

## Asst. Prof. Buse Merve Ürgen

### Personal Information

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### International Researcher IDs

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### Biography

Buse Merve Ürgen is an Assistant Professor at the Department of Psychology, TED University. She received her PhD in Neuroscience from Bilkent University, Turkey in 2021. She did her BA in Psychology at Bilkent University (2011), and MS in Cognitive Neuroscience at University College London, UK (2012). Following her PhD, she worked as a postdoctoral researcher at Aysel Sabuncu Brain Research Center and National Magnetic Resonance Research Center (UMRAM). Her primary research interest is to understand how top-down mechanisms such as expectation and attention affect visual perception and decision-making processes using psychophysics, computational modeling and functional magnetic resonance imaging (fMRI).

### Education Information

Doctorate, Ihsan Dogramaci Bilkent University, Institute Of Engineering And Natural Sciences, Neuroscience, Turkey 2014 - 2021

Postgraduate, University College London, Faculty of Brain Sciences, Institute of Cognitive Neuroscience, Cognitive Neuroscience, England 2011 - 2012

Undergraduate, Ihsan Dogramaci Bilkent University, Faculty Of Economics, Administrative And Social Sciences, Department Of Psychology, Turkey 2006 - 2011

### Dissertations

Doctorate, Behavioral and Computational Investigation of the Effect of Prior Knowledge on Visual Perception, Ihsan Dogramaci Bilkent University, Graduate School of Engineering and Science, Neuroscience, 2021

Postgraduate, Taking the measure of the factors which influence the assignment of agency during online motor control , University College London, INSTITUTE OF COGNITIVE NEUROSCIENCE, COGNITIVE NEUROSCIENCE, 2012

### Research Areas

Experimental Psychology, Cognitive Science, Neural Networks, Neurosystems

## Academic Titles / Tasks

Assistant Professor, TED University, Faculty of Arts and Sciences, Department of Psychology, 2022 - Continues

## Academic and Administrative Experience

Erasmus Program Department Coordinator, TED University, Faculty Of Arts And Sciences, Department Of Psychology, 2023 - Continues

## Courses

Cognitive Psychology, Undergraduate, 2023 - 2024, 2022 - 2023  
Sensation and Perception, Undergraduate, 2023 - 2024, 2022 - 2023  
Biopsychology, Undergraduate, 2023 - 2024, 2021 - 2022  
Graduation Paper and Seminar, Undergraduate, 2021 - 2022  
Current Topics in Cognitive Psychology, Undergraduate, 2022 - 2023, 2021 - 2022  
Selected Topics in Psychology, Undergraduate, 2022 - 2023

## Advising Theses

Boyacı H., Ürgen B. M., Predictive processing of temporal expectations and its computational modelling , Doctorate, H.İrem(Student), Continues

## Jury Memberships

Post Graduate, Post Graduate, İhsan Doğramacı Bilkent Üniversitesi, July, 2024  
Doctoral Examination, Doctoral Examination, İhsan Doğramacı Bilkent Üniversitesi, May, 2024  
Doctoral Examination, Doctoral Examination, İhsan Doğramacı Bilkent Üniversitesi, February, 2024  
Post Graduate, Post Graduate, İhsan Doğramacı Bilkent Üniversitesi, December, 2023  
Doctoral Examination, Doctoral Examination, İhsan Doğramacı Bilkent Üniversitesi, December, 2023  
Post Graduate, Post Graduate, İhsan Doğramacı Bilkent Üniversitesi, October, 2023  
Doctorate, Doctorate, İhsan Doğramacı Bilkent Üniversitesi, September, 2023  
Doctorate, Doctorate, İhsan Doğramacı Bilkent Üniversitesi, September, 2023  
Post Graduate, Post Graduate, İhsan Doğramacı Bilkent Üniversitesi, August, 2023  
Post Graduate, Post Graduate, İhsan Doğramacı Bilkent Üniversitesi, July, 2023  
Post Graduate, Post Graduate, İhsan Doğramacı Bilkent Üniversitesi, July, 2023  
Post Graduate, Post Graduate, İhsan Doğramacı Bilkent Üniversitesi, October, 2022

## Designed Lessons

Ürgen B. M., Programming for Experimental Psychology, Undergraduate, 2023 - 2024

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

- I. **Factors governing the assignment of visual consequence to the corresponding action**  
Reichenbach A., Ürgen B. M., Apostolakis S., Michlin L., Diedrichsen J.  
Journal of Neurophysiology, vol.127, no.3, pp.756-766, 2022 (SCI-Expanded)
- II. **Cortical connectivity in the face of congenital structural changes—A case of homozygous LAMC3**

## **mutation**

Demirayak P., Karli Oguz K., Ustun F. S., Ürgen B. M., Topac Y., Gilani I., Kansu T., SAYGI S., Ozcelik T., Boyaci H., et al. Brain and Behavior, vol.11, no.8, 2021 (SCI-Expanded)

### **III. Unmet expectations delay sensory processes**

Ürgen B. M., Boyaci H.

Vision Research, vol.181, pp.1-9, 2021 (SCI-Expanded)

### **IV. Homozygous LAMC3 mutation links to structural and functional changes in visual attention networks**

Ürgen B. M., Topac Y., Ustun F. S., Demirayak P., Oguz K. K., Kansu T., SAYGI S., Ozcelik T., Boyaci H., Doerschner K. NeuroImage, vol.190, pp.242-253, 2019 (SCI-Expanded)

## **Books & Book Chapters**

### **I. ÖN BİLGİ VE BEKLENTİLERİN GÖRSEL ALGI ÜZERİNDEKİ ETKİLERİ: DAVRANIŞ VE HESAPLAMALI MODELLER**

Ürgen B. M.

in: Nörondan Algoritmaya Davranışı Anlamak, Dicle Dövençioğlu, Editor, Nobel Yayın Dağıtım, Ankara, pp.1-166, 2024

## **Refereed Congress / Symposium Publications in Proceedings**

### **I. Hesaplamalı modelleme ile ön bilginin duyuşal süreçler üzerindeki davranışsal ve nöral etkilerini anlamak**

Ürgen B. M., Baştürk H. İ., Boyacı H.

Ulusal Deneysel-Bilişsel Psikoloji Sempozyumu, Gazimagusa, Cyprus (Kktc), 5 - 06 October 2023

### **II. Beklentinin algı süreçlerindeki nöral ve davranışsal etkilerini açıklayabilen yinelemeli bir kortikal model**

Ürgen B. M., Baştürk H. İ., Boyacı H.

1. Ulusal Nörogörüntüleme Kongresi , Ankara, Turkey, 07 September 2023, vol.17, pp.15

### **III. Predictive processing in biological motion perception**

Elmas H. O., Aydın B., Er S., Rezaki A. D., Izgi A., Ürgen B. M., Boyacı H.

International Symposium on Brain and Cognitive Sciences (ISBCS), Ankara, Turkey, 29 May 2022

### **IV. Sensory processes are delayed when expectations are not met**

Ürgen B. M., Boyacı H.

Vision Science Society, Florida, United States Of America, 21 - 26 May 2021, vol.21, no.9, pp.2529

## **Other Publications**

### **I. Predictive processing in biological motion perception: Evidence from human behavior**

Elmas H. O., Er S., Rezaki A. D., Izgi A., Ürgen B. M., Boyacı H., Ürgen B. A.

Other, pp.1-34, 2024

### **II. A recurrent cortical model can parsimoniously explain the effect of expectations on sensory processes**

Ürgen B. M., Boyacı H.

Other, pp.1-18, 2021

## **Supported Projects**

Aykaç E., Ürgen B. M., Tulumtaş D., Project Supported by Higher Education Institutions, Behavioral investigation of the

factors that govern voting behavior in Turkey, 2023 - 2024

## Scientific Refereeing

International Symposium on Brain and Cognitive Science, Conference Paper (Abstract), June 2024

Project Supported by Public Organizations in Other Countries, The Dutch Research Council (NWO) , Netherlands, May 2023

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, TÜBİTAK, Turkey, October 2022

## Metrics

Publication: 12

Citation (Scopus): 15

H-Index (Scopus): 2

## Congress and Symposium Activities

International Symposium on Brain and Cognitive Science (ISBCS), Panelists, Ankara, Turkey, 2024

## Invited Talks

Perception as an Inference Process: Insights from Computational Modeling of Human Behavior, Conference, International Symposium on Brain and Cognitive Sciences (ISBCS), Turkey, June 2024

Üst Seviye Mekanizmaların Duyusal Bilgi İşleme Üzerine Etkisi, Conference, Ankara Medipol Üniversitesi, Turkey, May 2024

Perception as an inference process: Insights from computational modeling of human behavior, Conference, Bilkent Üniversitesi, XI. Neuroscience Days, Turkey, November 2023

Ön bilgi ve beklentiler erken görsel süreçleri etkiler mi?, Conference, Çankaya Üniversitesi Psychology Society, Turkey, March 2023

Ön bilgi ve beklentilerin görsel algı üzerindeki etkileri, Conference, Hacettepe Üniversitesi, Turkey, December 2022