

III. **Generating functions for B-Splines with knots in geometric or affine progression**
Dişibüyük Ç., Budakçı G., Goldman R., Oruç H.
CALCOLO, vol.51, no.4, pp.599-613, 2014 (SCI-Expanded)

IV. **Bernstein-Schoenberg operator with knots at the q-integers**

BUDAKÇI G., ORUÇ H.

MATHEMATICAL AND COMPUTER MODELLING, vol.56, pp.56-59, 2012 (SCI-Expanded)

V. **TENSOR PRODUCT q-BERNSTEIN POLYNOMIALS**

Dişibüyük Ç., Oruç H.

BIT NUMERICAL MATHEMATICS, vol.48, no.4, pp.689-700, 2008 (SCI-Expanded)

VI. **LU factorization of the Vandermonde matrix and its applications**

Oruc H.

APPLIED MATHEMATICS LETTERS, vol.20, no.9, pp.982-987, 2007 (SCI-Expanded)

VII. **A generalization of rational Bernstein-Bezier curves**

Dişibüyük Ç., Oruc H.

BIT NUMERICAL MATHEMATICS, vol.47, no.2, pp.313-323, 2007 (SCI-Expanded)

VIII. **Symmetric functions and the Vandermonde matrix**

Oruc H., Akmaz H.

JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.172, no.1, pp.49-64, 2004 (SCI-Expanded)

IX. **q-Bernstein polynomials and Bezier curves**

Oruc H., Phillips G.

JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.151, no.1, pp.1-12, 2003 (SCI-Expanded)

X. **On the convergence and iterates of q-Bernstein polynomials**

Oruc H., Tuncer N.

JOURNAL OF APPROXIMATION THEORY, vol.117, no.2, pp.301-313, 2002 (SCI-Expanded)

XI. **Explicit factorization of the Vandermonde matrix**

Oruc H., Phillips G.

LINEAR ALGEBRA AND ITS APPLICATIONS, vol.315, no.1-3, pp.113-123, 2000 (SCI-Expanded)

XII. **A generalization of the Bernstein polynomials**

Oruc H., Phillips G.

PROCEEDINGS OF THE EDINBURGH MATHEMATICAL SOCIETY, vol.42, pp.403-413, 1999 (SCI-Expanded)

XIII. **Convexity and generalized Bernstein polynomials**

Goodman T., Oruc H., Phillips G.

PROCEEDINGS OF THE EDINBURGH MATHEMATICAL SOCIETY, vol.42, pp.179-190, 1999 (SCI-Expanded)

Articles Published in Other Journals

I. **A GENERALIZATION OF THE PEANO KERNEL AND ITS APPLICATIONS**

Budakçi G., Oruç H.

COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS, vol.67, no.2, pp.229-241, 2018 (ESCI)

II. **Probabilistic Approach to the Schoenberg Spline Operator and Unimodal Density Estimator**

Ege Oruç Ö., Erdoğan M. S., Oruç H.

İstatistik. Türk İstatistik Derneği Dergisi, vol.10, no.2, pp.33-39, 2017 (Peer-Reviewed Journal)

Other Publications

I. **İkinci çeşit Stirling Sayıları**

Oruç H.

Other, pp.8-13, 2002

Supported Projects

BUDAKÇI G., ORUÇ H., Project Supported by Higher Education Institutions, SOME RESULTS ON THE GENERALIZED BERNSTEIN SCHOENBERG OPERATOR, 2012 - 2015

ORUÇ H., Project Supported by Higher Education Institutions, Some results on Bernstein-Schoenberg operator (Bernstein-Schoenberg operatörü üzerine bazı sonuçlar), 2012 - 2014

ORUÇ H., Project Supported by Higher Education Institutions, A generalization of rational Bezier surfaces, 2007 - 2009

DİŞİBÜYÜK Ç., ORUÇ H., Project Supported by Higher Education Institutions, A generalization of Bezier surfaces, 2007 - 2009

ORUÇ H., Project Supported by Higher Education Institutions, Symmetric functions and its Applications, 2003 - 2005

ORUÇ H., Project Supported by Higher Education Institutions, Shape properties convergence and iterates of q Bernstein polynomials, 1999 - 2001

Scientific Refereeing

JOURNAL OF APPLIED MATHEMATICS AND COMPUTING, SCI Journal, June 2024

Communications/ Faculty of Sciences University of Ankara Series A2-A3: Physics, Engineering Physics and Astronomy, National Scientific Refreed Journal, March 2024

NUMERICAL ALGORITHMS, SCI Journal, November 2023

CAD COMPUTER AIDED DESIGN, SCI Journal, February 2022

COMPUTER AIDED GEOMETRIC DESIGN, SCI Journal, January 2022

IEEE SIGNAL PROCESSING LETTERS, SCI Journal, December 2017

NUMERICAL ALGORITHMS, SCI Journal, June 2017

FACTA UNIVERSITATIS-SERIES MATHEMATICS AND INFORMATICS, SCI Journal, January 2017

OPERATORS AND MATRICES, SCI Journal, June 2016

JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS, SCI Journal, June 2015

JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, SCI Journal, June 2010

LINEAR ALGEBRA AND ITS APPLICATIONS, SCI Journal, June 2004

IMA JOURNAL OF NUMERICAL ANALYSIS, SCI Journal, March 2002

Scientific Consultations

IYTE Izmir Mathematics Days IV, Scientific Consultancy, Dokuz Eylul University, Fen Fakültesi, Matematik Bölümü, Turkey, 2022 - 2022

Tasks In Event Organizations

Oruç H., Antep H. M., Cumhuriyetin 100. Yılında Temel Bilimler Sempozyumu ve Bilim Şenliği, Scientific Congress, İzmir, Turkey, Ekim 2023

Oruç H., İzmir Mathematics Days V., Scientific Congress, İzmir, Turkey, Eylül 2023

Metrics

Publication: 30
Citation (WoS): 352
Citation (Scopus): 413
H-Index (WoS): 10
H-Index (Scopus): 10

Congress and Symposium Activities

Izmir Mathematics Days V., Session Moderator, İzmir, Turkey, 2023