CHINMAYA MISHRA

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Postdoctoral Researcher, Max Planck Institute for Psycholinguistics, Nijmegen
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EDUCATION

Radboud University   *Nijmegen, Netherlands*
International Max Planck Research School   January 2021 - April 2024
Marie Curie PhD Fellow

Technische Universität Kaiserslautern   *Kaiserslautern, Germany*
Department of Computer Science   October 2016 - May 2020
Master of Science in Computer Science, Major in Intelligent Systems
GPA: 1.6

Application Period for Master Studies   *Bhubaneswar, India*
self study and applications for MS   July 2015 - September 2016

Institute of Technical Education and Research   *Bhubaneswar, India*
Siksha 'O' Anusandhan University   August 2008 - April 2012
Bachelor of Technology in Computer Science and Engineering
CGPA: 8.87

PROFESSIONAL EXPERIENCE

Max Planck Institute for Psycholinguistics   *Nijmegen, Netherlands*
Postdoctoral Researcher   January 2024 - Present

- Investigating the effects of robot-exhibited multi-modal cues on human behavior in HRI.
- Studying the interactions between humans and other artificial agents such as robots, 3D Avatars, and VR characters.
- Modelling new control architectures to automate robot's non-verbal behaviors during HRI.

Furhat Robotics AB   *Stockholm, Sweden*
Associate Researcher   January 2021 - December 2023

- Developing and maintaining the platform of the Social Robot Furhat.
- Researching and implementing new features and architectures for the robot.
- As PhD research: focusing on modelling gaze behaviors of Social Robots and their impact in Human-Robot Interaction.

PROAURIS GmbH   *Kaiserslautern, Germany*
Working Student   June 2019 - July 2020

- Developing new functionalities for the current business needs.
- Extracting statistical data from the database for analysis.
- Brainstorming new IT solutions for current and future business requirements.

Tata Consultancy Services Limited   *New Delhi, India*
Systems Engineer   June 2012 - June 2015

· Worked on the development and maintenance of a PBM (Pharmacy Benefit Management) system for a major US client considered to be one of the most complex systems.
· Backend development on IBM AS/400 to handle claim processing from various pharmacies for individuals.
· Responsible for requirement understanding, feasibility study, effort estimation, analysis and design, client signoffs among others.
· Development work using RPGLE and SYNON tools.

TEACHING EXPERIENCE

Technische Universität Kaiserslautern   *Kaiserslautern, Germany*
Research Assistant   May 2018 - August 2018

· In charge of conducting exercise sessions for the lecture "Applications of Artificial Intelligence" in the summer semester 2018.
· Responsibilities included creating relevant exercises, engaging students in various discussions on the topics mentioned in the lecture and clarification of any doubts the students may have.

SELECT PUBLICATIONS

Peer-reviewed

· **Mishra, C.**, Nandanwar, A., & Mishra, S. (2024). *HRI in Indian education: Challenges & Opportunities.* In the workshop: Designing an introductory HRI course, ACM/IEEE International Conference on Human-Robot Interaction.

· **Mishra, C.**, Verdonschot, R., Hagoort, P., & Skantze, G. (2023). *Real-time emotion generation in human-robot dialogue using large language models.* Frontiers in Robotics and AI, 10.
doi: 10.3389/frobt.2023.1271610

· **Mishra, C.**, Offrede, T., Fuchs, S., Mooshammer, C. & Skantze, G., (2023) *Does a Robot's Gaze Aversion Affect Human Gaze Aversion?.* Frontiers in Robotics and AI, 10, p.1127626.
doi: 10.3389/frobt.2023.1127626

· Offrede, T., **Mishra, C.**, Skantze, G., Fuchs, S., & Mooshammer, C. (2023). *Do humans converge phonetically when talking to a robot?* in Proceedings of the 20th International Congress of Phonetic Sciences (ICPhS), Prague, Czech Republic.

· **Mishra, C.**, & Skantze, G. (2022, August). *Knowing Where to Look: A Planning-based Architecture to Automate the Gaze Behavior of Social Robots.* In 2022 31st IEEE International Conference on Robot and Human Interactive Communication (RO-MAN) (pp. 1201-1208). IEEE.
doi: 10.1109/RO-MAN53752.2022.9900740.

· Paplu, S. H., **Mishra, C.**, & Berns, K. (2020, October). *Pseudo-randomization in automating robot behaviour during human-robot interaction.* In 2020 Joint IEEE 10th International Conference on Development and Learning and Epigenetic Robotics (ICDL-EpiRob) (pp. 1-6). IEEE.
doi: 10.1109/ICDL-EpiRob48136.2020.9278115

- Giridhara, P. K. B., **Mishra, C.**, Venkataramana, R. K. M., Bukhari, S. S., & Dengel, A. (2019). *A Study of Various Text Augmentation Techniques for Relation Classification in Free Text.* In the 8th International Conference on Pattern Recognition Applications and Methods : ICPRAM, 3, 5. doi: 10.5220/0007311003600367

Pre-print

- Kejriwal, J., Mishra, C., Offrede, T., Skantze, G. & Beňuš, S., (2024). *Does a Robot's Gaze Behavior Affect Entrainment in HRI?* PREPRINT (Version 1) available at Research Square. doi: https://doi.org/10.21203/rs.3.rs-3961654/v1

- Paplu, S.H., Mishra, C. & Berns, K., 2022. *Real-time Emotion Appraisal with Circumplex Model for Human-Robot Interaction.* arXiv preprint arXiv:2202.09813. doi: https://doi.org/10.48550/arXiv.2202.09813

INVITED TALKS

- Keynote on *Future Robots: Will they Replace or Reinforce?*, Odias in AI ML Conference 2023, Oct 2023

- Lunch Talk on *Modelling Gaze Behavior of Social Robots & How it Affects HRI*, Max Planck Institute for Psycholinguistics, Nijmegen, April 2023

- Public Talk on *Investigating Gaze Behavior of Social Robots*, 18th Annual ACM/IEEE International Conference on Human-Robot Interaction (HRI 2023), Stockholm, March 2023

- Guest Session on *Human-Robot Interaction: A Perfect Platform for Applied AI*, Symbiosis Institute of Technology, Pune, Oct 2022

- Online public talk on *Building a Planning-based Automated Gaze Control System for Social Robots* in the Psycholinguistics Coffee session, The University of Edinburgh, Jan 2022

- Online public talk on *A Broad Overview of Social Robotics*, CV Talks, Jan 2021

AWARDS & FELLOWSHIPS

- Special Recognition for Outstanding Reviews HRI 2024 Main Track
- Special Recognition for Outstanding Reviews CUI 2023 Papers
- One-year complimentary ACM Professional Membership for CUI 2023 paper reviews.
- Received the Marie Skłodowska-Curie fellowship as part of the COBRA MSCA ITN Project, 2021.
- Awarded "Star of the Learners Group" for being the best trainee in Tata Consultancy Services initial learning period training, 2012
- Awarded "On the Spot" award on numerous occasions in Tata Consultancy Services for outstanding contributions in the projects. 2012 - 2015
- Mini-project in ITER, Bhubaneswar adjudged as one of the best and felicitated by IBM. 2011
- Awarded Rajya Puraskar (Governor's Award) as a scout.

IN MASS MEDIA

- News channel interviews: 2

. Newspaper interviews: 3
. News mentions: 15
. For a detailed list, please visit: [Chinmaya in media](#).

RESEARCH EXPERIENCE

Max Planck Institute for Psycholinguistics   *Nijmegen, Netherlands*
Postdoctoral Researcher   January 2024 - Present

- Investigating the communicative role of various multi-modal cues during human-human, human-agent, and human-robot interactions (collaboration with Dr. Judith Holler).
- Investigating the integration of speech, gaze, and pointing in human communication and their adaptation in artificial agents (collaboration with Dr. Paula Rubio-Fernandez and Dr. Eleanor Huizeling)

Radboud University/ Furhat Robotics   *Nijmegen/ Stockholm*
Marie Curie PhD Fellow   January 2021 - December 2023

- Developing a comprehensive gaze control architecture for social robots.
- Investigating the influence of robot's gaze on human gaze behavior during HRI (a collaboration between Furhat Robotics, Stockholm, Leibniz-Centre General Linguistics (ZAS), Berlin, and Humboldt University of Berlin).
- Investigating ways to harness LLMs in behavior generation of social robots (collaboration with Max Planck Institute for Psycholinguistics).
- Investigating the factors responsible in the recognition of a robot's emotional expressions (collaboration with Max Planck Institute for Psycholinguistics).
- Studying the influence of robot gaze behaviors on entrainment between a human and robot (collaboration with Slovak Technical University, Slovakia).

Technical University of Kaiserslautern, Kaiserslautern   *Kaiserslautern, Germany*
M.Sc. (Research)   May 2018 - May 2020

- Master's thesis on the development of a behavior control architecture for a humanoid robot ROBIN (Robotics Research Lab, TU Kaiserslautern).
- Master's project on automating the generation of robot behaviors based on a robot's internal state (Robotics Research Lab, TU Kaiserslautern).
- Guided research on a study exploring various text data augmentation techniques for relation classification tasks (DFKI Kaiserslautern).

SKILLS

Computer Languages	Python, Kotlin, C, C++, PHP, RPG
Software & Tools	LaTeX/Overleaf, JASP, SYNON, Excel, MATLAB
Languages	Odia (Mother tongue), English, Hindi, German

REFERENCES

Prof. Gabriel Skantze   **Prof. Peter Hagoort**
Professor   Director
KTH Royal Institute of Technology,   Max Planck Institute for Psycholinguistics,
Stockholm   Nijmegen

Co-founder & Chief Scientist
Furhat Robotics AB, Stockholm
skantze@kth.se

Dr. Judith Holler
Associate Professor
Radboud university, Nijmegen

Senior Investigator
Max Planck Institute for Psycholinguistics,
Nijmegen
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Founding director
Donders Institute,
Centre for Cognitive Neuroimaging,
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Dr Paula Rubio-Fernandez
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