

SUVODIP CHAKRABORTY

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EXPERIENCE

PhD Researcher

Singapore-ETH Centre, Singapore

Jan 2021 - Ongoing

📍 Singapore

Optimizing strategies for communicating predicted disruptions to stakeholders

Junior Research Fellow

SRIC,IIT Kharagpur

Mar 2019 - Apr 2019

📍 Kharagpur, India

Study on the effects of meditation on human mind and body.

Study of effects of Meditation on Human Mind and Body which incorporated finding the changes in the signatures of saccades through electro-oculogram(EOG).

Development of smart sensors which can monitor the alertness levels of an individual

Development of an embedded platform for detection and estimation of fatigue using various physiological signals like Respiration Rate, Heart Rate, oxygen saturation, EEG, EOG.

Teaching assistant

IIT, Kharagpur

January 2017 - June 2017

📍 Kharagpur, India

Demonstration of capabilities of small embedded system platforms in resource constraint environment has been discussed with possible demonstrations and class projects..

EDUCATION

Master in Science(by Research)

Indian Institute of Technology (IIT) Kharagpur

July 2015 – Feb 2018

📍 Kharagpur, India

CGPA: 9.44/10

Design of electro-oculography based weareable systems for eye movement analysis

Worked on development of a prototype system capable of acquisition and processing of EOG based on the intersection of signal processing, embedded systems and pattern recognition.

Bachelors in Electrical engineering

Dr. B.C. Roy Engineering College,

July 2010 – July 2014

📍 Durgapur, India

CGPA: 8.25/10

Final-Year Project: The effects of fault on auto transformer and 3-phase transformer windings have been studied in the summer internship

Awards

- Poster presentation in 100 th Indian national science congress
- 1st postion in Jawahar Lal Nehru National science exhibition
- 2nd position in regional science exhibition (kolkata region)
- 1st position in school level science exhibition

SKILLS

Programming

Matlab Python Arduino C# L^AT_EX

Computer Aided Design Tools

AutoDesk-Eagle

Technical Skills

Eye Tracking Brain Computer Interface

Electroencephalogram(EEG)

Human Computer Interface(HCI) Instrumentation

Body Area Networks(BAN's) Data Analysis

SELECTED PUBLICATIONS

Full list on Google Scholar

S. Chakraborty, P. Kiefer and M. Raubal, "Estimating Perceived Mental Workload From Eye-Tracking Data Based on Benign Anisocoria," in *IEEE Transactions on Human-Machine Systems*.

Chakraborty, S., Kiefer, P., Raubal, M. (2024). The influence of uncertainty visualization on cognitive load in a safety- and time-critical decision-making task. *International Journal of Geographical Information Science*, 38(8), 1583–1610.

Chakraborty, S., Kiefer, P., Raubal, M. (2022). Improving Resilience by Communicating Predicted Disruptions in Control Rooms. In: , et al. *Sense, Feel, Design. INTERACT 2021. Lecture Notes in Computer Science*, vol 13198. Springer, Cham.

S. Chakraborty, A. Dasgupta and A. Routray, Localization of Eye Saccadic Signatures in Electrooculograms using Sparse Representations with Data-driven Dictionaries and Dynamic Time Warping, *Pattern Recognition Letters*, 2017

A. Dasgupta, **S. Chakraborty**, and A. Routray, A two-stage framework for denoising electrooculography signals, *Biomedical Signal Processing and Control*, Elsevier, vol. 31, pp. 231237, 2017

LANGUAGES

English Bilingual, Full Working Proficiency

Hindi Bilingual, Full Working Proficiency

Bengali Bilingual, Full Working Proficiency