

Tapas Ranjan Rath

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EDUCATION

Year	Degree/Certificate	Institute	CPI/%
2019-Present	Ph.D. Cognitive Science	Indian Institute of Technology, Kanpur	7.52/10
2008-2012	B.Tech/Electronics & Instrumentation Engg.	SRM University, Chennai	7.77/10
2007	XII (Higher Secondary Examination (HSE), Odisha)	BJB Junior College, Bhubaneswar, Odisha	75.44%
2005	X (Board of Secondary Education, Odisha)	Project High School, Rengali Dam Site, Angul	90.0%

WORK EXPERIENCE

- **DPS Kalyanpur, Kanpur** (CBSE Physics Teacher) (May'16–June'17)
 - Taught Physics to classes 9-12, designed tests, and demonstrated lab experiments.
- **Chaitanya's Academy, Pune** (Instructor, Physics - IITJEE & NEET) (Aug'14–April'16)
 - Prepared students for IITJEE & NEET, designed curriculum and assessments; mentored 500+ students.
- **Accenture, Pune** (Senior Software Engineer) (Aug'12–Aug'14)
 - Led QA strategy for enterprise telecom systems; designed automated testing frameworks.

RESEARCH EXPERIENCE

- **PhD Research** (Indian Institute of Technology, Kanpur) (2019–Present)
 - Supervisor: Prof. Narayanan Srinivasan, Prof. Nisheeth Srivastava
 - Thesis: "Investigating the Boundary Conditions of Context Effects in Decision-Making"
 - Developed computational models and performed Bayesian model comparisons.
 - Designed human behavioral experiments (PsychoPy, JavaScript) and developed RL agents (DRQN, PyTorch) to benchmark human decision-making and cognitive flexibility.

JOURNALS AND CONFERENCES

- Rath, T., Srinivasan, N., & Srivastava, N. (2025). **The attraction effect in perceptual decision-making: A case of dominance asymmetry.** *Frontiers in Psychology*. [Link]
- Rath, T., Srivastava, N., & Srinivasan, N. (2026). **A Self-directed Expanded Judgment Paradigm: Isolating the Pairwise Mechanism of the Attraction Effect.** *Accepted for Proceedings of CogSci 2026.*
- Rath, T., & Marupudi, V. (2025). **Re-evaluating the numerical-perceptual distinction in the attraction effect.** *Proceedings of CogSci 2025.* [Link]
- Rath, T., Srivastava, N., & Srinivasan, N. (2025). **Unmasking the flaws of triplet-triplet attraction effect measures.** *PsyArXiv*. [DOI]
- Rath, T., Srivastava, N., & Srinivasan, N. (2024) **Perceptual stimuli with difficult-to-trade-off attribute values show a positive attraction effect.** Presented at *Annual Meeting of the Society for Judgment and Decision Making*, New York City, USA.

RESEARCH INTERESTS

- Decision-making biases and context effects.
- Computational modeling of cognitive processes.
- User sense of agency in recommendation systems.
- Human-AI interactions.
- Sense of agency while working with agentic AI.
- Investigating player sense of agency in multiplayer online games.

RELEVANT COURSES AND TECHNICAL SKILLS

Coursework:

- Neurobiology (BSE656A)
- Basic Statistics Data Analysis & Inference (CGS602A)
- Computational Tools for Cognitive Science (CGS600A)
- Fundamentals of Cognitive Psychology (CGS601A)
- Methods and Tools in Cognitive Science (CGS603A)
- Topics in Cognitive Neuroscience (CGS698B)
- Human Cognitive Processes (PSY790A)

Technical Skills:

- *Statistical Analysis:* R (lme4, brms, BayesFactor, ggplot2); Python (Pandas, NumPy, SciPy, Statsmodels, Seaborn, Matplotlib)
- *Experimental Design:* OpenSesame, PsychoPy, JavaScript
- *Eye Tracking:* Eyelink 1000 Plus (SR Research)
- *Typesetting:* LaTeX

PROFESSIONAL MEMBERSHIPS

Society for Judgment and Decision Making, Society for Mathematical Psychology, Psychonomic Society, Cognitive Science Society.

POSITIONS OF RESPONSIBILITY

- **Teaching Assistant:** Human-centered Computing (CGS616) (Jan'24 - July'24)
- **Teaching Assistant:** Introduction to Cognitive science (CGS401) (July'23 - Dec'23)