Purba **Das**

DPhil in Mathematics, University of Oxford

Mathematical Institute, Andrew Wiles Building, University of Oxford.

☐ (+44) 7721722387 | ✉ purba.das@maths.ox.ac.uk | ⌂ https://www.maths.ox.ac.uk/people/purba.das

General information

Date of birth: May 13, 1995.
Citizenship: Indian.
Pronouns: She, Her.
DPhil in Mathematics (2018-present).
Institution: University of Oxford.
Languages Known: Bengali (Native), English, Hindi.

Academic history

2018-present	**Dphil in Mathematics**, University of Oxford
	PhD thesis, On pathwise stochastic analysis, **Advisor: Prof. Rama Cont.**
2016-2018	**Masters**, Applications of Mathematics, Chennai Mathematical Institute (CMI), India. **CGPA: 9.28/10**
	Masters thesis, On completely mixed stochastic games, **Advisor: Prof. T parthasarathy.**
2013-2016	**Undergraduate**, Honours in Mathematics and Computer Science. Chennai Mathematical Institute (CMI), India. **CGPA: 8.10/10**

Publications and preprints

Estimating the roughness of a path: application to volatility
Rama CONT and Purba DAS   *Working paper*

Functions with quadratic variation along refining partitions
Rama CONT and Purba DAS   *2021*

Pathwise quadratic variation and quadratic roughness
Rama CONT and Purba DAS   *2020*

On Completely Mixed Stochastic Games
Purba Das, T. Parthasarathy, G. Ravindran.   *2018*

Understanding Sea Ice Melting via Functional Data Analysis
Purba Das, Ananya Lahiri, Sourish Das   *2018*
Current Science, Volume 115, Issue 5, Pages 920–929.

Talks and poster presentations

Oct, 2021	**Contributed talk**, at Mathematical and computational finance internal seminar	*Oxford, UK*
Oct, 2021	**Contributed talk**, at Junior female researchers in probability	*Berlin, Germany*
Aug, 2021	**Contributed talk**, at 6th Berlin Workshop for Young Researchers on Mathematical Finance	*Online*
July, 2021	**Contributed talk**, at Bernoulli-IMS 10th World Congress in Probability and Statistics	*Online*
July, 2021	**Contributed talk**, Young Researcher's Session, Statistical Methods in Finance 2021	*Online*
Jan 2020	**Contributed talk**, at Bachelier Colloquiums,Mathematical Finance and stochastic calculus	*Metabief, France*
July 2019	**poster presentation**, at LMS Research School on Probability	*Bath, UK*
March 2019	**Contributed Talk**, at Oxford-ETH Workshop on Mathematical Finance.	*Oxford, UK*
April 2018	**Invited Talk**, Internal Seminar at Indian statistical Institute.	*Chennai, India*
April 2018	**Research seminar talk**, at Chennai Mathematical Institute (CIM), India.	*Chennai, India*
March 2018	**Invited talk**, at Research seminar, Indian Institute of Technology, India.	*Chennai, India*
Dec, 2017	**Poster presentation**, at International conference on statistics.	*Hydrabad, India*
Sep 2016	**Contributed talk**, at Workshop on Linear Complementarity and Generalisations.	*ISI Chennai, India*

Teaching

TT 2022	**Tutor: Revision class for Integration**, Queens college , University of Oxford .	*Upcoming*
MT 2021	**Tutor: Probability, measure and martingale**, Mathematical Institute, University of Oxford .	
TT 2021	**Tutor: Continuous Martingales and Stochastic Calculus**, Mansfield College, University of Oxford.	
HT 2021	**Tutor: Continuous martingale and Stochastic calculus**, Mathematical Institute, University of Oxford .	
HT 2021	**Tutor: Optimisation**, Mathematical Institute, University of Oxford.	
HT 2021	**Tutor: Stochastic calculus**, Mathematical Institute, University of Oxford.	
MT 2020	**Tutor: Probability- Measure and Martingales**, Mathematical Institute, University of Oxford.	
HT 2020	**Teaching Assistance: Optimisation**, Mathematical Institute, University of Oxford.	
HT 2020	**Teaching Assistance: Continuous martingale and stochastic calculus**, Mathematical Institute, University of Oxford.	
MT 2019	**Teaching Assistance: Stochastic Differential Equations**, Mathematical Institute, University of Oxford.	
MT 2019	**Teaching Assistance: Probability, Measure and Martingales**, Mathematical Institute, University of Oxford.	
HT 2019	**Teaching Assistance: Continuous Optimisations**, Mathematical Institute, University of Oxford.	
2018	**Teaching Assistance: Game Theory**, Chennai Mathematical Institute.	
2017	**Teaching Assistance: Regression and Classification**, Chennai Mathematical Institute.	
2016	**Teaching Assistance: Optimisation techniques**, Chennai Mathematical Institute.	
2016	**Teaching Assistance: Financial Risk Management**, Chennai Mathematical Institute.	

Reading and research projects

May-July 2016	**On Completely mixed Stochastic Games**, Summer internship at Chennai Mathematical Institute.	*T. Parthasarathy*
Dec 2014	**Characteristic function and moment generating function**, Winter internship at at Indian statistical Institute.	*Prof. Krishanu Maulik*
May-July 2015	**Bimatrix Games**, Summer internship at Chennai Mathematical Institute.	*T. Parthasarathy*
May-July 2016	**Functional Data analysis**, Summer internship at Chennai Mathematical Institute.	*Sourish Das*
June-July 2014	**Introduction on Markov chain and Poisson process**, Summer internship at Chennai Mathematical Institute.	*Nandini Karnan*
May-June 2014	**Graph algorithms**, Summer internship at Indian statistical Institute.	*Krishnendu Mukopadhayaya*
Dec 2013	**Introduction of graph theory and graph algorithms**, Winter internship at Indian statistical Institute.	*Krishnendu Mukopadhayaya*

Participation in conferences

Oct 2021	**Workshop: Junior female researchers in probability**, Berlin, Germany.
Aug 2021	**6th Berlin Workshop for Young Researchers on Mathematical Finance**, Online.
July 2021	**Random excursions with Jean Bertoin**, Online.
July 2021	**Bernoulli-IMS 10th World Congress in Probability and Statistics**, Online.
Jun 2021	**Statistical Methods in Finance 2021**, Online, India
May 2021	**SPDEs and their friends**, Online.
May 2021	**Women in Probability**, Conference on new developments in Probability
Jan 2020	**Bachelier Colloquiums,Mathematical Finance and stochastic calculus**, Metabief, France.
July 2019	**LMS Research School on Probability,**, Bath, UK
Mar 2019	**Oxford-ETH Workshop on Mathematical Finance**, Oxford, UK.
Dec 2017	**IISA International conference on Statistics.**, Research Workshop and Conference at Hyderabad International Convention Centre (HICC).
Dec 2017	**Statistical methods in finance 2017**, Research Workshop and Conference at Chennai Mathematical Institute(CMI), India.
Dec 2016	**Statistical methods in finance 2016**, Research Workshop and Conference at Chennai Mathematical Institute(CMI), India.
July 2015	**Linear Complementarity and Generalizations**, Workshop at Indian statistical Institute(ISI), India.
July 2015	**Game theory and Optimization**, Workshop and Conference at Indian Institute of Technology(IIT), Chennai, India.
July 2015	**Statistical methods in finance 2015**, Research Workshop and Conference at Chennai Mathematical Institute(CMI), India.

Scholarships

2018-2022	**Mathematical Institute Studentship at University of Oxford**, A full waiver of the tuition fees and monthly fellowship towards living cost
2016-2018	**Postgraduate studentship at Chennai Mathematical Institute, India**, A full waiver of the tuition fees and monthly fellowship towards living cost
2013-1016	**Undergraduate studentship at Chennai Mathematical Institute, India**, A full waiver of the tuition fees and monthly fellowship towards living cost

Awards

Jun 2021	Best student paper at Statistical Methods in Finance 2021.
Dec 2017	Honourable mention for the poster presentation at International conference on statistic.
March 2018	First Prize for the best poster at 'Tata Consultancy Services (TCS) Poster Competition'.

Computer skills:

Programming Languages: Haskell, C, C++, Java, Python, R.
Packages: LaTex, Matlab, Scilab.