

Assoc. Prof. CEREN VARDAR ACAR

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: AAZ-6544-2020

ScopusID: 55616872200

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Education Information

Doctorate, Bowling Green State University, Arts And Science, Mathematics And Statistics, United States Of America 2002 - 2008

Postgraduate, Middle East Technical University, Fen Edebiyat Fakültesi, İstatistik, Turkey 2000 - 2002

Undergraduate, Middle East Technical University, Fen Edebiyat Fakültesi, İstatistik, Turkey 1995 - 1999

Dissertations

Doctorate, On the Correlation of Maximum Loss and Maximum Gain of Stock Price Processes, Bowling Green State University, Department Of Mathematics And Statistics, 2008

Postgraduate, Comparing methods of estimation in experimental design, Orta Doğu Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, İstatistik (YI) (Tezli), 2002

Research Areas

Probability Theory, Stochastic Processes, Natural Sciences

Academic Titles / Tasks

Associate Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Statistics, 2020 - Continues

Assistant Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Statistics, 2018 - 2020

Assistant Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Statistics, 2015 - 2018

Assistant Professor, Tobb University Of Economics And Technology, Faculty Of Arts And Sciences, Department Of Mathematics, 2011 - 2015

Lecturer PhD, Tobb University Of Economics And Technology, Faculty Of Arts And Sciences, Department Of Mathematics, 2009 - 2011

Lecturer, Owens Community College, Fen Edebiyat Fakültesi, Matematik Ve İstatistik, 2007 - 2007

Research Assistant, Bowling Green State University, Fen Edebiyat Fakültesi, Matematik Ve İstatistik, 2002 - 2007

Research Assistant, Middle East Technical University, Faculty of Arts and Sciences, Department of Statistics, 2000 - 2002

Academic and Administrative Experience

Tobb Ekonomi Ve Teknoloji Üniversitesi, 2014 - 2015

Tobb Ekonomi Ve Teknoloji Üniversitesi, 2009 - 2011

Advising Theses

Vardar Acar C., Parameter estimation in merton jump diffusion model, Postgraduate, T.ADEM(Student), 2019

Vardar Acar C., Various parameter estimation techniques for stochastic differential equations, Postgraduate, S.ERGİŞİ(Student), 2019

VARDAR ACAR C., Duration of maximum drawdown in oil prices, Postgraduate, M.SALCI(Student), 2018

VARDAR ACAR C., A generalized correlated random walk approximation to fractional brownian motion, Postgraduate, B.COŞKUN(Student), 2018

VARDAR ACAR C., Stochastic delay differential equations, Postgraduate, E.EZGİ(Student), 2017

VARDAR ACAR C., Kesikli stokastik popülasyon modelleri ve gecikme etkisi, Postgraduate, E.EMİN(Student), 2013

VARDAR ACAR C., Hisse senetlerinde olabilecek en büyük kaybın asimptotik dağılımı uygulamaları, Postgraduate, Z.İSLAMOV(Student), 2013

VARDAR ACAR C., Kesirli brown hareketinin maksimum kayıp ve supremum değişkenleri, Postgraduate,

H.ÇAKAR(Student), 2012

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Stopping Levels for a spectrally negative Markov Additive process**
Çağlar M., Vardar Acar C.
Communications in Mathematics and Statistics, vol.1, no.1, pp.1-22, 2023 (SCI-Expanded)
- II. **An optimal stopping problem for spectrally negative Markov additive processes**
Çağlar M., Kyprianou A., Vardar Acar C.
Stochastic Processes and their Applications, vol.150, pp.1109-1138, 2022 (SCI-Expanded)
- III. **Maximum Drawdown and Drawdown Duration of Spectrally Negative Levy Processes Decomposed at Extremes**
Vardar Acar C., Caglar M., Avram F.
JOURNAL OF THEORETICAL PROBABILITY, vol.34, no.3, pp.1486-1505, 2021 (SCI-Expanded)
- IV. **Analysis of Confidence Levels and Application Success Rates in Simulator-Based Dental Anesthesia Education Among Undergraduate Dental Students**
Vural Ç., Bozkurt P., Vardar Acar C., Üçok C.
Journal of Oral and Maxillofacial Surgery, vol.79, no.6, 2021 (SCI-Expanded)
- V. **A study on the discretization of fractional Brownian motion**
COŞKUN B., VARDAR ACAR C., Demirtas H.
AIP Conference Proceedings, vol.2293, 2020 (SCI-Expanded)
- VI. **TheW,Zscale functions kit for first passage problems of spectrally negative Levy processes, and applications to control problems**
Avram F., Grahovac D., Vardar Acar C.
ESAIM-PROBABILITY AND STATISTICS, vol.24, pp.454-525, 2020 (SCI-Expanded)
- VII. **Accuracy of two different voxel sizes for presurgical evaluation of mandibular osteotomy**
Bozkurt P., Kurt M., Kolsuz M., Orhan K., Cömert A., Vardar Acar C.
JOURNAL OF STOMATOLOGY ORAL AND MAXILLOFACIAL SURGERY, vol.121, no.2, pp.129-132, 2020 (SCI-Expanded)
- VIII. **Anatomy of Correlational Magnitude Transformations in Latency and Discretization Contexts in Monte-Carlo Studies**

Demirtas H., Vardar-Acar C.

MONTE-CARLO SIMULATION-BASED STATISTICAL MODELING, pp.59-84, 2017 (SCI-Expanded)

IX. Bounds on the expected value of maximum loss of fractional Brownian motion

Vardar-Acar C., Bulut H.

STATISTICS & PROBABILITY LETTERS, vol.104, pp.117-122, 2015 (SCI-Expanded)

X. Estimation of the Hurst parameter for fractional Brownian motion using the CMARS method

Yerlikaya-Ozkurt F., Vardar-Acar C., Yolcu-Okur Y., Weber G. -.

JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.259, pp.843-850, 2014 (SCI-Expanded)

XI. Distribution of maximum loss of fractional Brownian motion with drift

Çağlar M., Vardar-Acar C.

STATISTICS & PROBABILITY LETTERS, vol.83, no.12, pp.2729-2734, 2013 (SCI-Expanded)

XII. On the correlation of the supremum and the infimum and of maximum gain and maximum loss of Brownian motion with drift

Vardar-Acar C., Zirbel C. L., Székely G. J.

JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.248, pp.61-75, 2013 (SCI-Expanded)

Articles Published in Other Journals

I. An Improved Textbook Rule on the Mean-Median Inequality for Discrete Data

VARDAR ACAR C., Demirtas H., AYDEMİR İ., YABACI A., gao R.

Türkiye Klinikleri Biyoistatistik Dergisi, vol.12, no.2, pp.158-167, 2020 (Peer-Reviewed Journal)

II. The $W, Z/\nu, \delta$ Paradigm for the First Passage of Strong Markov Processes without Positive Jumps

Avram F., Grahovac D., Vardar Acar C.

RISKS, vol.7, no.1, 2019 (ESCI)

III. COMPARING METHODS OF ESTIMATION IN NON NORMAL SAMPLES

Vardar Acar C., Islam Q.

PROCEEDINGS OF FIFTH INTERNATIONAL STATISTICAL CONFERENCE, vol.17, pp.7-14, 2009 (Conference Book)

Books & Book Chapters

I. Anatomy of correlational magnitude transformations in latency and discretization contexts in Monte Carlo studies

Demirtas H., Vardar Acar C.

in: Monte-Carlo Simulation-Based Statistical Modeling Part of the series ICSA Book Series in Statistics, Ding-Geng (Din) Chen, John Dean Chen, Editor, Springer, New York, pp.59-84, 2017

Refereed Congress / Symposium Publications in Proceedings

I. A Generalized

COŞKUN B., Demirtas H., VARDAR ACAR C.

ICNAAM, 23 - 28 September 2019

II. Maximum Loss of Spectrally Negative Lévy Processes

VARDAR ACAR C., ÇAĞLAR M.

International Workshop on Applied Probability, 18 - 21 June 2018

III. Towards extending the $W, Z/\nu, \delta$ paradigm for first passage problems of Lévy processes to strong Markov processes without positive jumps

VARDAR ACAR C., AVRAM F.

SPA 2018, 11 - 15 June 2018

- IV. **A GENERALIZED CORRELATED RANDOM WALK APPROXIMATION TO FRACTIONAL BROWNIANMOTION**
VARDAR ACAR C., COŞKUN B.
4th International Researchers, Statisticians, Young Statisticians Congress, 28 - 30 April 2018
- V. **ESTIMATION OF DURATION OF MAXIMUM DRAWDOWN IN OIL PRICES**
SALCI BİLİCİ M., KÜÇÜKBIÇAKCI P., VARDAR ACAR C., ÜNALMIŞ İ.
4th International Researchers, Statisticians and Young Statisticians Congress, 28 - 30 April 2018
- VI. **Maximum Loss and Maximum Gain of Spectrally Negative Levy Processes**
VARDAR ACAR C., ÇAĞLAR M.
10th ISC 2017 International Statistics Congress, 6 - 08 December 2017
- VII. **A review of the scale functions method for spectrally negative Levy processes**
AVRAM F., ÇAĞLAR M., VARDAR ACAR C.
21st International Congress on Insurance: Mathematics and Economics - IME 2017, 6 - 07 July 2017
- VIII. **Stochastic Delay Differential Equations and Their Applications to Finance**
ALADAĞLI E. E., VARDAR ACAR C., YOLCU OKUR Y.
IV. Kadın Matematikçiler Derneği Çalıştayı, Turkey, 28 - 29 April 2017
- IX. **Examination and Parameter estimation of single species Population Models in presence of randomness and delay**
ÖLMEZ S. B., VARDAR ACAR C., YOLCU OKUR Y.
3rd Ankara Istanbul Workshop on Stochastic Processes, Turkey, 16 June 2016
- X. **Estimation of the Relation Between the Maximum Loss of Fractional Brownian Motion and Its Duration Using SMARS Method**
VARDAR ACAR C., KARTAL KOÇ E.
APMOD 2016, 8 - 10 June 2016
- XI. **Distribution of Maximum Loss of Fractional Brownian Motion with Drift**
VARDAR ACAR C., ÇAĞLAR M.
European Meeting of Statisticians, 6 - 10 July 2015
- XII. **On the Supremum Infimum Maximum Gain and Maximum Loss of Brownian Motion**
VARDAR ACAR C., CRAIG Z., GABOR S.
1ST ANKARA-İSTANBUL WORKSHOP ON STOCHASTIC PROCESSES, İstanbul, Turkey, 12 - 13 June 2014, pp.1
- XIII. **Distribution of Maximum Loss for Fractional Brownian Motion**
VARDAR ACAR C.
26th European Conference on Operational Research, 1 - 04 July 2013
- XIV. **Correlation of Infimum and Supremum of Brownian Motion with drift**
VARDAR ACAR C.
4th Berlin Workshop on Mathematical Finance for Young Researcher, Berlin, Germany, 11 - 13 October 2012
- XV. **On Supremum Infimum Maximum Gain and Maximum Loss of Brownian Motion with drift and of Fractional Brownian Motion**
VARDAR ACAR C., ÇAĞLAR M.
1st AMAT International Conference on Applied Mathematics & Approximation Theory, Ankara, Turkey, 17 - 20 May 2012
- XVI. **On the Supremum Infimum Maximum Gain and Maximum Loss of Fractional Brownian Motion**
VARDAR ACAR C., ÇAĞLAR M.
ODTÜ, İstatistik Bölümü Seminer Günleri, Ankara, Turkey, 03 May 2012
- XVII. **The Supremum the Infimum Maximum Gain and Maximum Loss of Brownian Motion with Drift**
VARDAR ACAR C.
7th International Congress on Industrial and Applied Mathematics, Vancouver, Canada, 18 - 22 July 2011
- XVIII. **On the Supremum the Infimum and Maximum Gain and Maximum Loss of Brownian Motion with Drift**
VARDAR ACAR C.
International Conference on Mathematical Finance and Economics, İstanbul, Turkey, 6 - 08 July 2011, pp.134
- XIX. **Supremum Infimum Maximum Gain and Maximum Loss of Brownian Motion with Drift**

VARDAR ACAR C.

24th Mini Euro Conference, İzmir, Turkey, 23 - 26 June 2010

XX. Kesirli Brown Hareketinde Supremum Dağılımı Üzerine Sonuçlar

VARDAR ACAR C.

5nci Ankara Matematik Günleri Kongresi, Ankara, Turkey, 3 - 04 June 2010

XXI. On the Correlation of Maximu Loss and Maximum Gain of Stock Price Processes

VARDAR ACAR C.

The workshop on Recent Developments in Applied Probability and Statistics, Ankara, Turkey, 23 - 24 April 2009

Supported Projects

Vardar Acar C., Avram F., TÜBİTAK International Bilateral Joint Cooperation Program Project, Levy ve Difüzyon Modelleri Altında Varlık Fiyatlarında En Büyük Düşüş Süresi Dağılımı ve Beklenen Değeri, 2018 - 2020

VARDAR ACAR C., Çağlar M., Project Supported by Higher Education Institutions, Levy Süreçlerinin Yörünge Özellikleri ve En Büyük Kayıp ve En Büyük Kazancın Birlikte Dağılımları, 2016 - 2019

VARDAR ACAR C., TUBITAK Project, KESİRLİ BROWN HAREKETİNDE VE LEVY SÜREÇLERİNDE EN BÜYÜK KAYBIN DAĞILIMSAL ÖZELLİKLERİ, 2011 - 2014

Scientific Refereeing

JOURNAL OF APPLIED PROBABILITY, SCI Journal, May 2020

Metrics

Publication: 37

Citation (WoS): 59

Citation (Scopus): 62

H-Index (WoS): 5

H-Index (Scopus): 5

Non Academic Experience

Türk Matematik Derneği

TÜRKİYE İSTATİSTİK KURUMU

TC Merkez Bankası

Tobb Ekonomi ve Teknoloji Üniversitesi

Tobb Ekonomi ve Teknoloji Üniversitesi

Owens Community College

Bowling Green State Üniversitesi

Orta Doğu Teknik Üniversitesi

KALKINMA BAKANLIĞI

Atatürkçü Düşünce Derneği