PURVASHA CHAKRAVARTI

Department of Statistics and Data Science
Carnegie Mellon University
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EDUCATION

Department of Statistics and Data Science, Carnegie Mellon University — *May 2019 (expected)*
PhD in Statistics
Thesis Title: Gaussian Mixture Clustering Using Relative Tests of Fit
Advisor: Larry Wasserman

Indian Statistical Institute, Kolkata — *May 2014*
Master of Statistics
Specialization: Mathematical Statistics and Probability

Indian Statistical Institute, Kolkata — *May 2012*
Bachelor of Statistics (*Hons.*)

RESEARCH INTERESTS

Methodologies: clustering; density estimation; optimization; Neural Networks; graphical models.
Applications: Neuroscience; Image Processing; Signal Processing; Epidemiology.

RESEARCH

Gaussian Mixture Clustering Using Relative Tests of Fit
Joint with Larry Wasserman and Sivaraman Balakrishnan

· In preparation

A Generalization of Convolutional Neural Networks to Graph-Structured Data
Joint with Yotam Hechtlinger and Jining Qin

· Available at https://arxiv.org/abs/1704.08165

Statistical Analysis of the Chikungunya Fever
Joint with William F. Eddy and Virginia Dato

· In preparation.

Spatially Adaptive Kernel Regression Using Risk Estimation
Joint with Sunder Ram Krishnan and Dr. Chandra Sekhar Seelamantula

· Published in IEEE Signal Processing Letters.
· Available at http://ieeexplore.ieee.org/document/6734684/

SELECTED TALKS

Statistical Significance of k-Means Clustering 2017

Contributed Talk at Joint Statistical Meetings, Baltimore, Maryland.

Statistical Analysis of the Chikungunya Fever 2016

Women in Statistics and Data Science Conference, Charlotte, North Carolina.

TEACHING EXPERIENCE

- # Instructor

    CMU 36-226 Introduction to Statistical Inference Summer 2017

    9 credits undergraduate course with 31 students

    CMU 36-226 Introduction to Statistical Inference Summer 2016

    9 credits undergraduate course with 26 students

- # Teaching Assistant

    CMU 36-402 Advanced Methods for Data Analysis Spring 2018

    CMU 36-705 Intermediate Statistics Fall 2017

    CMU 36-402 Advanced Methods for Data Analysis Spring 2017

    CMU 36-705 Intermediate Statistics Fall 2016

    CMU 36-402 Advanced Methods for Data Analysis Spring 2016

    CMU 36-225 Introduction to Probability Theory Fall 2015

    CMU 36-625 Probability and Mathematical Statistics (Hons.) Spring 2015

    CMU 36-401 Modern Regression Fall 2014

AWARDS AND HONORS

- **National Level Scholarship**
  Obtained the INSPIRE Scholarship offered by the Department of Science and Technology (DST), Government of India from 2009 - 2014.

- **Cyber Olympiad**
  Secured All India rank 19 in 5th National Cyber Olympiad held on 19th February, 2006.

- **Summer Fellowship**
  Received Indian Academy of Science Fellowship, 2012.

PROFESSIONAL AFFILIATION

Member:

- American Statistical Association

- Institute of Electrical and Electronics Engineers

PROFESSIONAL SERVICE

On the Panel of Women in Statistics at Carnegie Mellon University   2016
Women in Statistics and Data Science Conference, Charlotte, North Carolina

Outreach Talk on Opportunities in Statistics   2016
At Winchester Thurston, Pittsburgh, PA

Cultural Chair (Music), Indian Graduate Student Association   2016-present
Carnegie Mellon University

Convenor of Irene J.Curie Hall   2011-2013
Indian Statistical Institute, Kolkata

Student Editor of Times of India   2006-08
Student edition