Megha Goyal

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Contact Information

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Personal Details

Date of Birth : December 19, 1986
Sex : Female
Citizenship : Indian
Martial Status : Married
Residence Address : Teacher's Flat-08, Near Gate No.-1, Panjab Technical University, Main Campus, IBBAN, Kapurthala-144603.

Academic Positions

Assistant Professor, Punjab Technical University Main Campus, Kapurthala.

Research Interests

Number Theory- Primarily interested in combinatorial interpretations of various basic series identities in terms of different combinatorial objects such as partitions, lattice paths, Frobenious symbols, anti-hook differences etc.

Ph.D. Details, August 2009 - May 2014

Supervisor: Prof. A. K. Agarwal

Department of Mathematics, Panjab University, Chandigarh, India.

Thesis Title: A study of basic series and combinatorics.

Published in Journals

1. **Megha Goyal** (2017). New combinatorial interpretations of some Rogers-Ramanujan type identities, *Contrib. Discrete Math.*, 11, 43–57 (SCI Listed).
   Publisher- **University of Calgary**, Country- **Canada**
2. **M. Goyal** and A.K. Agarwal (2016). On a new class of combinatorial identities, *ARS Combinatoria*, 127, 65–77 (SCI Listed).
   Publisher- **Charles Babbage Research Centre**, Country- **Canada**
3. **M. Goyal** and A.K. Agarwal (2014). Further Rogers-Ramanujan identities for n-color partitions, *Utilitas Mathematica*, 95, 141–148 (SCI Listed).
   Publisher- **Utilitas Mathematica Pub. Corp.**, Country- **Canada**

4. A.K. Agarwal and **M. Goyal** (2012). New partition theoretic interpretations of Rogers-Ramanujan identities, *International Journal of Combinatorics*, 2012, Article ID 409505, pp 6. doi:10.1155/2012/409505 (MR Listed)
   Publisher- **Hindawi**, Country- **USA**
5. A.K. Agarwal and **M. Goyal** (2011). Lattice paths and Rogers identities, *Open Journal of Discrete Mathematics*, 1, 89–95.
   Publisher- **SCIRP**, Country- **US**

Accepted Papers

1. **M. Rana and M. Goyal** (2017). On combinatorics of modified lattice paths and generalized q–series, Contributions to Discrete Mathematics (SCI Listed).
2. **Megha Goyal** (2017). Rogers-Ramanujan type identities for split $(n+t)$–color partitions, Mathematical Reports (SCI Listed).
3. **Megha Goyal** (2017). On four generalized basic series and combinatorics, Utilitas Mathematica (SCI Listed).
4. **Megha Goyal** and M. Rana (2016). On central tendencies of the parts in certain restricted partitions, Mathematical Reports (SCI Listed).
5. **Megha Goyal** (2016). On combinatorial extensions of Rogers-Ramanujan type identities, Contributions to Discrete Mathematics (SCI Listed).
6. A.K. Agarwal and **M. Goyal** (2015). On 3-way combinatorial identities, Proceedings of Indian Academy of Sciences (Math. Sci.) (SCI Listed).

Awards/ Scholarship Received

- Won 02-International (ICSFA-June 2012, FIM-Dec. 2012) and 01-University level (CHASCON-2013) "Best Paper Presentation Award".
- Received JRF (Junior Research Fellowship) from University Grants Commission (UGC), India.
- Received JRF (INSPIRE Research Fellowship) from Department of Science and Technology (DST), India.
- Qualified UGC-JRF-Dec 2010 during Ph.D. jointly conducted by UGC and CSIR (All India rank-123).
- Qualified UGC-NET-Dec 2008 jointly conducted by UGC and CSIR.

International Conferences

- International Conference on "Special Functions and Their Applications,"held at S.V.N.I.T., Surat (India), June 27-29, 2012.
  Presented a paper entitled "New Rogers-Ramanujan Identities for n-color Partitions."
  Won "**Best Paper Presentation Award**."

- "21^{st} International Conference of FIM on Interdisciplinary Mathematics, Statistics and Computational Techniques (FIM-2012),"held at Panjab University, Chandigarh (India), December 15-17, 2012.
  Presented a paper entitled "New Partition Theoretic Interpretations of Rogers-Ramanujan Identities."
  Won "**Second Best Paper Presentation Award**."

- International Conference on "Special Functions and Their Applications,"held at Thapar University, Patiala (India), October 16-18, 2014.
  Presented a paper entitled "New Partition Theoretic Interpretations of Rogers-Ramanujan Identities."
- International Conference on "Emerging Areas of Mathematics for Science and Technology,"held at Punjabi University, Patiala (India), January 30-February 1, 2015.
  Presented a paper entitled "New Partition Theoretic Interpretations of Rogers-Ramanujan Identities."

National Conferences

- Attended colloquium "On Recent Trends in Algebra and Algebraic Number Theory," held at Department of Mathematics, Panjab University, Chandigarh (India), November 25-27, 2009.
- Attended "4^{th} Chandigarh Science Congress (Chascon-2010),"held at Panjab University, Chandigarh (India), March 19-20, 2010.
- "77^{th} Annual Conference of Indian Mathematical Society (IMS-2011),"held at S.R.T.M. University, Nanded (India), December 27-30, 2011.
  Presented a paper entitled "New Combinatorial Interpretations of Two Basic Series Identities."
- "Symposium in Mathematics,"held at Department of Mathematics, Panjab University, Chandigarh (India), Feburary 7-8, 2012.
  Presented a paper entitled "New Combinatorial Interpretations of Two Basic Series Identities."
- "7^{th} Chandigarh Science Congress (Chascon-2013),"held at Panjab University, Chandigarh (India), March 1-3, 2013.
  Presented a paper entitled "New Partition Theoretic Interpretations of Rogers-Ramanujan Identities."
  Won "**Best Paper Presentation Award**."

Training Programs/ Workshops

- Participated in the "IWM regional workshop: Indian Women and Mathematics,"held at Punjabi University, Patiala (India), February 6-7, 2017.

Membership of Educational Bodies

- Member of American Mathematical Society
- Lifetime member of Indian Mathematical Society
- Lifetime member of Society for Special Functions and Their Applications

Previous Educational Details

- **Ph.D.** - Mathematics
  Supervisor : Prof. A.K. Agarwal
  Title : A study of basic series and combinatorics
  Degree awarded in May, 2014 from Department of Mathematics, Panjab University, Chandigarh, India.

- **B.Ed.** - Science, Mathematics.
  Passed in August, 2009 with 79.45% marks (Panjab University, Chandigarh) from Government College of Education, Chandigarh, India.
- **M.Sc. (Hons. School)** - Mathematics.
  Passed in July, 2008 with 81.3% marks from Department of Mathematics, Panjab University, Chandigarh, India.
- **B.Sc. (Non Medical)**- Physics, Chemistry, Mathematics.
  Passed in June, 2006 with 74.5% marks (Punjabi University, Patiala) from Government College, Malerkotla, Punjab, India.
- **Higher Secondary**
  Passed in April, 2003 with 74.4% marks (P.S.E.B.) from Government College, Malerkotla, Punjab, India.
- **High School**
  Passed in April, 2001 with 85.5% marks (P.S.E.B.) from S.S. Jain Girls High School, Malerkotla, Punjab, India.

Computer Skills

- Software: MATHEMATICA, LATEX, M.S. OFFICE
- Languages: C, FORTRAN 77

Languages known

- English, Hindi, Punjabi

Co-curricular Activities

- Won First prize in Panjab University inter zonal "Youth Festival-2008" for "Science Quiz Competition".
- Have been a N.S.S. volunteer during Graduation.
- Was the joint editor of Science-Section of College magazine during graduation.
- Participated and won various essay writing competitions during school days.

References

1. Prof. A.K. Agarwal
   Department of Mathematics, Panjab University, Chandigarh, India
   Tel: +91 172 2534502, Mob. 9815501950
   E-mail: aka@pu.ac.in
2. Prof. S.K. Tomar
   Department of Mathematics, Panjab University, Chandigarh, India
   Tel: +91 172 2534501, Mob. 9463223629; Fax: +91 172 2541132
   E-mail: sktomar66@gmail.com
3. Prof. Sanjiv Puri
   Basic and Applied Sciences, Punjabi University, Patiala, India
   Mob. 9815603759
   E-mail: : sanjivpurichd@yahoo.com