

## Lect. PhD ASLI BOYRAZ

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: JPA-0258-2023

Yoksis Researcher ID: 121205

### Biography

After I finished my Bachelor degree in Mathematics, I wanted to do applied science and I had masters in Informatics in the US. I worked with unstructured text data in my MS thesis and data mining techniques were explored. After I got back home, I have started to work as Instructor in Computer Programming Department in RTE University. Just teaching did not satisfy me, I decided medical area is the best for humanity to use my math and programming background and I chose to do a PhD in Medical Informatics. During my PhD education, I focused on to be a data scientist and I took data science related courses such as data mining and machine learning from computer engineering department.

For my PhD project, I started to work on microbiome bioinformatics. To focus my research, I visited Science for Life Laboratory at Karolinska Institute in Stockholm, Sweden with a government scholarship for six months. During my research, I had experience working with R and I explored bioinformatics pipelines. At the beginning of my PhD project, I was involved in a forensic research to solve hospital infection problem. I worked on analyzing a contagion dataset obtained in an intense care unit in order to find the contagion path among objects utilizing microbiome profiles of objects. During my effort of analyzing contagion dataset, I figured out microbiome data should be considered as "compositional data" and I took a course about Compositional Data Analysis from the founders of the Compositional Data Research Group in Spain. Then, we developed a new procedure to analyze microbiome data using compositional data techniques that has a well-founded mathematical background. We proposed a new clustering approach of microbiome data opposed to taxonomic clusters of OTUs/ASVs. This new approach could open new insights in the analysis of microbiome datasets.

### Education Information

Doctorate, Middle East Technical University, Graduate School Of Informatics, Medical Informatics, Turkey 2012 - 2022

Postgraduate, University of Pittsburgh, Information Science And Technology, Data Science, United States Of America 2008 - 2010

Undergraduate, Hacettepe University, Fen Fakültesi, Matematik, Turkey 2002 - 2006

### Foreign Languages

English, C2 Mastery

## Certificates, Courses and Trainings

Data Analysis, Compositional Data Analysis, University of Girona, 2018  
Data Analysis, Açık Veri ve Veri Okuryazarlığı Sertifikası, Açık Veri Derneği, 2016  
Personal Evolution, Gençler Var!, Akdeniz University, 2013  
Data Analysis, Mikroarray Eğitimi ve Veri Analizi Kursu, Orta Doğu Teknik Üniversitesi, 2013  
Data Analysis, Biological Databases and Analysis Tools , the Instituto Gulbenkian de Ciência, 2012

## Dissertations

Doctorate, MICROBIOME DATA ANALYSIS USING COMPOSITIONAL DATA APPROACH, Middle East Technical University, Graduate School Of Informatics, Medical Informatics, 2022  
Postgraduate, Potential of Bookmark Based User Profiles, University of Pittsburgh, The School of Computing and Information, Veri Bilimi, 2010

## Research Areas

bioinformatics, Artificial Intelligence, Computer Learning and Pattern Recognition, Knowledge Engineering, Health Sciences, Biostatistics and Medical Informatics

## Academic Titles / Tasks

Lecturer, Recep Tayyip Erdogan University, Teknik Bilimler Meslek Yüksekokulu, Bilgisayar Teknolojileri Bölüm, 2010 - Continues

## Courses

İleri Nesne Tabanlı Programlama, Associate Degree, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013  
Veritabanı, Associate Degree, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011  
İleri Veri Tabanı, Associate Degree, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012  
Nesne Tabanlı Programlama, Associate Degree, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011  
Girişimcilik, Associate Degree, 2021 - 2022  
Temel Elektronik, Associate Degree, 2021 - 2022  
Yönetim Bilişim Sistemleri, Undergraduate, 2017 - 2018

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Effects of different brewing conditions on acrylamide levels in Turkish black tea and health risk assessment**  
Başaran B., Abanoz Y., Boyraz A.  
Journal of Food Composition and Analysis, vol.133, 2024 (SCI-Expanded)
- II. **Principal microbial groups: compositional alternative to phylogenetic grouping of microbiome data**  
Boyraz A., Pawlowsky-Glahn V., Jose Egozcue J., ACAR A. C.

## Articles Published in Other Journals

I. **Developing Questionnaires as a Tool of Collecting Information for Program Evaluation in Medical Education**

TURHAN K., KURT B., BOYRAZ A., TOPRAK U., ÜNSAL S.

Journal of Medical Education and Informatics, vol.3, no.2, pp.10-19, 2017 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

I. **Collective, Collaborative and Personalized Mobile Health Recommender: HealthUp**

Boyraz A.

14. Tıp Bilişimi Kongresi , İzmir, Turkey, 16 - 18 March 2023, pp.256-262

II. **Öğretimsel Bir Araç Olarak Robotlar: Eğitim Uygulamalarında Robotların Kullanımı**

Boyraz A., Keskinç F.

11.th International Computer Instructional Technologies Symposium, Malatya, Turkey, 26 May 2017, pp.1

III. **Bilişim Teknolojileri ve Programlama alanında Kadın**

Boyraz A.

Kadınların mesleki eğitimi ve kadın istihdamı, Ankara, Turkey, 13 December 2017

IV. **Programlama Derslerinde Çevrimiçi Video Desteği Kullanımı ile Öğrencilerin Eğitsel İnternet Kullanım Özyeterlik İnançları Arasındaki İlişkinin İncelenmesi**

Boyraz A., Keskinç F.

11. International Computer Instructional Technologies Symposium, Malatya, Turkey, 26 May 2017, pp.1

V. **Envision Future Analysis of IoT Startup**

Yazağan A., Celik M., Sakıncı Z.

ICITS 2016, Tokyo, Japan, 17 - 19 June 2016

VI. **Analysis of Inter-rater Reliability of the Mammography Assessment after Image Processing**

Turhan K., Kurt B., Kul S., Boyraz A.

International Work-Conference on Bioinformatics and Biomedical Engineering, Granada, Spain, 15 April 2015, pp.48

VII. **Data Reduction for Medical Education Program Evaluation Questionnaire**

Turhan K., Kurt B., Yazağan A., Toprak U.

3rd International Work-Conference on Bioinformatics and Biomedical Engineering, Granada, Spain, 15 - 17 April 2015

VIII. **Mortality Prediction with Lactate and Lactate Dehydrogenase**

Engin Y. Z., Turhan K., Yazagan A., Örem A.

3rd International Work-Conference on Bioinformatics and Biomedical Engineering (IWBBIO), Grenada, Spain, 15 - 17 April 2015, vol.9043, pp.78-84

IX. **Biyoinformatik Araştırmaları ve Araçları**

Boyraz A.

Akademik Bilişim, Mersin, Turkey, 5 - 07 February 2014

## Supported Projects

BOYRAZ A., Other International Funding Programs, Kod Adı Çocuk, 2015 - 2015

## **Metrics**

Publication: 12

Citation (WoS): 1

## **Congress and Symposium Activities**

14. Tıp Bilişimi Kongresi, Attendee, İzmir, Turkey, 2023

Kadınların Mesleki Eğitimi ve Kadın İstihdamı, Attendee, Ankara, Turkey, 2017

Bilgisayar ve Öğretim Teknolojileri Sempozyumu, Attendee, Malatya, Turkey, 2017

## **Scholarships**

Doktora Sırası Araştırma Bursu, TÜBİTAK, 2018 - 2018

Yurtdışı Lisansüstü Eğitim Bursu, Ministry of Education, 2007 - 2010

## **Awards**

BOYRAZ A., Ders Performans Ödülü, ODTÜ, April 2014

## **Representation and Promotion Activities**

Institutional Representation, Girona University, Spain, Girona, 2022 - 2023

Institutional Representation, Tbilisi Medical University, Georgia, Tbilisi, 2019 - 2019

Institutional Representation, University of Elblag, Poland, Elblag, 2016 - 2016

Institutional Representation, University of Elblag, Poland, Elblag, 2015 - 2015

## **Non Academic Experience**

University, University of Pittsburgh, Medical School