

Abhishek Baba

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EDUCATION

Indian Institute of Technology, Kanpur

Uttar Pradesh, India

Doctor of Philosophy in Cognitive Science

July 2021-

- Coursework CGPA: 7.79

Indian Institute of Information Technology, Guwahati

Assam, India

Master of Technology in Communication and Signal Processing

July 2019- May 2021

- CGPA: 9.56
- MTech Batch Topper Certificate, 2019

North Eastern Regional Institute of Science and Technology

Arunachal Pradesh, India

Bachelor of Technology in Electronics and Communication Engineering

July 2015- June 2019

- CGPA: 7.43

North Eastern Regional Institute of Science and Technology

Arunachal Pradesh, India

BASE Degree (Class 12 equivalent)

July 2013- June 2015

- Percentage: 75.68

Kendriya Vidyalaya Bilaspur

Chhattisgarh, India

AISSE (Class 10)

April 2012- March 2013

- CGPA: 9.8

EXPERIENCE

Doctoral Thesis

August 2021-

Indian Institute of Technology Kanpur

Uttar Pradesh, India

- Project title: Investigating Intergroup Biases in Varying Social Contexts.
- Understanding biases in a minimal group paradigm through the lens of ingroup-outgroup distinction, and possible ways of mitigating these biases.
- Psychopy, R, JASP, Python

Master's Project

August 2020- May 2021

Indian Institute of Information Technology Guwahati

Assam, India

- Project title: Photo Core Transform for JPEG XR Image Compression.
- A novel software implementation of forward and inverse photo core transforms for JPEG XR image compression.
- MATLAB

Research Intern

May 2020- July 2020

Indian Institute of Information Technology Allahabad

Uttar Pradesh, India

- Project title: EEG Analysis of a Visual Attention Task Using ICA.
- An 8-week project studying different types of brain signals and analysing them on MATLAB.
- MATLAB, EEG Toolbox

Bachelor's Project

August 2018- May 2019

North Eastern Regional Institute of Science and Technology

Arunachal Pradesh, India

- Project title: Automatic Target Positioning with Computer Vision.
- Real time object identification involving a 6 degree-of-freedom robotic arm, equipped with computer vision using a pair of webcam.
- Arduino, Haar-Cascade Trainer GUI, Python

Research Intern

June 2018- July 2018

Centre for Development and Advanced Computing, Kolkata

West Bengal, India

- Project title: Speech Processing and Analysis Using PRAAT and MATLAB.
- A 4-week project getting acquainted with the vastness of signal processing applications in our day-to-day life, specifically to speech processing.
- MATLAB, PRAAT

Diploma Project

North Eastern Regional Institute of Science and Technology

January 2017- May 2017

Arunachal Pradesh, India

- Project title: Arduino Quadcopter
- Cost effective quadcopter design using Arduino, gyroscope and an accelerometer.
- Arduino

PUBLICATIONS AND ACHIEVEMENTS

Conference Talk/Poster

- Baba, A., & Verma, A. (2024). "The Dichotomy of Bias Behavior: Inhibition of Automaticity in Ingroup Bias for Deliberative Decisions?" 11th Annual Conference of Cognitive Science (ACCS 11), IIT Bombay, 2024. (Poster)
- Baba, A., & Verma, A. (2024). "Holier-Than-Thou: Can Contextual Information About Minimal Groups Modulate the Robust In-Group Bias Effect?" Proceedings of the 46th Annual Conference of the Cognitive Science Society, Rotterdam, 2024. (Poster)
- A. Baba and A. Verma, "The role of information/misinformation on our perceptual judgments of minimal groups." 33rd International Congress of Psychology (ICP), Prague, 2024. (Talk)
- A. Baba and A. Verma, "Is mine always better? Evidence for ingroup bias moderation through information dynamics in group relations." 10th Annual Conference of Cognitive Science (ACCS X), IIT Kanpur, 2023. (Talk)

Peer-reviewed journal articles & conference proceedings

- Baba, A., Thaikkandi, S., & Verma, A. (2024). Mine is Merrier: A Process Description of the Robust Ingroup Bias Across Contexts Using the Perceptual-Matching Task. (reviews awaited)
- Baba, A., & Verma, A. (2024). Holier-Than-Thou: Can Contextual Information About Minimal Groups Modulate the Robust In-Group Bias Effect? Proceedings of the 46th Annual Conference of the Cognitive Science Society. (Link)
- A. Baba and R. Biswas, "Pipeline Architecture of Forward and Inverse Photo Core Transform for JPEG XR Image Compression," 2021 International Conference on Intelligent Technologies (CONIT), 2021, pp. 1-5, doi: 10.1109/CONIT51480.2021.9498482.
- A. Baba and R. Biswas, "Multiplier-less Lifting-based Photo Core Transform for JPEG XR Ultrasound Image Compression," 2021 2nd International Conference for Emerging Technology (INCET), 2021, pp. 1-6, doi: 10.1109/INCET51464.2021.9456329.

Achievements

- Graduate Aptitude Test in Engineering (GATE- 2023), Psychology (C5) All India Rank 240.

TEACHING ASSISTANCE

Teaching Assistance, NPTEL

Aug - Oct 2023

Indian Institute of Technology Kanpur, India

Course Name: Introduction to Advanced Cognitive Processes

Teaching Assistance, Department of Cognitive Science

Aug - Nov 2023, Aug - Nov 2022

Indian Institute of Technology Kanpur, India

Course Name: Introduction to Cognitive Science (CGS 401A)

Teaching Assistance, Department of Cognitive Science

May - July 2023, Jan - April 2023

Indian Institute of Technology Kanpur, India

Course Name: Introduction to Psycholinguistics (CGS 621A)

CERTIFICATIONS

10th Annual Conference on Cognitive Science (India)

Indian Institute of Technology Kanpur, India, 2023

9th Annual Conference on Cognitive Science (India)

Indian Institute of Technology Delhi, India, 2022

Recent Trends in Learning and Optimization for Communication, Control and Signal Processing

Indian Institute of Information Technology Guwahati, India, 2020.

Emerging Trends in VLSI Design and Testing (VDNT 2020)

Indian Institute of Information Technology Guwahati, India, 2020.

Xilinx and Mentor Graphics Platform

CoreEL Technologies, Bengaluru, India, 2020.

Embedded System Using AVR

CETPA INFOTECH PVT. LTD., Noida, 2016.

PCB & Circuit Design, Embedded System Using 8051

CETPA INFOTECH PVT. LTD., Roorkee, 2015.

TECHNICAL SKILLS

Software: R, MATLAB, JASP, Python

Applications: Experiment Design, Data Analysis, GameMaker Studio, Machine Learning

Platforms: MS Office, PRAAT, OrCAD and PCB Design

EXTRA CURRICULAR ACTIVITIES

National Cadet Corps

NCC 'C' Certificate, NERIST, August 2016.

Robotics and Innovation Laboratory

Lab Coordinator, NERIST, July 2017- June 2019.

NERIST All India Students' Associations

General Secretary, NERIST, January 2017- January 2018.

Students' Union of NERIST

Co-convenor, NERIST, April 2017- April 2018.

SONBYSS (Cultural Fest of NERIST)

Hospitality and Transportation In-charge, NERIST, July 2017- November 2017.

SYNERGY (Annual Sports Meet of NERIST)

Sports Secretary, Hostel- Block F, NERIST, July 2016- June 2017.

Hobbies

Reading novels, playing guitar, running, sketching.

CONTACT INFORMATION OF REFEREES

- Dr. Ark Verma (Supervisor, PhD thesis)
Assistant Professor (Dept. of Cognitive Science, IIT Kanpur)
email: arkverma@iitk.ac.in
- Dr. Rakesh Biswas (Supervisor, Master's project)
Assistant Professor (Dept. of Electronics and Communication Engineering, IIIT Guwahati)
email: b.rakesh@iiitg.ac.in
- Mr. Edison Moirangthem Singh (Course Instructor, Bachelor's)
Assistant Professor (Dept. of Electronics and Communication Engineering, NERIST)
email: em@nerist.ac.in