

Manjil P. Saikia

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1090 Vienna, Austria

RESEARCH INTERESTS Enumerative and algebraic combinatorics, number theory

EDUCATION **University of Vienna**, Vienna, Austria

Ph.D. Candidate, Mathematics, September 2015 (expected graduation date: August 2018)
Member, Vienna Doctoral School in Mathematics

- Dissertation Topic: Refined enumeration of alternating sign matrices and domino tilings of Aztec rectangles
- Advisor: Professor Ilse Fischer

The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy

Postgraduate Diploma, Mathematics, August 2015

- Dissertation Topic: Representations of the Symmetric Group
- Advisor: Professor Fernando R. Villegas

Tezpur University, Tezpur, India

M.Sc., Mathematics, June 2014

- Dissertation Topic: A study of the crank function with special emphasis on Ramanujan's Lost Notebook
- Advisor: Professor Nayandeep Deka Baruah

HONORS AND AWARDS

UNESCO Scholarship Awarded to study at The Abdus Salam ICTP, September 2014 – August 2015

Gold Medal for academic excellence in Master of Science (Mathematics) course at Tezpur University, November 2015

Qualified the joint CSIR-UGC National Eligibility Test for Lecturership with Indian National Rank 17, June 2014

Summer Research Fellowship Awarded jointly by the three science academies of India, June – July 2011 and 2012

Certificate of excellence in mathematics from Assam Academy of Mathematics on their golden jubilee year, 2011

INSPIRE Scholarship Awarded by Department of Science and Technology, Government of India to the top 1% students of the country, August 2009 – July 2014

Prof. Bapu Krishna Choudhury Memorial Prize awarded by the Assam Academy of Mathematics, 2008

Qualified the Regional Mathematical Olympiad - North Eastern Region of India, 2007

Dr. Subratananda Dowerah Memorial Gold Medal awarded by the Assam Academy of Mathematics for topping the mathematics Olympiad, 2007

Anundoram Barooah Award from the Government of Assam, India to first division holders in school leaving examination, 2007

RESEARCH
EXPERIENCE

University of Vienna, Vienna, Austria

Graduate Student

September 2015 - present

Includes current Ph.D. research, Ph.D. level coursework and research projects.

The Institute of Mathematical Sciences, Chennai, India

Summer Research Fellow

June - July, 2012

Did a project titled *A few results in additive combinatorics and analytic number theory* under the supervision of *Professor Ramachandran Balasubramanian*

Indian Institute of Science Education and Research, Mohali, India

Summer Research Fellow

June - July, 2011

Did a project titled *A study of Kummer's proof of Fermat's Last theorem for regular primes* under the supervision of *Professor Kapil Hari Paranjape*

Chennai Mathematical Institute, Chennai, India

Summer Research Fellow

June - July, 2010

Did a project titled *On the irrationality of $\zeta(2)$ and $\zeta(3)$* under the supervision of *Professor Purusottam Rath*

PUBLICATIONS AND
PREPRINTS

Enumeration of Domino Tilings of an Aztec Rectangle with boundary defects, *Advances in Applied Mathematics*, 2017, 89, 41–66

Some Properties of Fibonacci Numbers, Generalized Fibonacci Numbers and Generalized Fibonacci Polynomial Sequences (with Alexandre Laugier), *Kyungpook Mathematical Journal*, 2017, 57 (1), 1–84

Some results on Generalized Multiplicative Perfect Numbers (with Alexandre Laugier and Upam Sarmah), *Annali dell'Università di Ferrara, Sezione VII Scienze Matematiche*, 2016, 62 (2), 293–312

A combinatorial proof of a result on generalized Lucas polynomials (with Alexandre Laugier), *Demonstratio Mathematica*, 2016, 49 (3), 266–270

A study of the crank function in Ramanujan's Lost Notebook, *The Mathematics Student*, 2015, 84 (1-2), 105 – 121

Some results about Linear Recurrence Relation Homomorphisms (with Alexandre Laugier), *Notes on Number Theory and Discrete Mathematics*, 2014, 20 (4), 58-68

A characterization of a prime p from the binomial coefficient $\binom{n}{p}$ (with Alexandre Laugier), *The Mathematics Student*, 2014, 83 (1-4), 221-227

Cranks in Ramanujan's Lost Notebook, *Journal of the Assam Academy of Mathematics*, 2013, 6, 59-63

A new proof of Lucas' Theorem, (with Alexandre Laugier) *Notes on Number Theory and Discrete Mathematics*, 2012, 18 (4), 1-6

Binomial Symbols and Prime Moduli (with Jure Vogrinč), *Journal of the Indian Mathematical Society*, 2011, 79 (1-4), 137-143

A simple number theoretic result (with Jure Vogrinč), *Journal of the Assam Academy of Mathematics*, 2010, 3, 91-96

- SELECTED TALKS Stat-Math Unit Seminar, Indian Statistical Institute, Delhi, India, February 2017
 International Conference of The Indian Mathematics Consortium in cooperation with American Mathematical Society, Banaras Hindu University, Varanasi, India, December 2016
 Department Seminar, Mathematical Sciences, Tezpur University, Tezpur, India, November 2016
 ALEA in Europe Young Researcher's Workshop, Technische Universität Wien, Austria, September 2016
 3rd Algorithmic and Enumerative Combinatorics Summer School, Research Institute for Symbolic Computation, Johannes Kepler Universität Linz, August 2016
 Vienna Discrete Mathematics Seminar, Technische Universität Wien, June 2016
 Combinatorics Working Seminar, Universität Wien, May 2016
 National Seminar on Advances in Mathematical Sciences, Gauhati University, December 2015
 Combinatorics Working Seminar, Universität Wien, November 2015
 Cotton College, Guwahati, India, February 2013
 St. Mary's College, Shillong, India, September 2010
 ICM International Satellite Conference on Rings and Near Rings, North Eastern Hill University, Shillong, India, September 2010
- SELECTED CONFER- Elliptic Hypergeometric Functions in Combinatorics, Integrable Systems and Physics, Erwin Schrödinger
 ENCES/WORKSHOPS International Institute for Mathematics and Physics, Universität Wien, Austria, March 2017
 ATTENDED Computer Algebra and Elementary Particle Theory at the Large Scale: 10 Years of JKU-DESY
 Collaboration, Research Institute for Symbolic Computation, Johannes Kepler Universität Linz, Austria, February 2017
 International Conference of The Indian Mathematics Consortium in cooperation with American Mathematical Society, Banaras Hindu University, Varanasi, India, December 2016
 ALEA in Europe Young Researcher's Workshop, Technische Universität Wien, Austria, September 2016
 3rd Algorithmic and Enumerative Combinatorics Summer School, Research Institute for Symbolic Computation, Johannes Kepler Universität Linz, Austria, August 2016
 2016 Symposium Diskrete Mathematik, Freie Universität Berlin, Zuse-Institut Berlin, Germany, July 2016
 28th International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC), Simon Fraser University, Vancouver, Canada, July 2016
 76th Séminaire Lotharingien de Combinatoire, Obernai, France, April 2016
 Conference dedicated to the scientific legacy of Marcel-Paul Schützenberger, Université de Bordeaux, Bordeaux, France, March 2016
 CIMPA International Research School and Conference on Fourier analysis of groups in Combinatorics, North-Eastern Hill University, Shillong, India, November 2013
 Advanced Instructional School on Analytic Number Theory, Kalinga Institute of Industrial Technology (KIIT) University, Bhubaneswar, India, June 2013
 The Legacy of Srinivasa Ramanujan, University of Delhi, New Delhi, India, December 2012
 Pan Asian Number Theory Conference, Indian Institute of Science Education and Research, Pune, India, July 2012
 Advanced Instructional School on Number Theory (The Circle Method), The Institute of Mathematical Sciences, Chennai, India, June - July 2012
 ICM International Satellite Conference on Rings and Near Rings, North Eastern Hill University, Shillong, India, September 2010

PROFESSIONAL EXPERIENCE **Gonit Sora**, <http://gonitsora.com>
Co-founder and Managing Editor **April, 2011 - present**
The website is a bilingual website devoted to mathematics education and teaching

TEACHING EXPERIENCE Teacher, Mathematical Olympiads for high school students, North Eastern Hill University, India, 2012, 2013, 2014
Teacher, Mathematical Olympiads for high school students, Gauhati University, India, 2012, 2013, 2014
Teacher, Mathematical Olympiads for high school students, Darrang College, India, 2011, 2014
Teacher, Mathematical Olympiads for high school students, Tinisukia Women's College, India, 2013
Teacher, Mathematical Olympiads for high school students, Kaliabor College, India, 2008, 2012, 2013

PROFESSIONAL DUTIES Reviewer of articles for the following journals: The Mathematics Student, British Journal of Mathematics and Computer Science
Reviewer of 8 items for *Mathematical Reviews*, *American Mathematical Society*
Reviewer of 5 items for *Zentralblatt Math*, *European Mathematical Society – Springer*

MEMBERSHIPS American Mathematical Society, 2015 - present

SKILLS

- Computer: Mathematica (basic), python (basic), MySQL (intermediate), html (intermediate), css (intermediate), L^AT_EX(advanced), Linux (advanced)
- Languages: Assamese (native), English (fluent), Hindi (fluent), Bengali (fluent)

REFERENCES **Prof. Ilse Fischer** **Prof. Lothar Göttsche**
University of Vienna The Abdus Salam ICTP
Vienna, Austria Trieste, Italy
Phone: *available on request* Phone: *available on request*
Email: *available on request* Email: *available on request*

Prof. Nayandeeep D. Baruah **Prof. Sujatha Ramdorai**
Tezpur University University of British Columbia
Tezpur, India Vancouver, Canada
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Last updated on May 12, 2017.