GEETHA VENKATARAMAN, PROFESSOR (SUS and SLS)

EDUCATION AND RESEARCH

Geetha Venkataraman did a BSc (Hons) in Mathematics at St. Stephen's College, University of Delhi. She was awarded an Inlaks scholarship to read for a second BA (Hons) in Mathematics (equivalent to a Masters) at the University of Oxford. Her doctoral degree, DPhil, is from the University of Oxford. A Burton Senior Scholarship from Oriel College, University of Oxford supported her research for the doctorate. Professor Venkataraman's doctoral work was in Group Theory, (part of abstract algebra); she researched questions regarding the enumeration of finite groups. Her research interests in mathematics still centre on various aspects of finite group theory.

PAST EMPLOYMENT

Professor Venkataraman joined Ambedkar University, Delhi in August 2010. Prior to that, from 1993, Dr Venkataraman was with the Department of Mathematics, St. Stephen's College, University of Delhi. There she taught various papers in mathematics to undergraduates of Mathematics (Hons), Physics (Hons), Economics (Hons), English (Hons) and Philosophy (Hons). She taught students pursuing a Masters degree in Mathematics at the University of Delhi. She also taught students at the Mathematical Sciences Foundation, Delhi. These were students pursuing a Masters leading to a PhD in mathematics, in collaboration with the University of Houston, USA. She was on deputation to the Institute of Life Long Learning, University of Delhi from November 2007-April 2009. She has been part of curriculum development/review boards for Delhi University, Ambedkar University, Delhi, Indira Gandhi National Open University and the NCERT. She has served on many occasions on the interview boards of the National Board of Higher Mathematics for award of PhD and MSc scholarships.

BOOKS

(RESEARCH MONOGRAPH)

1. *Enumeration of Finite Groups*, Cambridge Tracts in Mathematics, 173, Cambridge University Press, UK, 2007. (Co-authored with Simon Blackburn and Peter M Neumann.)

(E-book/lessons)

2. *Mathematical Awareness*, Institute of Life Long Learning, University of Delhi, 2009. (Print version of e-lessons, co-authored with Shobha Bagai and Pankaj Jain)

SELECTED SHORTER PUBLICATIONS

1. *On finite groups whose every proper normal subgroup is a union of a given number of conjugacy classes*, Proceedings Indian Academy of Sciences (Math. Sci.), Vol. 114, No. 3, (2004), 1-8. (Coauthored with Ali Reza Ashrafi.)

2. *Enumeration of finite soluble groups with abelian Sylow subgroups*, Quarterly Journal of Mathematics, Oxford (2), 48 (1997), 107-125.

3. *Enumeration of finite soluble groups in small varieties of A-groups and associated topics*, Research Report, ICICI Centre for Mathematical Sciences, St. Stephen's College, University of Delhi, 1999.

4. *On irreducibility of induced modules and an adaptation of the Mackey-Wigner method of little groups.* (2010, *Preprint*, sent for publication, posted on arxiv.org.)

5. *E-learning*: *From the Computer to the Classroom*, FORTELL, a journal of English language and literature, issue number 19, September 2010, 6-8.

6. *UGC proposal*: *The Academician's nightmare,* Economic and Political Weekly, March 28, 2009, Vol XLIV No 13, 10-12.

7. *Revitalising Undergraduate Education*, Seminar, 581, January 2008, 79-82.

8. *Teaching Students to Think*, Economic and Political Weekly, August 25, 2007, 3449-3451.

SELECTED CONFERENCE ACTIVITIES/ RESEARCH TALKS/ACADEMIC VISITS/POPULAR LECTURES

1. Invited panelist for a Round Table Discussion titled `*Women mathematicians around the world*', during the International Conference of Women Mathematicians, Hyderabad, August 17-18, 2010.

2. Served as a panelist for the panel discussion based on the *Pipeline* report, during the International Congress of Mathematicians, Hyderabad, August 19-27, 2010.

3. *Is the group enumeration function onto*? Seminar series, Indian Institute of Technology (IIT), Delhi, (2008).

4. *Sets, functions, limits, continuity and derivability*, invited talk, Workshop for students and teachers of Bachelor degree in Business Economics, Department of Business Economics, University of Delhi South Campus, (2008).

5. Invited to Royal Holloway, University of London for three weeks in March-April 2006 to collaborate on a research monograph in Group theory.

6. Panel discussion on *Women in Mathematics*, invited panelist, international conference on 20th Century Mathematics to commemorate the birth anniversary of Andre Weil, Delhi. (Organized in 2005 by the Mathematical Sciences Foundation, Delhi).

7. *Finite Group Enumerations: A brief introduction*, invited talk at the `International conference on Geometric Group Theory', IIT, Guwahati, 2002.

8. *Enumerating Finite* Groups, invited talk, Conference on Combinatorial methods in Group Theory and Number Theory, ISI, Bangalore, 2001.

9. *Enumeration of types of finite groups*, Pure Mathematics Seminar Series, Department of Mathematics, Royal Holloway, University of London, UK, 2001.

10. *Enumeration of types of finite groups*, invited talk, Mathematical Meetings to celebrate Dr Peter Neumann's 60th birthday, University of Oxford, Oxford, UK, 2001.

11. Talk on life and mathematics of Srinivasa Ramanujan at the summer programme of the Mathematical Sciences Foundation, Delhi, at the mathematics festivals of Dayal Singh College and Lady Shri Ram College (2009-2010).

12. Talk on life of Emmy Noether and Women in Mathematics at Jesus and Mary College and Lady Shri Ram College (2008-2009).

13. Talk on Symmetry to school students at the 2009 summer programme of the Mathematical Sciences Foundation, Delhi.

CURRENT RESEARCH PROJECTS AND INTERESTS

Professor Venkataraman continues to work on various aspects of finite group theory, including questions related to enumeration of finite groups. She is also interested in questions regarding classification of finite groups on the basis of properties related to order of elements, conjugacy classes, subgroups etc. Certain aspects of Geometric Group Theory are also of interest for future work.

Popularising mathematics, mathematics education at schools and undergraduate education are also areas of potential interest. Questions related to gender and mathematics, in particular, research pertaining to `women in mathematics' is an area that Dr. Venkataraman is keen to explore further.

PROFESSIONAL DISTINCTIONS/AWARDS

1. Invited to be one of seven members of the Local Organising Committee, International Conference of Women Mathematicians (ICWM), Hyderabad, August 17-16, 2010. (This was a 2-day meeting prior to International Congress of Mathematicians (ICM) 2010 at Hyderabad.)

2. Nominated by University of Delhi to attend the Third Blended Learning Workshop at Open University UK as part of team from ILLL. (2008)

3. Appointed a senior fellow of the Mathematical Sciences Foundation, Delhi. (2002)

4. Appointed a member of the Council of Editors of Resonance, a journal of science education for a period of three years, (2000-2003).

5. Awarded sponsorship for two years by the Department of Science and Technology for a research project, housed at St. Stephen's College, titled Enumeration of types of finite groups and associated topics, under the Young Scientists Scheme, (1997-1999).

6. Elected to the Burton Senior Scholarship at Oriel College, University of Oxford, for the years 1991-1993.

7. Elected to an open scholarship by the Governing Body of St. Edmund Hall, University of Oxford, (1989).

8. Inlaks Scholarship (1988-1990) to study for a second BA (Hons) in Mathematics at St. Edmund Hall, University of Oxford.

9. Rajpal Memorial Prize for the best woman student in St. Stephen's College, University of Delhi, (1987).