# Debarghya Ghoshdastidar

Technical University of Munich

Assistant Professorship of Theoretical Foundations of Artificial Intelligence

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Personal information

Date of birth: 27.08.1987

Gender: Male

Nationality: Indian

Family status: Married (no children)

Languages spoken: English, Hindi (fluent); German (intermediate); Bengali (native)

Positions

Assistant Professor (W2, Tenure Track), Technical University of Munich, School of Computation Information and Technology since Sep 2019 Munich Data Science Institute since Jun 2021

POSTDOCTORAL RESEARCHER / JUNIOR RESEARCH GROUP LEADER (E13-E14), University of Tübingen, Department of Computer Science May 2016 - Aug 2019

Education

Ph.D. (Computer Science), Indian Institute of Science Jan 2017 (in top 2)

MASTER (M.E. SYSTEM SCIENCE), Indian Institute of Science Jul 2012 (topper)

BACHELOR (B.E. ELECTRICAL), Jadavpur University, India Jul 2010 (top 4%)

Awards, Fellowships, Achievements PAIRED EARLY CAREER RESEARCH FELLOWSHIP, Indo-German Science and Technology Center (approx. 5 k€) 2023

MEMBER, European Laboratory for Learning and Intelligent Systems since 2020

COMMENDATION CERTIFICATE for outstanding Ph.D. thesis, Indian Institute of Science. Nominated for ACM India doctoral dissertation award 2017

GOOGLE INDIA PH.D. FELLOW in statistical learning theory (approx 18 k€) 2013

N. R. Khambati medal for best Masters student in Department of Electrical Engineering, Indian Institute of Science 2012

S. K. Basu medal for highest marks in laboratory and practical examinations of Bachelors (Electrical) in Jadavpur University 2010

ALL INDIA RANK 4 (out of 52000 candidates) in Graduate Aptitude Test in Engineering (Electrical), India 2010

Research grants (over 1 M€)

NEMETSCHEK INNOVATION FOUNDATION GRANT, funded through TUM GNI. Breaking into the black box of ESG in the building sector: A machine learning approach Co-PI with B. Zhu, 700k€ (personal share 345 k€), 2025–2028

GERMAN RESEARCH FOUNDATION (DFG) RESEARCH GRANT. Statistical, computational and algorithmic aspects of kernel clustering. PI (Sole),  $\bf 309~k \in$ , 2022–2025

FRENCH-GERMAN (ANR-DFG) COLLABORATION FOR JOINT PROJECTS. Active and batch Segmentation, Clustering, and seriation: toward unified foundations in AI. Co-PI with A. Carpentier, N. Verzelen, E. Gassiat, approx  $550 \text{ k} \in \text{(personal share } 112 \text{ k} \in \text{)},$ 

KONRAD ZUSE SCHOOL OF EXCELLENCE IN RELIABLE AI. One of 23 PIs (spokespersons: G. Kutyniok, S. Günnemann), 2022–2028

DFG PRIORITY PROGRAM: THEORY OF DEEP LEARNING. Statistical foundations of unsupervised and semi-supervised deep learning. PI (Sole), 275 k€, 2021–2024

DFG RESEARCH TRAINING GROUP. Continuous verification of cyber-physical systems. One of 9 PIs (spokesperson: H. Seidl), personal share: 180 k€ 2019–2023

# Research grants (continued)

MUNICH DATA SCIENCE INSTITUTE SEED GRANT. Netrium: Precise and fast model prediction with ML. Co-PI with S. Mertens, approx 40 k€, 2021–2022

ELITEPROGRAMM FOR POSTDOCS (Baden-Württemberg Stiftung). Clustering large evolving graphs. PI (Sole),  $127 \text{ k} \in$ , 2018–2021 ELITEPROGRAMM Cooperation project. Co-PI with N. Stricker,  $10 \text{ k} \in$ , 2020–2021

#### **Publications**

#### 30 PEER-REVIEWED PUBLICATIONS:

- 10 journals (Ann. Stat. x2; JMLR x1; TMLR x2; Automatica x1)
- 20 peer-reviewed conferences (NeurIPS x6; AAAI x2; COLT,ICLR,CVPR x1)
- 15 first-author publications; 10 papers as PhD advisor of first author
- Over 600 citations with h-index 12 (list at Google Scholar, ID: Kp-enVQAAAAJ)

## Invited / Keynote talks (selected)

AI Hub@Karlsruhe 2022 (keynote); CMStatistics 2021, 2023; Google Algorithms seminar 2020; International Summit on Data Science & AI 2020; Conference on Random matrix theory 2019: Dagstuhl seminar on Foundations of unsupervised learning 2016; ACM-IKDD CoDS 2015

# Students

#### Ph.D. STUDENTS:

## advised, Postdocs hosted

Leena Chennuru Vankadara (2018–2022, co-advised with U. von Luxburg, Tübingen); Pascal Mattia Esser (since 2019); Mahalakshmi Sabanayagam (since 2021);

Maximillian Fleissner (since 2022)

POSTDOCS HOSTED: Satyaki Mukherjee (2022–2023)

MASTER/BACHELOR: 12 student theses, 6 internships/projects, further examined 6 externally supervised theses

#### Teaching

#### LECTURES:

Statistical foundations of learning (since 2019); Gems of informatics 3 (since 2020); Complexity theory (since 2021); Fundamental algorithms (2022); Efficient algorithms and data structures (2020); Statistical network analysis (2018)

SEMINARS / PRACTICAL COURSES:

Theoretical advances in deep learning (since 2020); Analysis of new phenomena in machine/deep learning (since 2022); Advanced complexity theory (2021); Machine learning theory (2016–2018)

# Professional duties

### Workshop organisation:

Organiser of invited session at CMStatistics, Berlin 2023

Main organiser of 2nd ASCAI workshop, funded by DFG-ANR, Munich 2023 Scientific advisory board member in IGSTC Indo-German Workshop on AI, 2021

CONTRIBUTION TOWARDS DIVERSITY AND GENDER EQUALITY: Deputy Gender Equality Officer, TUM School of CIT (since 2021)

Committee for Talent Management and Diversity, TUM School of CIT (since 2023)

Member, Women in CS at TUM (since 2021)

Advisory Board: International AIQT Foundation, Switzerland

SENIOR PROGRAM COMMITTEE (CONFERENCES): ALT 2024

GRANT REVIEWING: German Research Foundation; UNESCO TWAS

REVIEWING: 10+ conferences (including COLT, NeurIPS, ICML, ICLR, AISTATS); 14+ journals (including Ann. Stat., JMLR, JRSS, IEEE TIT, IEEE TSP, Automatica, Lin. Alg. Appl.)

# Further training

TEACHING TRAINING: Certification for teaching in higher education (Bavarian universities); Resilience in teaching; Blended learning • WORKSHOP: Diversity in teams; Leadership & mental health; Science communication