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ACADEMIC DEGREES

- 2019 **Associate Professor in Neuroscience**, Multidisciplinary Health Sciences, Council of Higher Education (UAK), Ankara, Turkiye
- 2007 **Ph.D. in Electrical & Computer Engineering**, University of Houston, Houston, TX
Thesis: Dynamics of Feature Processing for Static and Moving Objects in the Human Visual System
Advisor: Prof. Haluk Ogmen
- 2007 **Certificate in Cognitive Science**, Center for Neuro-Engineering & Cognitive Science, University of Houston, Houston, TX
- 2003 **B.S. in Electrical & Electronics Engineering**, Bogazici University, Istanbul, Turkiye
Concentration in Signal Processing and Communication Systems

PROFESSIONAL POSITIONS

- 2018-present **Affiliate Faculty**, Graduate School of Informatics-Cognitive Science, METU, Ankara, Turkiye
- 2016-present **Assistant Professor**, Aysel Sabuncu Brain Research Center, Bilkent University, Ankara, Turkiye
- 2014-present **Assistant Professor**, Interdisciplinary Neuroscience Program, Bilkent University, Ankara, Turkiye
- 2013-present **Assistant Professor**, National Magnetic Resonance Research Center, Bilkent University, Ankara, Turkiye
- 2008-2013 **Postdoctoral Research Associate**, Vision Center Laboratory, The Salk Institute for Biological Studies, La Jolla, CA
- 2003-2008 **Research & Teaching Assistant**, Department of Electrical & Computer Engineering, University of Houston, Houston, TX

HONORS & AWARDS

- 2022 Distinguished Young Scientist Award (BAGEP), The Science Academy-Turkiye
- 2021 Research Incentive Award, METU Prof. Dr. Mustafa Parlar Foundation
- 2020 Outstanding Young Scientist Award (GEBIP), The Turkish Academy of Sciences (TUBA)
- 2013-2015 Co-Funded Brain Circulation Fellowship, The Scientific and Technological Research Council of Turkiye (TUBITAK) and the European Union Marie Curie Scheme (EU-FP7 Marie Curie Actions People COFUND)
- 2010 Included in Marquis Who's Who in America 2011, 65th Edition

- 2008-2009 KIBM Innovative Research Award, The Kavli Institute for Brain & Mind, University of California, San Diego, CA
- 2003-2007 University of Houston GATF Fellowship
- 1999-2003 Turkish Government Tuition Scholarship
- 1999-2003 Sabanci Foundation Fellowship
- 1999 Ranked 277th among 1.5 million examinees in Turkish University Examination

RESEARCH INTERESTS

Visual Perception and Cognition, Multisensory Integration, Systems Neuroscience, Neurophysiology, Theoretical Brain Studies, Mathematical Modeling of Perceptual and Cognitive Processes, Neuroimaging, Brain Stimulation, Age-dependent Changes in Perception and Sensory Processing.

PROFESSIONAL MEMBERSHIPS

- 2020-present **Young Academy Member**, Turkish Academy of Sciences
- 2018-present **Member**, American Physiological Society
- 2008-present **Member**, Society for Neuroscience
- 2006-present **Member**, Vision Sciences Society

RESEARCH FUNDING

- 2022-2024 **BAGEP Project**, Is It Possible to Have a Better Vision?, Principal Investigator. Budget: ~3700 USD
- 2021-2024 **TUBITAK 1001 Grant**, Improving Vision through Perceptual Learning and Brain Stimulation, Principal Investigator. Budget: ~95400 USD
- 2020-2023 **TUBA-GEBIP Project**, The Role of Associative Learning and Attention in Crossmodal Interactions, Principal Investigator. Budget: ~10000 USD
- 2020-2023 **TUBITAK 1001 Grant**, Functional Roles of Inter- and Intra-pathway Interactions in Visual Perception, Principal Investigator. Budget: ~132715 USD
- 2019-2020 **TUBITAK 1002 Grant**, Exposure-based Perceptual Learning in Zebrafish Aging Model, Principal Investigator. Budget: ~7800 USD
- 2018-2019 **British Academy Newton Mobility Grant**, Neural Mechanisms Underlying Adaptation Induced Changes in Motion Perception, Principal Investigator. Budget: 10000 £
- 2017-2018 **TUBITAK 1001 Grant**, The Interaction between Caloric Restriction and Age in mTOR Mutants, Principal Investigator. Budget: ~154400 USD
- 2016-2019 **TUBITAK 1001 Grant**, Functional Links between Motion Perception and Key Synaptic Targets during Neural Aging, Principal Investigator. Budget: ~155000 USD
- 2014-2016 **TUBITAK 1001 Grant**, Neural Mechanisms Underlying Multisensory Perception of Speed, Principal Investigator. Budget: ~127000 USD
- 2013-2015 **TUBITAK 2236 Grant** (joint funding program by TUBITAK and EU-FP7 Marie Curie Actions People COFUND), Neural Mechanisms Underlying Multisensory Associative Learning, Principal Investigator. Budget: 114408 €

Other Projects

- 2023-2024 **TUBITAK 1002 Grant**, Interpreting the Effects of Peripheral and Central Noise on Visual Perception through Stochastic Resonance, Consultant.
- 2019-2020 **TUBITAK 1002 Grant**, Demonstration and Detailed Functional Analysis of Central Pattern Generator for Chewing by Functional MRI, Researcher.
- 2017-2019 **TUBITAK 1001 Grant**, Development of New Methods to Obtain High Performance in Electroencephalography Based Brain-Computer Interfaces, Consultant.
- 2017 **TUBITAK 2221 Program**, Mechanisms Underlying Object-based Selective Processing in Vision, Host Scientist. Budget: ~12140 USD
- 2017 **TUBITAK 1000 Program**, Bilkent University Research and Development Strategic Plan for Neurosciences, Researcher.

Advised

- 2018 **TUBITAK 2209**, National/International Research Projects Fellowship Programme for Undergraduate Students-A (2018-1). Fellow: Berfin Aydın Budget: ~522 USD
- 2016 **TUBITAK 2209**, National/International Research Projects Fellowship Programme for Undergraduate Students-A (2016-1). Fellow: Can Oluk Budget: ~700 USD
- 2015 **TUBITAK 2209**, National/International Research Projects Fellowship Programme for Undergraduate Students-A (2015-1). Fellows: Meltem Karaca, Nilsu Atilgan Budget: ~450 USD
- 2014 **TUBITAK 2209**, National/International Research Projects Fellowship Programme for Undergraduate Students-A (2014-1). Fellows: Merve Karacaoglu, Cansu Ogulmus Budget: ~1130 USD

PUBLICATIONS

Refereed Journal Articles

1. Pavan, A., Yilmaz, S.K., **Kafaligonul, H.**, Föcker, J., Greenlee, M.W. (in progress). Action video game players learn perceptual templates of motion direction faster but do not exhibit higher precision of visual short-term memory.
2. Yilmaz, S.K., **Kafaligonul, H.** (in progress). Attentional demands in the visual field alter audiovisual interactions in the temporal domain.
3. Akdogan, I., Ogmen, H., **Kafaligonul, H.** (in progress). The phase coherence of low-frequency brain oscillations predict changes in perceived visibility.
4. Catak, E.N., Ogmen, H., **Kafaligonul, H.** (in progress). Attentional load modulates neural processing of target visibility in metacontrast masking.
5. Karaduman, A., Karoglu-Eravsar, E.T., Adams, M.M., **Kafaligonul, H.** (under review). Passive exposure to visual motion leads to short-term changes in the optomotor response of aging zebrafish. Behavioural Brain Research.
6. Karoglu-Eravsar E.T., Tuz-Sasik M.U., Karaduman A., Keskus A.G., Konu O., **Kafaligonul H.**, Adams M.M. (2023). Chronic long-term acetylcholinesterase inhibition alters the levels of key

synaptic proteins while maintaining neuronal markers in the aging zebrafish (*danio rerio*) brain. *Gerontology*. <https://doi.org/10.1159/000534343>

7. Karaduman, A., Karoglu-Eravsar, E.T., Kaya, U., Aydin, A., Adams, M.M., **Kafaligonul, H.** (2023). Zebrafish optomotor response to second-order motion illustrates that age-related changes in motion detection depend on the activated motion system. *Neurobiology of Aging*, 130, 12-21.
8. Pavan, A., Contillo, A., Koc Yilmaz, S., **Kafaligonul, H.**, Donato, R., O'Hare, L. (2023). A comparison of equivalent noise methods in investigating local and global form and motion integration. *Attention, Perception and Psychophysics*, 85, 152-165.
9. Duyar, A., Pavan, A., **Kafaligonul, H.** (2022). Attentional modulations of audiovisual interactions in apparent motion: temporal ventriloquism effects on perceived visual speed. *Attention, Perception and Psychophysics*, 84, 2167–2185.
10. Pavan, A., Koc Yilmaz, S., **Kafaligonul, H.**, Battaglini, L., Blurton, S.P. (2022). Motion processing impaired by transient spatial attention: potential implications for the magnocellular pathway. *Vision Research*, 199, 108080.
11. Catak, E.N., Ozkan, M., **Kafaligonul, H.**, Stoner G.R. (2022). Behavioral and ERP evidence that object-based attention utilizes fine-grained spatial mechanisms. *Cortex*, 151, 89-104.
12. Aydin, A., Ogmen, H., **Kafaligonul, H.** (2021). Neural correlates of metacontrast masking across different contrast polarities. *Brain Structure and Function*, 226, 3067-3081.
13. Kaya, U., **Kafaligonul, H.** (2021). Audiovisual interactions in speeded discrimination of a visual event. *Psychophysiology*, 58, e13777.
14. Karaduman, A., Karoglu-Eravsar, E.T., Kaya, U., Aydin, A., Adams, M.M., **Kafaligonul, H.** (2021). The optomotor response of aging zebrafish reveals a complex relationship between visual motion characteristics and cholinergic system. *Neurobiology of Aging*, 98, 21-32.
15. Celebi-Birand, D., Ardic, N.I., Karoglu-Eravsar, E.T., Sengul, G.S., **Kafaligonul, H.**, Adams, M.M. (2020). Dietary and pharmacological interventions that inhibit mammalian target of rapamycin activity alter the brain expression levels of neurogenic and glial markers in an age- and treatment-dependent manner. *Rejuvenation Research*, 23(6), 485-497.
16. Akyuz, S., Pavan, A., Kaya, U., **Kafaligonul, H.** (2020). Short- and long-term forms of neural adaptation: an ERP investigation of dynamic motion aftereffects. *Cortex*, 125, 122-134.
17. Kaya, U., **Kafaligonul, H.** (2019). Cortical processes underlying the effects of static sound timing on perceived visual speed. *NeuroImage*, 199, 194-205.
18. Adams, M.M., **Kafaligonul, H.** (2018). Zebrafish-a model organism for studying the neurobiological mechanisms underlying cognitive brain aging and use of potential interventions. *Frontiers in Cell and Developmental Biology*, 6: 135.
19. **Kafaligonul, H.**, Albright T.D., Stoner, G.R. (2018). Auditory modulation of spiking activity and local field potentials in area MT does not appear to underlie an audiovisual temporal illusion. *Journal of Neurophysiology*, 120(3), 1340-1355.
20. **Kafaligonul, H.** (2018). Examining the effects of audiovisual associations on motion perception through task-based fMRI. *Dusunen Adam: The Journal of Psychiatry and Neurological Sciences*, 31(2), 125-134. (Published in Turkish, Original Title: İşitsel-görsel çağrışımların hareket algısı üzerine etkilerinin görev temelli fMRI ile incelenmesi)

21. Ogulmus, C., Karacaoglu, M., **Kafaligonul, H.** (2018). Temporal ventriloquism along the path of apparent motion: speed perception under different spatial grouping principles. *Experimental Brain Research*, 236(3), 629-643.
22. Kaya, U., Yildirim, F.Z., **Kafaligonul, H.** (2017). The involvement of centralized and distributed processes in sub-second time interval adaptation: an ERP investigation of apparent motion. *European Journal of Neuroscience*, 46(8), 2325-2338.
23. Oluk, C., Pavan, A., **Kafaligonul, H.** (2016). Rapid motion adaptation reveals the temporal dynamics of spatiotemporal correlation between ON and OFF pathways. *Scientific Reports*, 6:34073.
24. **Kafaligonul, H.**, Breitmeyer B.G., Ogmen, H. (2015). Feedforward and feedback processes in vision. *Frontiers in Psychology*, 6:279.
25. **Kafaligonul, H.**, Oluk, C. (2015). Audiovisual associations alter the perception of low-level visual motion. *Frontiers in Integrative Neuroscience*, 9:26.
26. **Kafaligonul, H.** (2014). Vision: a systems neuroscience perspective. *Journal of Neurobehavioral Sciences*, 1(2), 21-26.
27. **Kafaligonul, H.**, Stoner, G.R. (2012). Static sound timing alters sensitivity to low-level visual motion. *Journal of Vision*, 12(11):2, 1-9.
28. **Kafaligonul, H.**, Stoner, G.R. (2010). Auditory modulation of visual apparent motion with short spatial and temporal intervals. *Journal of Vision*, 10(12):31, 1-13.
29. **Kafaligonul, H.**, Breitmeyer, B.G., Ogmen, H. (2009). Effects of contrast polarity in paracontrast masking. *Attention, Perception and Psychophysics*, 71, 1576-1587.
30. Breitmeyer B.G., Tapia, E., **Kafaligonul, H.**, Ogmen, H. (2008). Metacontrast masking and stimulus contrast polarity. *Vision Research*, 48, 2433-2438.
31. Breitmeyer, B.G., **Kafaligonul, H.**, Ogmen, H., Mardon, L., Todd, S., Ziegler, R. (2006). Meta- and paracontrast reveal differences between contour and brightness processing mechanisms. *Vision Research*, 46, 2645-2658.

Books

1. **Kafaligonul, H.**, Breitmeyer B.G., Ogmen, H. (Eds.) (2015). Feedforward and feedback processes in vision, 151 pp, Lausanne, Frontiers Media SA.

Book Chapters

1. Celebi-Birand, D., Tuz-Sasik M.U., Ardic-Avci, N.I., Aydogan, H.O., Erbaba, B., Karoglu-Eravsar, E.T., **Kafaligonul, H.**, Adams, M.M. (2021). The zebrafish (*Danio rerio*) and its uses for understanding the neuroscience of aging: applications and observation. In Martin, C.R., Preedy, V.R. and Rajendram, R. (Eds.), *Assessments, Treatments and Modeling in Aging and Neurological Disease: The Neuroscience of Aging*, London, Academic Press, 491-503.
2. Celebi-Birand, D., Erbaba, B. Ozdemir, A.T., **Kafaligonul, H.**, Adams, M. (2018). Zebrafish aging models and possible interventions. In Bozkurt, Y. (Ed.), *Recent Advances in Zebrafish Researches*, London, InTechOpen Press, 3-26.
3. **Kafaligonul, H.**, Patel, S.S., Ogmen, H., Bedell, H.E., Purushothaman, G. (2010). Perceptual asynchronies and the dual-channel differential latency hypothesis. In Nijhawan, R. and Khunara,

B. (Eds.), Space and Time in Perception and Action, Cambridge, Cambridge University Press, 379-395.

PRESENTATIONS & PUBLISHED ABSTRACTS

1. Akdogan, I., **Kafaligonul, H.** (accepted). The phase coherence in alpha and beta frequency bands is associated with the modulations of target visibility in visual masking. Annual Meeting of the Society for Neuroscience, Washington, DC.
2. Yilmaz S.K., **Kafaligonul, H.** (accepted). Attentional demands in the visual field alter audiovisual interactions in time: EEG correlates. Annual Meeting of the Society for Neuroscience, Washington, DC.
3. **Kafaligonul, H.**, Turker, A. (2023). Event-related potentials associated with the inhibitory processes of forward masking. Annual Meeting of Vision Sciences Society, St. Pete Beach, FL (Journal of Vision 23 (9), 4998-4998).
4. Turker, A., **Kafaligonul, H.** (2023). Neurophysiological investigation of inhibitory processes involved in forward masking. National Neuroimaging Congress, Ankara, Turkiye.
5. Akdogan, I., **Kafaligonul, H.** (2022). Examining the effects of contrast ratio on metacontrast masking with electroencephalography. 44th European Conference on Visual Perception, Nijmegen, Netherlands (Perception vol.51 suppl.1S p.142-142).
6. Turker, A., **Kafaligonul, H.** (2022). EEG correlates of inhibitory processes involved in paracontrast masking. 44th European Conference on Visual Perception, Nijmegen, Netherlands (Perception vol.51 suppl.1S p.141-141).
7. Pavan, A., Contillo, A., Koc Yilmaz, S, **Kafaligonul, H.**, Donato, R., O'Hare, L. (2022). A comparison of equivalent noise methods in investigating form/motion Integration. 44th European Conference on Visual Perception, Nijmegen, Netherlands (Perception vol.51 suppl.1S p.31-31).
8. Koc Yilmaz, S., Pavan, A., **Kafaligonul, H.**, Battaglini, L., Blurton, S.P. (2021). The effect of transient attention on motion processing: implications for the magnocellular pathway. 43rd European Conference on Visual Perception, Virtual Meeting, (Perception vol.50 suppl.1S p.71-72).
9. Catak, E.R., **Kafaligonul, H.** (2021). Electrophysiological investigation of attentional modulation on metacontrast masking. 43rd European Conference on Visual Perception, Virtual Meeting, (Perception vol.50 suppl.1S p.181).
10. Konyali, A., **Kafaligonul, H.** (2021). Attention differentially modulates brief and prolonged inhibitions in paracontrast masking. Annual Meeting of Vision Sciences Society, Virtual Meeting (Journal of Vision 21 (9), 2217-2217).
11. Aydin, A., Ogmen, H., **Kafaligonul, H.** (2021). Metacontrast masking across different contrast polarities: the role of late ERP components. Annual Meeting of Vision Sciences Society, Virtual Meeting (Journal of Vision 21 (9), 2083-2083).
12. Konyali, A., **Kafaligonul, H.** (2020). The involvement of attention and masking in controlling stimulus visibility. 18th National Neuroscience Congress, Ankara, Turkiye (Anatomy vol.14 suppl.2 S133).
13. Catak, E.N., **Kafaligonul, H.**, Ozkan, M., Stoner G.R. (2020). Neural activation for object-based selection persists despite random changes in object features. 18th National Neuroscience Congress, Ankara, Turkiye (Anatomy vol.14 suppl.2 S152).

14. **Kafaligonul, H.** (2020). Interdisciplinary education in neuroscience: Bilkent example. 18th National Neuroscience Congress, Ankara, Turkiye (Anatomy vol.14 suppl.2 S95).
15. Akyuz, S., Pavan, A., Kaya, U., **Kafaligonul, H.** (2020). Short- and long-term forms of sensory plasticity probed with a motion adaptation paradigm. 18th National Neuroscience Congress, Ankara, Turkiye (Anatomy vol.14 suppl.2 S143).
16. Karaduman, A., Karoglu Eravsar, E.T., Adams, M.M., **Kafaligonul, H.** (2020). Exposure-based perceptual learning in aging zebrafish. 18th National Neuroscience Congress, Ankara, Turkiye (Anatomy vol.14 suppl.1 S136).
17. Catak, E.N., **Kafaligonul, H.**, Ozkan, M., Stoner G.R. (2019). ERP evidence for persistence of object-based selection over unpredictable changes in object attributes. Annual Meeting of the Society for Neuroscience, Chicago, IL (Program No. 309.07/L42 Neuroscience Meeting Planner).
18. Ozkan, M., Stoner G.R., **Kafaligonul, H.** (2019). Functional links between motion-onset visual evoked potentials and perception. Annual Meeting of the Society for Neuroscience, Chicago, IL (Program No. 309.14/M3 Neuroscience Meeting Planner).
19. **Kafaligonul, H.** (2019). Visual motion: a window into the functioning brain. 5th Experimental and Cognitive Psychology Symposium, Istanbul, Turkiye.
20. Duyar, A., **Kafaligonul, H.** (2019). Attentional modulation of audiovisual interactions in time: temporal ventriloquism in visual apparent motion. 42nd European Conference on Visual Perception, Leuven, Belgium (Perception vol.48 suppl.2S p.100-101).
21. Kaya, U., **Kafaligonul, H.** (2018). Neural mechanisms underlying auditory time interval effects on perceived visual speed. Annual Meeting of the Society for Neuroscience, San Diego, CA (Program No. 223.15/HH7 Neuroscience Meeting Planner).
22. Akyuz, S., Pavan, A., **Kafaligonul, H.** (2018). Neural mechanisms underlying short- and long-term forms of plasticity probed with a motion-adaptation paradigm. 41st European Conference on Visual Perception, Trieste, Italy (Perception vol.48 suppl.S1 p.98).
23. **Kafaligonul, H.** (2018). Zebrafish as a model for perceptual and cognitive performance. 16th National Neuroscience Congress, Istanbul, Turkiye (Anatomy vol.12 suppl.1 S25).
24. Karaduman, A., Kaya, U., Karoglu, E.T., Arslan-Ergul, A., Adams, M.M., **Kafaligonul, H.** (2018). A systematic investigation of motion direction discrimination in aged zebrafish. 16th National Neuroscience Congress, Istanbul, Turkiye (Anatomy vol.12 suppl.1 S26).
25. Karoglu, E.T., Tuz-Sasik M.U., Karaduman, A.,Keskus, A.G., Arslan-Ergul, A., Konu, O., **Kafaligonul, H.**, Adams, M.M. (2018). Cholinergic modulations of synaptic protein levels in male and female aged zebrafish. 16th National Neuroscience Congress, Istanbul, Turkiye (Anatomy vol.12 suppl.1 S25).
26. Celebi Birand, E.D., Ardic N.I., Sengul, G.F., **Kafaligonul, H.**, Adams, M.M. (2018). Effects of short-term caloric restriction and rapamycin on brain aging in zebrafish (*Danio rerio*). 16th National Neuroscience Congress, Istanbul, Turkiye (Anatomy vol.12 suppl.1 S85-86).
27. Karaduman, A., Kaya, U., Karoglu, E.T., Ergul-Arslan, A., Adams, M.M., **Kafaligonul, H.** (2017). Motion direction discrimination during neural aging. Annual Meeting of the Society for Neuroscience, Washington, DC (Program No. 685.01/GG9 Neuroscience Meeting Planner).
28. Celebi-Birand, E., Sengul, G.F., Ardic, N.I., **Kafaligonul, H.**, Adams, M.M. (2017). Effects of short-term of caloric restriction and rapamycin treatments on cellular and synaptic components in

- young and old zebrafish (*Danio rerio*). Annual Meeting of the Society for Neuroscience, Washington, DC (Program No. 663.15/K6 Neuroscience Meeting Planner).
29. Kaya, U., Yildirim, F.Z., **Kafaligonul, H.** (2017). Evoked potentials to visual apparent motion after auditory and visual time interval adaptation. 40th European Conference on Visual Perception, Berlin, Germany.
 30. Karoglu, E.T., Tuz-Sasik, M.U., Keskus, A.G., Arslan-Ergul, A., Konu, O., **Kafaligonul, H.**, Adams, M.M. (2017). Cholinergic manipulations alter the levels of key synaptic proteins in a sexually dimorphic manner in old zebrafish (*Danio rerio*). 10th European Zebrafish Meeting, Budapest, Hungary.
 31. **Kafaligonul, H.**, Kaya, U. (2016). Multisensory interactions and perceived timing. 14th National Neuroscience Congress, Ankara, Turkiye (Anatomy vol.10 suppl.1 S6).
 32. Ogulmus, C., **Kafaligonul, H.** (2016). Audiovisual interactions in time and spatial grouping principles of vision. 14th National Neuroscience Congress, Ankara, Turkiye (Anatomy vol.10 suppl.1 S65-S66).
 33. Yildirim, Z.F., Kaya, U., **Kafaligonul, H.** (2016). Auditory adaptation alters evoked potentials to visual motion over temporal and frontal regions. 14th National Neuroscience Congress, Ankara, Turkiye (Anatomy vol.10 suppl.1 S66-S67).
 34. **Kafaligonul, H.**, Kaya, U. (2015). Crossmodal interactions in the timing of a visual event: An EEG study. Annual Meeting of the Society for Neuroscience, Chicago, IL (Program No. 509.04/N17 Neuroscience Meeting Planner).
 35. **Kafaligonul, H.**, Oluk, C. (2014). Audiovisual associations alter low-level motion perception. Annual Meeting of the Society for Neuroscience, Washington, DC (Program No. 623.01/CC35 Neuroscience Meeting Planner).
 36. **Kafaligonul, H.**, Oluk, C. (2014). Altering perception of low-level visual motion by audiovisual associations. 37th European Conference on Visual Perception, Belgrade, Serbia (Perception vol.43 suppl.1 p.36).
 37. Stoner G.R., Albright T.D., **Kafaligonul, H.** (2013). A phase-resetting framework for crossmodal influences on perception. Annual Meeting of the Society for Neuroscience, San Diego, CA (Program No. 357.03/UU20 Neuroscience Meeting Planner).
 38. Lopes, M.A., **Kafaligonul, H.**, Albright T.D., Stoner G.R. (2013). Surround modulation in visual area MT: Suppression/facilitation, antagonism/integration. Annual Meeting of the Society for Neuroscience, San Diego, CA (Program No.360.02/WW22 Neuroscience Meeting Planner).
 39. Lopes, M.A., **Kafaligonul, H.**, Albright, T.D., Stoner, G.R. (2013). Support for a non-human primate (NHP) model of schizophrenia: acute subanesthetic ketamine alters center-surround interactions. 7th Annual Salk/ Fondation Ipsen/ Nature Symposium on Biological Complexity: Molecular Biology of Psychiatric Disorders, La Jolla, CA.
 40. **Kafaligonul, H.**, Albright, T.D., Stoner, G.R. (2012). Neural mechanisms underlying a crossmodal temporal illusion in visual area MT. Annual Meeting of the Society for Neuroscience, New Orleans, LA (Program No.369.16/KK3 Neuroscience Meeting Planner).
 41. Lopes, M.A., **Kafaligonul, H.**, Albright, T.D., Stoner, G.R. (2012). Support for a non-human primate (NHP) model of schizophrenia: acute subanesthetic ketamine alters center-surround interactions. Annual Southern California Cognitive Neuroscience Meeting, San Diego, CA.

42. **Kafaligonul, H.**, Stoner, G.R. (2011). The timing of static sounds modulates sensitivity to low-level visual motion. Annual Meeting of the Society for Neuroscience, Washington, DC (Program No. 376.03/NN10 Neuroscience Meeting Planner).
43. Lopes, M.A., **Kafaligonul, H.**, Albright, T.D., Stoner, G.R. (2011). Support for a non-human primate (NHP) model of schizophrenia: acute subanesthetic ketamine alters center-surround interactions. Annual Meeting of the Society for Neuroscience, Washington, DC (Program No.163.14/DD31 Neuroscience Meeting Planner).
44. **Kafaligonul, H.**, Albright, T.D., Stoner, G.R. (2011). Modulatory effect of auditory timing on visual motion processing. Annual Meeting of the Sloan-Swartz Centers for Theoretical Neurobiology, Janelia Farm Research Campus, Ashburn, VA.
45. **Kafaligonul, H.**, Stoner, G.R. (2010). The auditory capture of visual timing extends to short-range apparent motion. Annual Meeting of Vision Sciences Society, Naples, FL (Journal of Vision 10(7): 890, 890a).
46. **Kafaligonul, H.** (2010). Evidence that static sounds shift the temporal tuning of lower visual motion areas. The Kavli Institute Brain and Mind Symposium, San Diego, CA.
47. Stoner, G., Klam, F., **Kafaligonul, H.** (2008). An apparent disagreement between MT surround modulation and perception. Annual Meeting of the Society for Neuroscience, Washington, DC (Program No. 460.18/GG10 Neuroscience Meeting Planner).
48. **Kafaligonul, H.H.**, Patel, S.S., Ogmen, H., Bedell, H.E., Purushothaman, G. (2006). Simultaneous flash-lag effects in two directions reveal a slow stage of multi-directional motion integration. Annual Meeting of Vision Sciences Society, Sarasota, FL (Journal of Vision 6(6):641 641a).
49. Ogmen, H., Breitmeyer, B.G., **Kafaligonul, H.**, Todd, S., Mardon, L., Ziegler, R. (2006). Temporal aspects of contour and brightness processing in meta- and paracontrast. Annual Meeting of Vision Sciences Society, Sarasota, FL (Journal of Vision 6(6):122, 122a).
50. **Kafaligonul, H.**, Breitmeyer, B.G., Ogmen, H., Mardon, L., Todd, S., Ziegler, R. (2006). Computational and psychophysical analyses of contour and surface processing in human vision. Annual Meeting of Houston Society for Engineering in Medicine and Biology, Houston, TX.
51. **Kafaligonul, H.**, Breitmeyer, B.G., Ogmen, H., Mardon, L., Todd, S., Ziegler, R (2005). The dynamics of surface and contour processing in human vision. Annual GCC Conference on Theoretical and Computational Neuroscience, Houston, TX.
52. **Kafaligonul, H.**, Ogmen, H., Bedell, H.E. (2004). Effect of exposure duration and contrast on human blur perception. Texas Systems Day Conference, Houston, TX.

INVITED TALKS & COLLOQUIA

1. “Understanding the Dynamics of Perceptual Processing with Electroencephalogram”, National Neuroimaging Congress, Ankara, Turkiye, September 2023.
2. “Dynamics of Sensory and Perceptual Processing”, University of Essex, Colchester, UK, July 2023.
3. “Applications of EEG Technique in Cognitive Psychology and Neuroscience”, Bartın University, Amasra, Turkiye, October 2022.

4. "Age-related Changes in Sensation and Perception: Visual Motion and Zebrafish Model", METU Neuroscience Days, Ankara, Turkiye, June 2022.
5. "Visual Motion: A Window into the Functioning Brain", Neuroscience and Neurotechnology Center of Excellence Seminars, Ankara, Turkiye, February 2022.
6. "Audiovisual Integration: Flexible Use of Dynamic Operations", Cognitive Science Days, Yeditepe University, Istanbul, Turkiye, September 2021.
7. "Multisensory Nature of Motion and Speed Estimation", Dynamics of Vision and Touch Workshop, Marie Skłodowska-Curie Action – Innovative Training Network Program, Cappadocia, Turkiye, November 2019.
8. "Speed Estimation as a Multistage and a Multisensory Process", Cognitive Science Colloquium, Informatics Institute, METU, Ankara, Turkiye, April 2019.
9. "Data Preprocessing for Functional Magnetic Resonance Imaging", 22th Annual Turkish Magnetic Resonance Meeting, Ankara, Turkiye, May 2017.
10. "Multisensory Contributions to Visual (Motion) Perception", Cognitive Science Colloquium, Informatics Institute, METU, Ankara, Turkiye, December 2014.
11. "Audiovisual Interactions in Cortical Area MT", 12th National Neuroscience Congress, Bahçeşehir University, Istanbul, Turkiye, May 2014.
12. "Crossmodal Interactions within the Framework of Visual Motion Processing", National Nanotechnology Research Center, Bilkent University, Ankara, Turkiye, November 2013.
13. "The Importance of Multisensory Contextual Information for Visual Perception", Cognitive Science Meeting, Bogazici University, Istanbul, Turkiye, September 2013.
14. "Contextual Influences on Visual Motion Processing: Contributions of Auditory Timing", Department of Psychology, Bilkent University, Ankara, Turkiye, February 2012.
15. "The Underlying Mechanisms of Multisensory Interactions in Area MT", The Kavli Institute Brain & Mind Symposium, University of California, San Diego, CA, May 2009.
16. "Perceptual Asynchronies, Differential Latencies and the Dynamics of Feature Computation in the Human Visual System", The Salk Institute for Biological Studies, La Jolla, CA, June 2007.

SCHOLARLY SERVICE

Editorial: Frontiers in Neuroscience, Frontiers in Psychology, Frontiers in Cognition

Journal Review: Attention Perception & Psychophysics, Brain Research, Current Biology, Consciousness & Cognition, Frontiers in Behavioral Neuroscience, Frontiers in Integrative Neuroscience, Frontiers in Neural Circuits, IEEE Signal Processing & Communications Applications (Conference Proceedings), Journal of Experimental Psychology: General, Journal of Neural Engineering, Neurobiology of Aging, Scientific Reports, Timing & Time Perception, Translational Vision Science & Technology

Book Chapter Review: Cambridge University Press

Grant Proposal Review: The Scientific and Technological Research Council of Turkiye (TUBITAK), Health Institutes of Turkiye (TUSEB)

Scientific Meeting:

Advisory Committee Member, 9th International Symposium on Brain and Cognitive Sciences, Ozyegin University, Istanbul, Turkiye, 7 May 2023.

Advisory Board Member, Neuroimaging Course for Graduate Students: Novel and Recent Techniques, Bartın University, Amasra, Turkiye, 15-16 October 2022.

Advisory Committee Member, 8th International Symposium on Brain and Cognitive Sciences, Koc University, Istanbul, Turkiye, 29 May 2022.

Review Committee Member, 30th IEEE Conference on Signal Processing and Communications Applications, Safranbolu, Turkiye, 15-18 May 2022.

Scientific Course Organizer, “EEG Evaluation and Application in Cognitive Neuroscience”, Aysel Sabuncu Brain Research Center, Ankara, Turkiye, 28 March 2022.

Local Organizing Committee, 18th National Neuroscience Congress, Bilkent University, Ankara, Turkiye, 6-9 November 2020.

Plenary Talk Moderator, 18th National Neuroscience Congress, Bilkent University, Ankara, Turkiye, 8 November 2020.

Program Committee Chair, 7th International Symposium on Brain and Cognitive Sciences, Bilkent University, Ankara, Turkiye, 31 May 2020.

Advisory Committee Member, 6th International Symposium on Brain and Cognitive Sciences, Yeditepe University, Istanbul, Turkiye, 28 April 2019.

Scientific Course Organizer, “EEG Course for Beginners”, Aysel Sabuncu Brain Research Center, Ankara, Turkiye, 1 December 2018.

Panel Organizer and Moderator, “Zebrafish Model for Neural Aging, Cognitive and Perceptual Processes”, 16th National Neuroscience Congress, Istanbul, Turkiye, 23 May 2018.

DEPARTMENTAL SERVICE

- 2022-present **Associate Director**, Aysel Sabuncu Brain Research Center, Bilkent University
- 2019-2023 **Organizer, Neuroscience Seminars**, Aysel Sabuncu Brain Research Center/
National Magnetic Resonance Research Center, Bilkent University
- 2019-2022 **Member, Executive Committee**, Aysel Sabuncu Brain Research Center, Bilkent
University
- 2019-2020 **Member, Faculty Search Committee**, Aysel Sabuncu Brain Research Center/
National Magnetic Resonance Research Center, Bilkent University
- 2014-present **Member, Qualifying Examination Committee**, Interdisciplinary Neuroscience
Program, Bilkent University

TEACHING EXPERIENCE

- 2013-present **Instructor**, Bilkent University, Ankara, Turkiye
PSYC 220 Brain and Behavior
PSYC 401 Psychology Senior Thesis I
PSYC 402 Psychology Senior Thesis II
NSC 510 Sensory and Motor Systems Neuroscience

NSC 546 Computing for Neuroscience
 NSC 612 Selected Topics in Neuroscience I

2003-2007 **Teaching Assistant**, University of Houston, Houston, TX
 ECE 2100 Circuit Analysis Laboratory
 ECE 2300 Circuit Analysis
 ECE 3441 Digital Logic Design
 ECE 3337 Electrical Engineering Analysis I

2002 **Undergraduate Assistant**, Bogazici University, Istanbul, Turkiye
 EE 210 Introduction to Electrical Engineering

SUPERVISION OF RESEARCH

2013-present **Advisor**, Bilkent University, Ankara, Turkiye

Postdoctoral Researchers:

Esra Nur Catak (Aysel Sabuncu Brain Research Center/National Magnetic Resonance Research Center, Bilkent University, 2022-present), “The effects of spatial attention on visual dynamics”

Seyma Koc Yilmaz (Aysel Sabuncu Brain Research Center/National Magnetic Resonance Research Center, Bilkent University, 2020-present), “Perceptual learning and sensory plasticity”

Aysenur Karaduman (Aysel Sabuncu Brain Research Center/National Magnetic Resonance Research Center, Bilkent University, 2021-2022), “Visual motion detection of adult zebrafish”

Utku Kaya (Aysel Sabuncu Brain Research Center/National Magnetic Resonance Research Center, Bilkent University, 2018-2019), “Temporal dynamics of multi-sensory processing”

Current Graduate Students:

Irem Akdogan, PhD Student, Neuroscience Program, Bilkent University

Alaz Aydin, PhD Student, Informatics Institute, METU

Afife Konyali, PhD Student, Neuroscience Program, Bilkent University

Sudenur Ozkan, PhD Student, Neuroscience Program, Bilkent University

Busra Karakus Soylemez, PhD Student, Neuroscience Program, Bilkent University

Beril Simay Uner, PhD Student, Neuroscience Program, Bilkent University

Former Graduate Students:

Esra Nur Çatak (PhD in Neuroscience, Bilkent University, 2017-2022), “Cortical processes underlying attentional modulations of dynamic vision”

Aysenur Karaduman (PhD in Neuroscience, Bilkent University, 2015-2021), “Investigating motion detection of aging zebrafish with optomotor response”

Sibel Akyuz (PhD in Neuroscience, Bilkent University, 2015-2020), “Probing sensory plasticity with rapid forms of motion adaptation”

Utku Kaya (PhD in Cognitive Science, METU Informatics Institute, 2014-2018), “Neural mechanisms underlying sub-second crossmodal time perception”

Berrak Müftüoğlu (MS in Neuroscience, Bilkent University, 2022-2023), “Predictive processing during novel word learning: ERP measures of vowel harmony”

Efsun Kavaklioglu (MS in Cognitive Science, METU Informatics Institute, 2020-2022), “Speed perception in multisensory profiles: what is the role of attention?”

Irem Akdogan (MS in Neuroscience, Bilkent University, 2019-2021), “Neurophysiological investigation of contrast ratio effects on metacontrast masking”

Afife Konyali (MS in Neuroscience, Bilkent University, 2018-2021), “Spatial attention and paracontrast masking”

Alaz Aydin (MS in Cognitive Science, METU Informatics Institute, 2017-2018), “Cortical processes underlying metacontrast masking across different contrast polarities”

Gaye Benliolper (MS in Neuroscience, Bilkent University, 2016-2018), “EEG correlates of audiovisual associations in motion perception”

Cansu Ogulmus (MS in Neuroscience, Bilkent University, 2014-2016), “Audiovisual interactions in time and spatial grouping principles of vision”

Zeynep Yildirim (MS in Neuroscience, Bilkent University, 2014-2016), “Changes in fMRI resting state networks due to audiovisual association induced effects on visual motion perception”

Thesis Committees:

Emin Celik, PhD Thesis, Neuroscience Program, Bilkent University

Pinar Demirayak, PhD Thesis, Neuroscience Program, Bilkent University

Hayriye Aktas Dincer, PhD Thesis, Biomedical Engineering, METU

Halil Duzcu, PhD Thesis, Informatics Institute, METU

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Ayşe Ozhan, PhD Thesis, Materials Science & Nanotechnology, Bilkent University

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Buse Merve Urgen, PhD Thesis, Neuroscience Program, Bilkent University

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Yigit Tuncel, MS Thesis, Electrical & Electronics Eng., Bilkent University
Abdul Waheed, MS Thesis, Electrical & Electronics Eng., Bilkent University
Muhammad N. Yasinzai, MS Thesis, Electrical & Electronics Eng., Bilkent University
Cemre Yilmaz, MS Thesis, Neuroscience Program, Bilkent University

Undergraduate Students:

Nilsu Atilgan, Psychology Department, Bilkent University
Deniz Duman, Psychology Department, Bilkent University
Aysun Duyar, Psychology Department, Bilkent University
Aykut Gunes, School of Medicine, Hacettepe University
Ecem Karabork, School of Medicine, Hacettepe University
Meltem Karaca, Psychology Department, Bilkent University
Merve Karacaoglu, Psychology Department, Bilkent University
Ege Kibrislioglu, MBG Department, Bilkent University
Can Oluk, Psychology Department, Bilkent University
Mert Ozkan, Psychology Department, Bilkent University
Serkan Senturk, MBG Department, Bilkent University
Ceyda Tekalp, Psychology Department, Bilkent University
Sila Toker, Psychology Department, Bilkent University
Ulku Ugurlu, School of Medicine, Ankara University
Efe Yalim, MBG Department, Bilkent University

2008-2013 **Mentor**, The Salk Institute for Biological Studies, La Jolla, CA

Graduate Students:

Marco Lopes, PhD student, Salk Institute and Universidade di Coimbra
Mike Jansen, MS Student, California State University

Neuroscience Interns:

Christopher Fernandez, STARS Program, UCSD
Justin Klein, Vision Center Laboratory, Salk Institute
Tina T. Tian, STARS Program, UCSD
Brittani Vaillancourt, STARS Program, UCSD

OTHER PROFESSIONAL EXPERIENCE

2011 **Consultant**, Laboratory of Cognitive Neuroscience, The Salk Institute for Biological Studies, La Jolla, CA
Consulting for pre-doc and post-doc researchers in scientific programming