

Ozan Evkaya

STATISTICIAN, DATA SCIENTIST, TEAM PLAYER, COLLABORATOR, TRAINEE ACTUARY

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Experience (T: Teaching, R: Research)

T - The University of Edinburgh, School of Mathematics

Edinburgh, Scotland

UNIVERSITY TEACHER

March 2022 -

- Delivering teaching at all levels, helping to develop new and existing courses
- Undertaking teaching and student support related administrative duties

T - Istinye University, Faculty of Economics, Administrative and Social Sciences

Istanbul, Turkey

PART-TIME LECTURER (ONLINE)

Oct. 2022 -

- **Courses:** Data, AI and Ethics (22-23 Fall) / Data Viz with R, Data Science II (22-23 Spring, 23-24 Spring) / Intro to Gen-AI (23-24 Fall)

T - TED University, Faculty of Economics and Administrative Sciences

Ankara, Turkey

PART-TIME LECTURER (ONLINE)

Oct. 2021 - Dec. 2022

- **Courses:** Statistical Learning with R, (Undergraduate and Postgraduate level)

R - Università Degli Studi Di Padova, Department of Statistical Sciences

Padova, Italy

POSTDOCTORAL RESEARCHER

Jan. 2021 - Febr. 2022

- **Project title:** Bayesian methods for conditional dependence learning
- **Advisor:** Prof. Bruno Scarpa

T - Istanbul Bilgi University, Department of Mathematics

Istanbul, Turkey

PART-TIME LECTURER (ONLINE)

Febr. 2021 - June. 2021

- **Course:** Computational and Mathematical Numeracy for Social Scientists II / Probability

R - Technische Universität Dresden, Institute of Economics and Transport School of Transportation

Dresden, Germany

VISITING RESEARCHER

Oct. 2020 - Dec. 2020

- **Project title:** Subsampling for HAC parameter estimation
- **Advisor:** Prof. Ostap Okhrin

R - KU Leuven, Research Centre for Operations Research and Statistics (ORSTAT)

Leuven, Belgium

POSTDOCTORAL RESEARCHER

Jan. 2020 - Sep. 2020

- **Project title:** Semi-parametric approach for copula directed acyclic graphs.
- **Advisors:** Prof. Gerda Claeskens and Irène Gijbels

T - Atılım University, Department of Mathematics

Ankara, Turkey

TEACHING ASSISTANT

Oct. 2009 - Dec. 2019

- Successfully taught a large variety of courses from service courses to upper level math courses
- Experience about preparing homework, reading exam and quiz papers and other related academic duties

Skills

Languages	Turkish (native), English (fluent), Italian (basics)
Programming	R, Python, MATLAB, SPSS
Others	Github, Latex(Overleaf), Microsoft Office

Education

Middle East Technical University

Ankara, Turkey

PHILOSOPHY OF DOCTORATE IN STATISTICS, GPA: 3.56/4.0

August 2018

- **Thesis Title:** Mixture of Vines for Dependence Modeling: Finite Mixture and CD-vine Approaches with Applications (CITATION: 1)
- **Advisor:** Ceylan Yozgatlıgil, **Co-advisor:** A. Sevtap Kestel

Middle East Technical University

Ankara, Turkey

MASTER OF SCIENCE IN ACTUARIAL SCIENCE, GPA: 3.64/4.0

August 2012

- **Thesis Title:** Modelling Index-Based Drought Insurance for the Provinces of Central Anatolia Region (CITATION: 3)
- **Advisor:** S. Kasırğa Yıldırak

Dissertations

Understanding factors of Dementia in depth: Explainable AI (XAI) approach

The University of Edinburgh

(MSc Thesis, SOR)

- Supervising; Kezheng Wang (June-August 2024)

A wavelet-based copula approach for modeling market risk: Turkey ISE-100 Case Study

The University of Edinburgh

(MSc Thesis, SOR)

- Supervising; Xin Wang (June-August 2024)

Turkey Stock market Dependencies: Study based on wavelet-vine copula approach

The University of Edinburgh

(UG Project)

- Supervising; Tim Xu, Huari Yang, Maiyue Xu (Sept. 2023 - March 2024)

Starting journey for Explainable and Responsible Artificial Intelligence: Experiments on Insurance Data

The University of Edinburgh

(UG Project)

- Supervising; Richard Huang, Callum Purcell (Sept. 2023 - March 2024)

Understanding the product performance of Fouling Control Coatings

The University of Edinburgh

(SwDS PG Project)

- Project leader with industrial partner AkzoNobel, (July - August 2023)

Non-parametric copula based Drought Analysis

The University of Edinburgh

(UG Project)

- Supervising; Hongyi Lu, (Sept. 2022 - March 2023)

Evaluating Student's Attitudes Towards Statistics

The University of Edinburgh

(MSc Thesis, SOR)

- Supervising; Shuyu Liu, (June-August 2022)

Projects

Understanding LLMs and Generative-AI (Gen-AI)

Turkish Mathematics Association

(3rd Directed Reading Program (DRP))

- Mentoring Emre Anil Oguz, for 2023 Summer (July-August 2023)

The application of algorithmic trading in portfolio optimization

The University of Edinburgh

(Vacation Scholarship Project)

- Supervising Rishabh Ramruttun, Submitted for 2023 Summer (July-August 2023)

Copula based Drought Analysis and Drought Estimations: Konya Case

Middle East Technical University

(BAP-08-11-2017-025)

- Project coordinator: Assoc. Dr. Ceylan Yozgatligil
- Role & spent time : Assistant researcher & 12 Months (01.01.2017-31.12.2017)

Software

ResProStr R package R package available in <https://oevkaya.github.io/ResProStr/>

Awards/Funding

Advanced Higher Education	Edinburgh Teaching Fellow - Category 2 (FHEA), 2023
DAAD	Short Term Research Scholarship, 2019
TUBITAK 2219	Postdoctoral Research Scholarship, 2019 (Not used)
ICCOPT2019	Free Conference Participation Grant, 2019
TUBITAK 2224-A	Participation in Scientific Activities Abroad Program, 2015

Refereeing (17)

(1) Earth Science Informatics (2023), (6) Computational Economics (2023-2024), (2) Mathematical Modelling and Numerical Simulation with Applications (2023), (1) International Journal on Artificial Intelligence Tools (2023), (1) Journal of Engineering Technology and Applied Sciences (2021), (1) İSTATİSTİK, Journal of the Turkish Statistical Association (2021), (1) Hacettepe Journal of Mathematics and Statistics (2021), (1) Dependence Modeling (2021), (1) Journal of Applied Statistics (2020), (1) Mathematical Problems in Engineering, Special Issue (2018), (1) Central European Journal of Operations Research (2018)

Memberships

2024-present	Royal Statistical Society Fellow; Royal Statistical Society Edinburgh local group member
2023-present	EdinbR R users co-organiser
2018-present	Turkish Statistical Association
2017 – 2018	Student Membership, Society for Industrial and Applied Mathematics (SIAM); Bernoulli Society for Mathematical Statistics and Probability

Conference Talks

Leveraging Gen-AI tools in Higher Education: Data Science Perspectives	<i>24 August 2023</i>
ABERDEEN, UK • SICSA Education - Pedagogical Impacts of ChatGPT and Other LLMs	
Analysing Drought Characteristics by Parametric and Non-parametric Copula Approach	<i>17 August 2023</i>
LEICESTER, UK • The Young Statisticians' Meeting (YSM), YSM2023	
Potentials and Challenges of Gen-AI for learning and assessment feedback	<i>30 June 2023</i>
LONDON, UK • The 21st Academic Practice and Technology Conference, APT2023 (Open-Space Discussion)	
Clustering mortality data with nonparametric Bayesian approach	<i>21-23 Sept. 2022</i>
PADOVA, ITALY • Statistical methods and models for complex data, Poster Presentation	
Modeling the Dependency in the Turkish Stock Market via the Dynamic Vine-GARCH Model	<i>12-15 July 2022</i>
GUANGZHOU, CHINA • 25'th International Congress on Insurance: Mathematics and Economics (UME2022), Virtual	
Modeling asymmetric dependence pattern with directional dependence measures	<i>24-28 August 2020</i>
WORLDWIDE • "Mathematical Finance" of the Bernoulli-IMS One World Symposium 2020 (Prerecorded Talk)	
Drought Monitoring of Marmara Region using Novel Machine Learning Tools	<i>4-8 October 2019</i>
MUGLA, TURKEY • 11'th International Statistics Congress (ISC2019)	
Parameter Estimations of Finite Mixture Models with Particular Optimization Tools	<i>3-8 August 2019</i>
BERLIN, GERMANY • 6'th International Conference on Continuous Optimization (ICCOPT2019)	
Understanding Drought with copula functions: Case study for Konya Province	<i>3-7 October 2018</i>
MUGLA, TURKEY • 11'th International Statistics Days Conference (ISDC2018)	
Mathematics in Theatre: Beckett's Quad Play and Consuming Space	<i>7-11 March 2018</i>
KRAKOW, POLAND • EuroMath-EuroScience 2018, Joint Workshop with Gizem Gurer for young researchers	

Drought Forecasting with Time Series and Machine Learning Approaches ANKARA, TURKEY • International Statistics Congress (ISC2017)	6-8 December 2017
Finite Mixture of C-vines for Complex Dependence UPPSALA, SWEDEN • 20 th European Young Statisticians Meeting	14-18 August 2017
Multivariate Analysis of Drought Characteristics Using Vine Copula Approach ALMEIRA, SPAIN • Copula Theory and its Applications. To commemorate the 75 th birthday of Professor Roger B. Nelsen	3-5 July 2017
The Investigation of the Number of Babies Born Alive in Multiple Pregnancies Using Poisson Models KONYA, TURKEY • 3rd International Researchers, Statisticians and Young Statisticians Congress (IRSYC 2017)	24-26 May 2017
Mixture of Vine Copulas for Complex and Hidden Dependence AEGINA, GREECE • Recent Developments in Dependence Modelling with Applications in Finance and Insurance (Fourth Edition)	22-23 May 2017
Bivariate Drought Analysis using Copulas GIRESUN, TURKEY • X th International Statistics Days Conference (ISDC 2016)	7-9 October 2016
Electricity Consumption and Economic Growth in Turkey: Is Copula framework possible ANTALYA, TURKEY • IX th International Statistics Congress	28 October - 1 November 2016
Copula Based Drought Indices (joint work with Tobias, E. and Ondrej, L.) PAU, FRANCE • Summer School on Copulas for Hydrology and Environmental Sciences	6-10 July 2015
Basis Risk Comparison of Bayesian based Wheat Yield Estimation against drought ANKARA, TURKEY • X th International Conference on Applied and Computational Mathematics (ICACM)	3-6 October, 2012

Invited Talks

AI generative tools - how is it going so far?: School of Math plannings UNIVERSITY OF EDINBURGH, SCHOOL OF INFORMATICS, COMPUTER SCIENCE EDUCATION (CSE) GROUP • Short Talk	January 29, 2024
Talking with your data: Langchain usecase UNIVERSITY OF EDINBURGH, SCHOOL OF MATHEMATICS, ML READING GROUP • Short Demo (1 Hours)	November 5, 2023
Harnessing Generative Artificial Intelligence (GEN-AI) for Teaching/Learning/Research IV. ULUSLARARASI UYGULAMALI İSTATİSTİK KONGRESİ (UYİK-2023) • Online Course (2 Hours, English)	September 30, 2023
Harnessing Gen-AI for teaching/research DRP2023 - PROFESSIONAL DEVELOPMENT TALKS • Online	July 25, 2023
Data Science Education and Ethical Concerns INTERNATIONAL SYMPOSIUM ON DATA SCIENCE AND STATISTICS • Online	November 4, 2022
Academic Writing and Reporting Tools III. ULUSLARARASI UYGULAMALI İSTATİSTİK KONGRESİ (UYİK-2022) • Online Course (2 Hours, Turkish)	June 21, 2022
The Use of R Language in the Insurance Industry TURKISH ACTUARY SOCIETY • Online	November 10, 2021
Basics of Python II. ULUSLARARASI UYGULAMALI İSTATİSTİK KONGRESİ (UYİK-2021) • Online Course (4 Hours, Turkish)	June 29-July 2, 2021

About Data Science

YOZGAT BOZOK UNIVERSITY

- Departmental Seminar

May 2021.

Use of R for Actuarial Science

KIRIKKALE UNIVERSITY

- Seminar for a course

May 2021.

Semi-parametric copula directed acyclic graphs

MIDDLE EAST TECHNICAL UNIVERSITY

- Departmental Seminar

April 2021.

Analysis of drought using copulas and possible benefits of nonparametric approach

KU LEUVEN

- ORSTAT Departmental Seminar

April 2020.

Further Discussions on Mixture of Vines

TECHNISCHE UNIVERSITÄT DRESDEN

- Invited by Ostap Okhrin

August 2019

Copula(s), advantages and limitations with its applications

MIDDLE EAST TECHNICAL UNIVERSITY

- Advanced Modelling in Mathematical Finance. A Workshop in Honour of Azize Hayfavi's 75'th Birthday

October, 2017

Mixture of Vine Copulas for Complex Dependence Patterns

MIDDLE EAST TECHNICAL UNIVERSITY

- Statistics Departmental Seminar

January 2017

Conference/Symposium Organization

ASA Data Fest 2024 - Edinburgh (DataFest-2024)

MEMBER OF ORGANIZING COMMITTEE

March 2024

Edinburgh

CfS Annual Conference 2023 (CFS-2023)

MEMBER OF ORGANIZING COMMITTEE

June 2023

Edinburgh

CfS Researcy Day 2023 - Dealing with Messy Data

MEMBER OF ORGANIZING COMMITTEE

- <https://centreforstatistics.maths.ed.ac.uk/cfs/events/past-events-and-recordings/2023-events/research-afternoon-messy-data>

March 2023

Edinburgh

CfS Annual Conference 2022 (CFS-2022)

MEMBER OF ORGANIZING COMMITTEE

- <https://centreforstatistics.maths.ed.ac.uk/cfs/events/the-cfs-annual-conference/cfsc-2022>

June 2022

Edinburgh

The 3. International Congress of Applied Statistics (UYİK-2022)

MEMBER OF ORGANIZING COMMITTEE

- <https://www.uyik.org/en>

June 2022

Skopje

Why R? 2022 Turkey

MEMBER OF ORGANIZING COMMITTEE

- <http://why.pl/2022/turkey/>

April 2022

Turkey

Why R? 2021 Turkey

MEMBER OF ORGANIZING COMMITTEE

- <https://github.com/why2021turkey>

April 2021

Turkey (Online)

6'th International Conference on Continuous Optimization (ICCOPT2019)

SESSION CHAIR

- The Technical University of Berlin (TU Berlin)

August 2019

Berlin, Germany

4'th International Conference on Computational Mathematics and Engineering Sciences (CMES 2019)

MEMBER OF LOCAL COMMITTEE

- Akdeniz University

April 2019

Antalya, Turkey

11'th International Statistics Days Conference

MEMBER OF ORGANIZING COMMITTEE

- Mugla Sitki Kocman University

October 2018

Mugla, Turkey

30'th National Mathematics Symposium (UMS2017)

MEMBER OF ORGANIZING COMMITTEE

- Atılım University

September 2017

Ankara, Turkey

International Conference on Applied Mathematics and Analysis (ICAMA), In Memory of Gusein Guseinov

MEMBER OF ORGANIZING COMMITTEE

- Atılım University

July 2016

Ankara, Turkey

References

Chris Sangwin

PROFESSOR OF MATHEMATICS EDUCATION

- The University of Edinburgh
- c.j.sangwin@ed.ac.uk / +44 (0)131 650 5966

Teaching

Bruno Scarpa

PROFESSOR OF STATISTICS

- University of Padua
- bruno.scarpa@unipd.it / +39 392 670 3028

Research

Gerda Claeskens

PROFESSOR OF STATISTICS

- Katholieke Universiteit (KU), Leuven
- gerda.claeskens@kuleuven.be / +32 (0)16/32.6993

Research

Ceylan Yozgatligil

ASSOC. PROFESSOR OF STATISTICS

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Research