Ashima Keshava

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Institute für Kognitionswissenschaft,
Wachsbleiche 27,
D-49090, Osnabrück
Email: ashimakeshava<at>gmail.com
Git : github.com/ashimakeshava

Strengths

Fluent in Python, Matlab, and R

Eye-tracking setup and analysis in VR

Advanced EEG & Eye-Tracking signal processing

Advanced topics in statistical modeling and machine learning

Research

Neurobiopsychology Lab / Doctoral Candidate
May 2017-PRESENT, INSTITUTE OF COGNITIVE SCIENCE
May 2019-PRESENT, COMPUTATIONAL COGNITION RESEARCH TRAINING GROUP

Neurobiopsychology Lab / Research Assistant
2014 -2016, INSTITUTE OF COGNITIVE SCIENCE

Infosys Ltd. Department of Education & Research / Systems Engineer
SEPTEMBER 2011 - SEPTEMBER 2013, MYSORE, INDIA

Defense Research & Development Organisation / Trainee
JANUARY 2011 - JUNE 2011, NEW DELHI, INDIA

Teaching

Real-world Neuroscience and Beyond
WINTER SEMESTER 2021-22
Topics: Computational ethology, ecological validity, real-world neuro-imaging

Deep Learning & Cognitive Neuroscience
WINTER SEMESTER 2020-21

Topics: Encoding-Decoding models of human visual cortex

Action & Cognition: Computational Cognition
SUMMER SEMESTER 2021, 2020, 2019

Topics: Data Science for human neuroimaging and behavioral data

Education

Institute of Cognitive Science / Doctoral Candidate
MAY 2017 - PRESENT, OSNABRÜCK, GERMANY

Study emphasis on modeling action-oriented visual perception in naturalistic environments.

Topics: Intention Recognition, Active Vision, Human-Machine Interaction, Embodied Cognition, Real-World Neuroscience

Methods: Eye-Tracking in VR, EEG, Statistical modeling

Institute of Cognitive Science / MSc Cognitive Science
OCTOBER 2013 - DECEMBER 2016, OSNABRÜCK, GERMANY

Study emphasis on Cognitive Neuroscience and Cognitive Psychology

Master's Thesis: Classification of attentive and inattentive states based scalp EEG signal using SVMs

Manipal Institute of Technology / BE Electronics & Communication
AUGUST 2007 - JULY 2011, MANIPAL, INDIA

Study emphasis on Engineering Mathematics, Signal Processing

Selected Publications

Keshava, A., Aumeistere, A., Izdebski, K., & Konig, P. (2020). Decoding Task From Oculomotor Behavior In Virtual Reality. *ACM Symposium on Eye Tracking Research and Applications*.

Keshava, A., Gottschewsky, N., Balle, S., Nezami, F. N., Schüler, T., & König, P. (2021). Action Affordance Affects Proximal And Distal Goal-Oriented Planning. (In review) Preprint at bioRxiv

Keshava, A., Nezami, F. N., Neumann, H., Izdebski, K., Schüler, T., & König, P. (2021). Low-level Action Schemas Support Gaze Guidance Behavior for Action Planning and Execution in Novel Tasks. (In review) Preprint at bioRxiv

Nezami, F. N., Wächter, M. **A., Keshava,** A., Czeszumski, A., Lukanov, H., De Palol, M. V., Pipa, G., & König, P. (2021). Talking cars, doubtful users - a population study in virtual reality. Preprint at bioRxiv

Czeszumski, A., Gert, A. L., **Keshava, A.,** Ghadirzadeh, A., Kalthoff, T., Ehinger, B. V., Tiessen, M., Björkman, M., Kragic, D., & König, P. (2021). Coordinating With a Robot Partner Affects Neural Processing Related to Action Monitoring. *Frontiers in Neurorobotics*, *15*, 102.

König, S. U., **Keshava, A.,** Clay, V., Ritterhofer, K., & Kuske, N., König, P.(2020). Embodied Spatial Knowledge Acquisition in Immersive Virtual Reality: Comparison to Map Exploration. *Frontiers in Virtual Reality, 4.*

Grants/Funding

SmartFi: Smart Fidelity interaction system to increase the realism of performing manual tasks in virtual reality. funded by the European Funds for Regional Development, Lower Saxony, Germany
OCTOBER 2021 - PRESENT

ErgoVR: Development of an ergonomics analysis tool in virtual reality for the planning of workplaces in industrial manufacturing, funded by the German Federal Ministry of Education and Research
SEPTEMBER 2018 - AUGUST 2020

VRFlow Suite: Embodied Engineering in der Produktionstechnik, funded by European Funds for Regional Development, Lower Saxony, Germany
MAY 2017 - JULY 2018

Extras

Equal Opportunity Representative, Computational Cognition Research Training Group
APRIL 2019 - PRESENT

Lab Admin, NeuroBioPsychology Lab
JANUARY 2018 - PRESENT