



## Seda Dural, Ph. D.

Professor of Experimental Psychology

İzmir University of Economics  
Department of Psychology  
İzmir, Türkiye  
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*Understanding the underlying mechanisms of behavior and discovering how the mind works have always been a priority in my research. I am particularly interested in innate and acquired aspects of number-space associations. In the same vein, I also find it quite exciting to work through how learning and memory processes are involved in forming these associations.*

### Academic Appointments

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|---------------------|--|-------------|
| Professor           | İzmir University of Economics<br><i>Department of Psychology</i> | 2019 -      |
| Associate Professor | İzmir University of Economics<br><i>Department of Psychology</i> | 2013 - 2019 |
| Assistant Professor | İzmir University of Economics<br><i>Department of Psychology</i> | 2011 - 2013 |
| Assistant Professor | İzmir University<br><i>Department of Psychology</i>              | 2010 - 2011 |
| Research Assistant  | Ege University<br><i>Department of Psychology</i>                | 2005 - 2010 |
| Research Assistant  | Muğla University<br><i>Department of Psychology</i>              | 2001 - 2005 |

### Education and Training

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|--------------------------------|---|-------------|
| Postdoctoral Research          | Ruhr University<br><i>Advisor: Professor Onur Güntürkün</i>   | 2015 - 2016 |
| Ph.D. (Psychometrics)          | Ege University<br><i>Advisor: Professor Oya Somer</i>         | 2005 - 2010 |
| M.A. (Experimental Psychology) | Muğla University<br><i>Advisor: Professor Hakan Çetinkaya</i> | 2001 - 2005 |
| B.Sc. (Psychology)             | Hacettepe University  | 1997 - 2001 |

### Awards and Honors

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|---|--------------------------------------|------|
| Outstanding Young Scientists Award                | <i>Turkish Academy of Sciences</i>   | 2019 |
| Overseas Experience Scholarship (Ruhr University) | <i>İzmir University of Economics</i> | 2015 |

Erasmus Visiting Researcher Grant *İzmir University of Economics* 2013  
(Ruhr University)

### **Funding / Research Support (Principal Investigator or Co-Investigator)**

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İzmir University of Economics Scientific Research Project Grant (BAP2023-2023) 2023 - 2024

*Title: Time Dependent Effects of MNL Compatible and Incompatible Stimulus-Response Relations on Magnitude Space Associations*

*Role: PI*

*Co-Investigator: Ezgi Palaz*

Turkish Academy of Sciences Grant (GEBIP2019) 2019-2023

(Outstanding Young Scientists Program)

*Title: A Memory Model for Magnitude-Space Associations*

*Role: PI*

*Research Assistants: Merve Bulut, Ilgün Hepdarcın, Ezgi Palaz*

The Scientific and Technological Research Council of Türkiye (120K778) 2021-2022

(1002-Short Term R&D Funding Program)

*Title: An Investigation of The SNARC and SNARC-Like Effects: Time-Dependent Effects of Compatible and Incompatible Stimulus-Response Practice*

*Role: PI*

*Co-Investigator: Merve Bulut*

İzmir University of Economics Scientific Research Project Grant (BAP2019-15) 2020 - 2022

*Title: An Investigation of Space-Size Association in the Context of Long-Term Memory Representations*

*Role: PI*

*Co-Investigators: Hakan Çetinkaya, Seda Can*

*Research Assistants: Merve Bulut, Ilgün Hepdarcın, Ezgi Palaz*

The Scientific and Technological Research Council of Türkiye (111K258) 2011 - 2013

(3501-Career Development Program)

*Title: The Investigation of Effects of Stimulus Modality on the Non-Invasive Prevention of the Return of Fear Memory*

*Role: PI*

*Consulting: Hakan Çetinkaya*

The Scientific and Technological Research Council of Türkiye (111K233) 2011-2013

(1001-The Scientific and Technological Research Projects Funding Program)

*Title: Investigation of Personality Traits in Acquisition and Extinction of Trauma Expectation by Using Conditioned Stimuli of Different Modalities in an Instructed Fear Paradigm*

*Role: Co-Investigator*

*PI: Hakan Çetinkaya*

### **Other Grants (Consulting or Minor Role)**

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The Scientific and Technological Research Council of Türkiye (114K213) 2014-2016

(3501-Career Development Program)

*Title: Exploring the Design Criteria of Low-Cost Motor Learning Game Systems*

*Role: Consulting*

*PI: Gazihan Alankuş*

## **Manuscripts in Progress**

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- Palaz, E., Cetinkaya, H., & Dural, S. (under preparation). The time dependent effects of MNL compatibility under different representational context on SNAs.
- Kaya, C., Candemir, A., Kaya, D., Cetinkaya, H., & Dural, S. (under preparation). Reading between the lines: Investigating the role of reading habits in SNAs in non-SNARCer Turkish sample.
- Hepdarcan I., Korkut, I., Gur, E., Cetinkaya H., & Dural S. (under review). Revisiting the SNARC effect: Testing magnitude comparison in a Turkish sample lacking the SNARC effect in parity judgment task. *Journal of Cognitive Psychology*. Submission ID: 247637866.
- Palaz E., Cetinkaya H., Tuncalı Z., Kamar B., & Dural S. (under review). Practice induced SNARC: Evidence from a null-SNARC sample. *Cognitive Processing*. Submission ID: COPR-D-23-00270.
- Hepdarcan I., Cetinkaya H., & Dural S. (under review). Magnitude-space representations in the n-back task: Long-term representations of magnitudes alter the working memory performance. *Memory & Cognition*. Submission ID: MC-ORIG-23-364.
- Bulut, M., Çetinkaya, H., & Dural, S. (under review). SNARC effect in a transfer paradigm: Long lasting effects of S-R compatibility practices. *Psychological Research*. Submission ID: 9d618795-b4cd-4be2-af8c-6e1e7f129f9a.
- Gelbart B., Walter K. V., Conroy-Beam D., et al. (under review). The function of love: Assessing commitment device and relationship maintenance hypotheses of romantic love. *Evolution and Human Behavior*. Submission ID: EVOLHUM BEHAV-D-23-00184.
- Kowal, M., Al-Shawaf, L., Varella, M. A. C., et al. (under review). Insights on the importance of physical attractiveness: Two-step cluster analysis on data from 93 countries. *Journal of Economic Psychology*. Submission ID: JOEP-D-23-00246.

## **Peer-Reviewed Publications**

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- Groyecka-Bernard, A., Sorokowski, P., Karwowski, M., et al. (in press) Conservatism negatively predicts creativity: A study across 28 countries. *Journal of Cross-Cultural Psychology*.
- Mesko, H., Kowal, M., Lang, A., et al. (2023) Exploring attitudes towards sugar relationship across 87 countries: A global perspective on exchanges of resources for sex and companionship. *Archives of Sexual Behavior*. DOI: 10.1007/s10508-023-02724-1.
- Kowal, M., Sorokowski, P., Dinic, B. M., et al. (2023) Validation of the short version (TLS-15) of the Triangular Love Scale (TLS-45) across 37 languages. *Archives of Sexual Behavior*. DOI: 10.1007/s10508-023-02702-7.
- Croy, I., Heller, C., Akello, G., et al. (2023). COVID-19 and social distancing: A cross-cultural study of interpersonal distance preferences and touch behaviors before and during the pandemic. *Cross-Cultural Research*. DOI: 10.1177/10693971231174935.

- Bulut, M., Hepdarcıan, I., Palaz, E., Çetinkaya, H., & Dural, S. (2023). No SNARC effect among left-to-right readers: Evidence from Turkish sample. *Advances in Cognitive Psychology*. DOI: 10.5709/acp-0394-x.
- Sorokowska, A., Kowal, M., Saluja, S., et al. (2023). Love and affectionate touch toward romantic partners all over the World. *Nature: Scientific Reports*. DOI: 10.1038/s41598-023-31502-1.
- Sorokowski, P., Kowal, M., Sternberg, R., et al. (2023). Modernization, collectivism, and gender equality predict love experiences in 45 countries. *Nature: Scientific Reports*. DOI: 10.1038/s41598-022-26663-4.
- Kowal, M., Sorokowski, P., Pisanski, K., et al. (2022). Predictors of enhancing human physical attractiveness: Data from 93 countries. *Evolution and Human Behavior*. DOI: 10.1016/j.evolhumbehav.2022.08.003.
- Dural, S., Gur, E., & Çetinkaya, H. (2022) Testing the memory reconsolidation hypothesis in a fear extinction paradigm: The effects of ecological and arbitrary stimuli. *Learning and Behavior*. DOI: 10.3758/s13420-022-00536-2.
- Burkova, V. N., Butovskaya, M. L., Randall, A. K., et al. (2022). Factors associated with highest symptoms of anxiety during COVID-19: Cross-cultural study of 23 countries. *Frontiers in Psychology*. DOI: 10.3389/fpsyg.2022.805586.
- Walter, K. V., Conroy-Beam, D., Buss, D. M., et al. (2021). Sex differences in human mate preferences vary across sex ratios. *Proceedings of the Royal Society B: Biological Science*. DOI: 10.1098/rspb.2021.1115.
- Butovskaya, M. L., Burkova, V. N., Randall, A. K., et al. (2021). Cross-cultural perspectives on the role of empathy during COVID-19's first wave. *Sustainability*. DOI: 10.3390/su13137431.
- Sorokowska, A., Saluja, S., Sorokowski, P., et al. (2021). Affective interpersonal touch in close relationships: A cross-cultural perspective. *Personality and Social Psychology Bulletin*. DOI: 10.1177/0146167220988373.
- Burkova, V. N., Butovskaya, M. L., Randall, A. K., et al. (2021). Predictors of anxiety in the COVID-19 pandemic from a global perspective: Data from 23 countries. *Sustainability*. DOI: 10.3390/su13074017.
- Hepdarcıan, I., Bulut, M., Palaz, E., Can, S. & Dural, S. (2021) The distance effect on discrimination ability and response bias during magnitude comparison in a go/no-go task. *Attention, Perception & Psychophysics*. DOI: 10.3758/s13414-021-02274-5.
- Sorokowski, P., Sorokowska, A., Karwowski, M., et al. (2020). Universality of the triangular theory of love: Adaptation and psychometric properties of the triangular love scale in 25 countries. *The Journal of Sex Research*. DOI: 10.1080/00224499.2020.1787318.
- Dobrowolska, M., Groyecka-Bernard, A., Sorokowski, P., et al. (2020). Global perspective on marital satisfaction. *Sustainability*. DOI:10.3390/su12218817.
- Kowal, M., Sorokowski, P., Sorokowska, A., et al. (2020). Reasons for Facebook usage: Data from 46 countries. *Frontiers in Psychology*. DOI: 10.3389/fpsyg.2020.00711.
- Walter, K. V., Conroy-Beam, D., Buss, D. M., et al. (2020). Sex differences in mate preferences across 45 countries: A large-scale replication. *Psychological Science*. DOI: 10.1177/0956797620904154.
- Conroy-Beam D., Buss D.M., Asao K., et al. (2019). Contrasting computational models of mate preference integration across 45 countries. *Nature: Scientific Reports*. DOI: 10.1038/s41598-019-52748-8.
- Conroy-Beam, D., Roney, J. R., Lukaszewski, A. W. et al. (2019). Assortative mating and the evolution of desirability

covariation. *Evolution and Human Behavior*. DOI: 10.1016/j.evolhumbehav.2019.06.003.

- Dural, S., Burhanoglu, B. B., Ekin, N., Gurbuz, E., Akın, İ. U., Can, S. & Cetinkaya, H. (2018). Compatibility between physical stimulus size-spatial position and false recognitions. *Frontiers in Psychology*. DOI: 10.3389/fpsyg.2018.01457.
- Sorokowska, A., Groyecka, A., Karwowski, M. et al. (2018). Global study of social odor awareness. *Chemical Senses*. DOI: 10.1093/chemse/bjy038.
- Sorokowski, P., Randall, A. K., Groyecka, A., et al. (2017). Marital satisfaction, sex, age, marriage duration, religion, number of children, economic status, education, and collectivistic values: Data from 33 countries. *Frontiers in Psychology*. DOI: 10.3389/fpsyg.2017.01199.
- Sorokowska, A., Sorokowski, P., Hilpert, P., et al. (2017). Preferred interpersonal distance: A global comparative analysis. *Journal of Cross-Cultural Psychology*. DOI: 10.1177/0022022217698039.
- Dural, S., Cetinkaya, H., & Gunturkun, O. (2017). Imagine a mouse and an elephant: Hemispheric asymmetries of imagination. *Laterality*. DOI: 10.1080/1357650X.2016.1200594.
- Hilpert, P., Randall, A. K., Sorokowski, P., et al. (2016). The associations of dyadic coping and relationship satisfaction vary between and within nations: A 35-Nation study. *Frontiers in Psychology*. DOI: 10.3389/fpsyg.2016.01106.
- Dural, S., Cetinkaya H., & Gulbetekin, E. (2015). Hemispheric specialization in the assessment of female physical attractiveness. *Laterality*. DOI: 10.1080/1357650X.2014.955503.
- Dural, S., Cetinkaya H., Can S., Kaya A. G., & Hünler, O. S. (2014). Examination of sex differences in the responses to heterosexual and homosexual infidelity. *Anatolian Journal of Psychiatry*. DOI: 10.5455/apd.39255.
- Gulbetekin, E., Iyilikci, O., Amado, S., Cetinkaya, H., & Dural, S. (2012). Hemispheric asymmetry in expression and perception of happiness. *Türk Psikoloji Dergisi*. 27(70), 65-83.
- Dural, S., Somer, O., Korkmaz, M., Can, S., & Öğretmen, T. (2011). Second order latent growth models and measurement equivalence. *Education and Science*. 36(161), 51-63.
- Sorokowski, P., Szmajke, A., Sorokowska, A., et al. (2011). Attractiveness of leg length: Report from 27 nations. *Journal of Cross-Cultural Psychology*. DOI: 10.1177/0022022110392229.
- Dural, S., Karaşar, A., & Cetinkaya, H. (2010). The effect of derogation strategies used by females in intrasexual competition on males' mate preferences. *Türk Psikoloji Dergisi*. 25(66), 101-116.
- Cetinkaya, H., Dural, S., & Gulbetekin, E. (2010). Testing the concealed ovulation hypothesis in the framework of facial symmetry fluctuations moderated by menstrual cycle in women. *Türk Psikoloji Dergisi*. 25(66), 1-20.
- Tok, S., Koyuncu, M., Dural, S., & Çatıkkaş, F. (2010). Evaluation of international affective picture system (IAPS) ratings in an athlete population and its relations to personality. *Personality and Individual Differences*. DOI: 10.1016/j.paid.2010.04.020.
- Dural, S., Somer, O., Korkmaz, M., & Can, S. (2010). Latent growth models with multiple indicators. *Journal of Measurement and Evaluation in Education and Psychology*. 1(1), 29-36.
- Dural, S., Somer, O., Korkmaz, M., Can, S., & Öğretmen, T. (2010). An analysis of change over time: Latent growth models. *Türk Psikoloji Dergisi*. 24(65), 1-15.

- Somer, O., Korkmaz, M., Dural, S., & Can, S. (2009). Detection of measurement equivalence by structural equation modeling and item response theory. *Türk Psikoloji Dergisi*. 24(64), 61-75.
- Gülbetekin, E., Güntürkün, O., Dural, S., & Çetinkaya, H. (2009). Visual asymmetries in Japanese quail (*Coturnix coturnix japonica*) retain a lifelong potential for plasticity. *Behavioral Neuroscience*. DOI: 10.1037/a0016406.
- Dural, S., Çetinkaya, H., & Gülbetekin, E. (2008). The role of waist-to-hip ratio in evaluation of female physical attractiveness: Eye-tracker data. *Türk Psikoloji Dergisi*. 23(61), 75-91.
- Gülbetekin, E., Güntürkün, O., Dural, S., & Çetinkaya, H. (2007). Asymmetry of visually-guided sexual behavior in adult Japanese quail (*Coturnix japonica*). *Laterality*. DOI: 10.1080/13576500701307080.

### **Selected Conference Presentations**

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- Bulut, M., Hepdarcan, I., Palaz, E., Çetinkaya, H. ve Dural, S. (2022). *The SNARC effect: Can reading direction and finger counting habits explain the spatial-numerical associations?* 21st National Congress of Psychology, İstanbul, Türkiye.
- Bulut, M. ve Dural, S. (2022). *Time-dependent effect of compatible and incompatible practice on the SNARC effect in the context of spatial-numerical associations.* 21st National Congress of Psychology, İstanbul, Türkiye.
- Bulut, M. & Dural, S. (2022). *Finger counting habit and its link with spatial-numerical associations in a Turkish sample.* 17th European Congress of Psychology, Ljubljana, Slovenia.
- Dural, S., Bulut, M., Palaz, E., & Hepdarcan, I. (2021). *The distance effect in a response inhibition task.* 32nd International Congress of Psychology, Prague, Czech Republic.
- Palaz, E., Dural, S., & Çetinkaya, H. (2019). *The blocking effect in observational learning of fear.* 16th European Congress of Psychology, Moscow, Russia.
- Dural, S., Çetinkaya, H., & Can, S. (2018). *Biological roots of left-to-right-oriented mental line.* International Society for Comparative Psychology Biennial Meeting, Los Angeles, USA.

### **Invited Seminars, Talks & Colloquia**

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| Acquired Fears and Phobias: Experimental Approach<br><i>İzmir University of Economics (Psychology Club Talks)</i>  | 2022 |
| Magnitude-Space Association<br><i>Hacettepe University (PSL702 Current Issues in Psychology Seminar)</i>   | 2021 |
| Magnitude-Space Congruency and False Memories<br><i>İzmir University of Economics (Department of Psychology Seminar)</i>   | 2018 |
| Imagine an Elephant and a Mouse: The Visual Field Bias in Picturing<br><i>Ruhr University (Biopsychology Research Colloquium)</i>  | 2016 |
| A Novel Approach to Extinction of Acquired Fear: Intervening to Reconsolidation Process of Fear Memory<br><i>Dokuz Eylül University (Department of Psychology Seminar)</i> | 2015 |

Stimulus Modality Effects on Fear Memory Update Process 2013  
*İzmir University of Economics (Department of Psychology Seminar)*

### **Mentoring (Ph.D. students)**

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|                 |                                      |            |
|-----------------|--------------------------------------|------------|
| Merve Bulut     | <i>İzmir University of Economics</i> | 2018- 2024 |
| Ezgi Palaz      | <i>İzmir University of Economics</i> | 2018-      |
| Ilgım Hepdarcan | <i>İzmir University of Economics</i> | 2018 -     |

### **Mentoring (Graduate students)**

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|                  |                                      |            |
|------------------|--------------------------------------|------------|
| Ayşenur Candemir | <i>İzmir University of Economics</i> | 2023 -     |
| İlayda Korkut    | <i>İzmir University of Economics</i> | 2023 -     |
| Elvin Naz Tunç   | <i>İzmir University of Economics</i> | 2022 -     |
| Sayyara Hasanlı  | <i>İzmir University of Economics</i> | 2016- 2018 |
| Beste İçağası    | <i>İzmir University of Economics</i> | 2014- 2016 |
| Ezgi Gür         | <i>İzmir University of Economics</i> | 2012- 2014 |
| Ayşegül Aydınlık | <i>İzmir University of Economics</i> | 2011- 2014 |

### **Mentoring (Undergraduate students)**

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|-------------------|--------------------------------------|------------|
| Samet Kahraman    | <i>İzmir University of Economics</i> | 2023-      |
| Melike Şefikoğlu  | <i>İzmir University of Economics</i> | 2023-      |
| Duru Kaya         | <i>University College London</i>     | 2023 -     |
| Şimal Yenigüllü   | <i>İzmir University of Economics</i> | 2023-      |
| Zeynep Tunçalı    | <i>İzmir University of Economics</i> | 2022-      |
| Ceren Kaya        | <i>İzmir University of Economics</i> | 2021-      |
| Emine Bengi Kamar | <i>İzmir University of Economics</i> | 2021-      |
| Büşra Elif Yelbuz | <i>İzmir University of Economics</i> | 2016– 2018 |

### **Mentoring (Other)**

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|                 |  |             |
|-----------------|--|-------------|
| Beria S. Haugen | <i>University of Minnesota Twin-Cities</i> | 2023-       |
| Bengisu Alkan   | <i>İzmir University of Economics</i>       | 2023 - 2024 |
| Ceyhun Yener    | <i>Yaşar University</i>                    | 2023        |

|              |                         |      |
|--------------|-------------------------|------|
| Eylül Hırlak | <i>Yaşar University</i> | 2023 |
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#### **Dissertation Proposal Committees**

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|-------------|--------------------------------------|------|
| Merve Bulut | <i>İzmir University of Economics</i> | 2020 |
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| Ezgi Palaz | <i>İzmir University of Economics</i> | 2020 |
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| Ilgım Hepdarcan | <i>İzmir University of Economics</i> | 2020 |
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| Turan Gündüz | <i>Ankara University</i> | 2019 |
|--------------|--------------------------|------|

#### **Dissertation Defense Committees**

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|-------------|--------------------------------------|------|
| Merve Bulut | <i>İzmir University of Economics</i> | 2024 |
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|--------------|--------------------------|------|
| Turan Gündüz | <i>Ankara University</i> | 2023 |
|--------------|--------------------------|------|

|                 |  |      |
|-----------------|--|------|
| Ömer Taha Sözer | <i>Aydın Adnan Menderes University</i> | 2021 |
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|-------------------|-----------------------|------|
| Yalçın Akın Duyan | <i>Koç University</i> | 2019 |
|-------------------|-----------------------|------|