

Kanishka Bhattacharya

- CONTACT INFORMATION** Wolfson College *Office Ph:* (0044) 1865-287-608
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- OBJECTIVE** My interests include development of new mathematical and statistical tools, with special emphasis on computationally demanding algorithms. I am looking for a work opportunity which includes application of complex statistical routines in real life, large scale datasets implemented by structured low-level programming in a team based environment.
- EDUCATION** **University of Oxford, UK.**
Wolfson College.
D.Phil., Applied Statistics [Wellcome Trust Funded], Sept. 2011.
 - Research Topic: Developing statistical methods and associated softwares to analyze large-scale genetic datasets. Special emphasis on implementing (in C/C++) novel complex mathematical algorithms which enable efficient and parallel computation (Super Computing clusters) in large-scale ($\leq 4TB$) real life datasets.
 - Supervisor: Dr Andrew P. Morris**University of Oxford, UK**
St Anne's College.
M.Sc., Applied Statistics, Sept. 2007.
 - Research Topic: Involved development of a new mathematical method to compare correlation matrices in large scale genetic datasets. Published in Genome Research.
 - Supervisor: Dr YY Teo & Dr K Small**Fergusson College, University of Pune, India.**
Department of Statistics
B.Sc., Statistics (major), Mathematics (minor) & Physics (minor), May 2006.
 - Overall percentage: 81.2%**St. James' School, Calcutta, India.**
Indian School Certificate (84.8%), May 2003.
South Point High School, Calcutta, India.
Lower School Certificate (86.4%), May 2001.
- COMPUTER SKILLS** • Statistical Packages: R/S-Plus, MIM, GGOBI, SPSS, Minitab, Excel, WinBUGS etc.
• Languages: C, C++, BASH, Unix shell scripts (awk, sed etc).
• Applications: \LaTeX , Microsoft office.
• Operating Systems: Unix/Linux, Windows, Macintosh.

WORK
EXPERIENCE AND
CONSULTING

University of Oxford, Wellcome Trust Centre for Human Genetics, UK.

Research Associate in Statistical Genetics

June 2008 -

Involves development of statistical and computational tools for large scale genetic datasets.

University of Oxford, Institute of Musculoskeletal Sciences, UK.

Consultant: Course in R programming and Statistics

Oct. 2009 -

Involves advising on course structures and materials.

University of Southampton, MRC Epidemiology Resource Centre, UK.

Statistician

Oct. 2007 - May 2008

Included research/consulting of biological datasets and teaching. Was primarily involved in a Thailand-based project, and also developed new statistical methods and did statistical consulting for some senior medical researchers.

College of International Education, Oxford, UK.

Teacher

Mar. - Sept. 2007

Taught A and GCSE level Mathematics, Statistics and Mechanics. Responsibility for teaching, homework assignments and grades.

D.E Shaw & Co., Hyderabad, India.

Research Associate in Financial Research team

June - Aug. 2006

Financial Research and reporting on USEQ and JPEQ markets. Also involved in internal management of D.E. Shaw data supply vendors (e.g. Bloomberg, Thomson etc).

University of Pune, Department of Statistics, Pune, India.

Research Assistant

Jan. 2005 - May 2006

Statistical Analysis and reporting for several research projects as a part of the Statistical Consultancy Group.

LECTURING AND
TEACHING
ASSISTANTSHIP

University of Oxford, Medical Sciences Training Centre, UK.

Lecturer - Statistics for undergraduate medical students

Jan. 2010 -

Lecturer - Statistics with SPSS, for Doctors and Physiologists

Apr. 2010 -

Teaching Assistant - above course

Sept. 2008 - Mar. 2010

Involves a series of lectures, including practical sessions using SPSS. Basic theories of statistics (incl. Exploratory Data Analysis, Linear Modeling, Logistic Regression, etc) are explained and practicals include analysis of real life datasets.

University of Oxford, Oxford University Computing Services, UK.

Lecturer - Introduction to Statistics using SPSS

Jan. 2009 -

Involves a series of four/five lectures, giving a brief introduction to some fundamental statistics up to Linear Models, using SPSS.

University of Oxford, Harris Manchester College, UK.

Tutor - Statistical Methods

Feb. 2009

Involves teaching an entire course of statistics to an undergraduate student.

MalariaGEN Genomic Epidemiology Network, Oxford, UK.

Instructor - Course on Genomic Epidemiology of Malaria

May 2009

Involved helping with analysis of large scale Malaria related genomic data in R.

University of Oxford, Oxford University Computing Services, UK.

Lecturer - Introduction to Statistics with R

Oct. 2008 -

Involved a series of seven lectures, giving a brief introduction to some fundamental statistics up to Generalized linear Models, using R-programming throughout.

PUBLICATIONS

- **Kanishka Bhattacharya**, Andrew Morris. Rapid testing of gene-gene interactions in genome-wide association studies of binary and quantitative phenotypes. Submitted to Genetic Epidemiology, January 2011.
- **Kanishka Bhattacharya**, Reedik Magi, Andrew Morris. IntRapid: Software for rapid testing of gene \times gene interactions in GWAS. Conference for the American Society of Human Genetics, Washington DC, USA, 2 – 6 November 2010.
- **Kanishka Bhattacharya**, Reedik Magi, Andrew Morris. Rapid testing of gene \times gene interactions in GWAS. Conference for the International Genetic Epidemiology Society, Boston, USA, 10 – 12 October 2010.
- Teo YY, Fry AE, **Bhattacharya K**, Small KS, Kwiatkowski DP, Clark TG. 2009b. Genome-wide comparisons of variation in linkage disequilibrium. Genome Research 19: 18491860.
- **Kanishka Bhattacharya**, Andrew Morris. 2009 May. The power of interaction tests in genome-wide association studies. Annals of Human Genetics, Volume 73, Issue 6 (p 658-669).

**CONFERENCES
AND WORKSHOPS
ATTENDED**

- American Society of Human Genetics, 2 – 6 Nov 2010, Washington DC, USA.
- International Genetic Epidemiology Society, 10 – 12 Oct 2010, Boston, USA.
- European Mathematical Genetics Meeting (EMGM), 14 – 15 May 2009, Max Planck Institute of Psychiatry, Munich, Germany.
- Design & Analysis of Genetic-Based Association Studies, 23 – 27 June 2008, University of Pavia, Italy.
- Epidemiology for Clinicians (run by MRC Cambridge Epidemiology Unit and MRC Epidemiology Resource Centre, Southampton), 9 – 11 Jan 2008, Southampton, UK.
- Epigenetics 2007, Australian Scientific Conference, 4 – 7 Nov 2007, Perth, Australia.
- 5th International Congress on Developmental Origins of Health & Disease, 6 – 10 Nov 2007, Perth, Australia.

**HONOURS AND
AWARDS**

- Travel grant from Wolfson College, Oxford to attend the European Mathematical Genetics Meeting (EMGM), Munich, Germany in 2009.
- 1st place and 3rd place in inter-university statistics meet for undergraduate statistics projects, 2005 & 2006 respectively.
- Awards for winning intra & inter university debates: Oorja, 2003, 2004 & Wallstreet, 2004.
- Certificate of participation in National debating events, 2003.
- Awards for an International Cycling Expedition to Dhaka, Bangladesh, 2000.

- COMMUNITY
ACTIVITIES AND
LEADERSHIP
SKILLS
- Member of the Organizing Committee of American Society for Human Genetics meeting at Montreal, Canada in October 2011.
 - Member of the Statistics Committee at the Faculty of Medical Sciences, University of Oxford, 2011-.
 - Member of the Academic Committee of the Faculty of Medical Sciences, University of Oxford, 2011-.
 - Elected member of Wolfson College Governing Body, 2009-.
 - President of the Oxford University Hiking and Hill Walking Club 2011 (Hilary Term).
 - Treasurer of the Oxford University Hiking and Hill Walking Club 2009 (Michaelmas Term).
 - Treasurer of the Wolfson College Cellar Bar, 2009-10.
 - Volunteer for Oxford Muse workshops, 2006.
 - Teaching underprivileged children of "Missionaries of Charity" in Kolkata, India, 2001-2003.
 - President of Mathematics Club in high school, 2001-2003.
 - School cycling team leader including International Cycling Expeditions, 1999-2001.
 - Writer for physically challenged college student, 1999-2003.
 - Volunteers in fund raising for some natural disasters and several community based programs, 1999-2001.
- INTERESTS AND
HOBBIES
- Hiking and hill walking. Cricket, Badminton, Running.
 - Traveling. Political and economic debates.
- REFEREES
- On request.