Rishiraj **Saha Roy**

Senior Researcher, Max Planck Institute for Informatics

About me

Computer scientist by training. Passionate about topics at the intersection of NLP and IR.

Keywords

Question answering (QA) ·
Knowledge graphs (KG) ·
User studies ·
Large language models ·
Conversational AI (ConvAI) ·
Explainable AI (xAI) ·
Generative AI (GenAI) ·

Areas

Natural language processing ·
Information retrieval ·
Text mining ·

Specialized topics

Graph neural networks (GNN) ·
Reinforcement learning (RL) ·

Methods and algorithms

Seq-to-seq models ·
Group Steiner trees ·
Fagin's threshold algorithm ·
Influence functions ·
Learning to rank ·
Integer linear programming ·
Counterfactuals ·
Random walks ·

Research desiderata

Explainability · Efficiency ·
Robustness · Performance ·

Programming languages

Python (2014 - 2023) ·
Java (2007 - 2015) ·
C# (2010 - 2014) ·
C (2003 - 2014) ·
LaTeX (2011 - 2023) ·

Natural languages

English (professional level) ·
German (B1) ·
Bengali (native) ·
Hindi (professional level) ·

Interests

Taekwondo · Hiking · Puzzles ·
Table tennis · Philately · Coins ·
Reading · Photography ·

Employment history

2015 – Present — **Max Planck Institute for Informatics**
Senior Researcher · Saarbrücken, Germany 📍
Focused research in question answering (QA) since 2015. Recent topics include conversational QA with heterogeneous sources and user feedback. Parallel thread on explainability and privacy in recommender systems. Supervised three PhD students. Senior Area Chair for QA at ACL 2023.

2014 – 2015 — **Adobe Research**
Computer Scientist · Bangalore, India 📍
Automated content personalization for various market segments.

2011 – 2012 — **Microsoft Research**
Research Intern · Bangalore, India 📍
Query segmentation and intent detection in Web search logs.

Three selected publications (See full 50+ list here)

2024 — **Robust Training for Conversational Question Answering Models with Reinforced Reformulation Generation**
Long research paper · WSDM '24, Merida, Mexico 📍
Magdalena Kaiser, **Rishiraj Saha Roy**, and Gerhard Weikum.

2023 — **Explainable Conversational Question Answering over Heterogeneous Sources via Iterative Graph Neural Networks**
Long research paper · SIGIR '23, Taipei, Taiwan 📍
Philipp Christmann, **Rishiraj Saha Roy**, and Gerhard Weikum.

2022 — **Question Answering for the Curated Web: Tasks and Methods in QA over Knowledge Bases and Text Collections**
Book · Springer Nature '22, Berlin, Germany 📍
Rishiraj Saha Roy and Avishek Anand.

Recent long papers

SIGIR	2023, 2022, 2021, 2019
WSDM	2024, 2022, 2020, 2019
WWW	2021, 2017
CIKM	2021, 2019
NAACL	2019

Patents

2021	Linguistic Personalization of Messages for Targeted Campaigns
2020	Expanding Input Content Utilizing Previously-generated Content
2018	Assigning of Topical Icons to Documents to Improve File Navigation

Recognitions

2021	AAAI Outstanding Senior PC Member
2020	EMNLP Outstanding Reviewer
2017	Selection to Google NLP Summit
2015	CICLing 2015 Best Paper
2012	Evolang IX Best Poster
2010	Microsoft Research India PhD Fellow

Education

2014	**Ph.D. in Computer Science** · IIT Kharagpur, India 🏛
2009	**Masters' in I.T.** · IIT Roorkee, India 🏛
2007	**Bachelors' in I.T.** · Jadavpur University, India 🏛
2003	**High school** · BGK Vidyamandir, India 🏛

Teaching

2021	Selected topics in Question Answering
2020	Question Answering Systems
2019	Information Retrieval and Data Mining

🌐 **Web:** https://people.mpi-inf.mpg.de/~rsaharo/index.html   ✉ **Email:** rishiraj@mpii.de