Manjil P. Saikia

CONTACT INFORMATION	01.128 OMP1	*Voice:* +43 660 837 5232
	Faculty of Mathematics	*Fax:* +43 1 4277 855739
	University of Vienna	*E-mail:* manjil.saikia@univie.ac.at
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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 2019)
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

Refined enumeration of Vertically Symmetric Alternating Sign Matrices, *preprint*

On Deficient Perfect Numbers with Four Distinct Prime Factors, II, *submitted*

Almost Circular Balancing Numbers, *submitted*

On Deficient Perfect Numbers with Four Distinct Prime Factors (with Parama Dutta), *submitted*

Hard and Easy Instances of L-Tromino Tilings (with Javier T. Akagi, Carlos F. Gaona, Fabricio Mendoza and Marcos Villagra), *submitted*

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'Universitá 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 charecterization 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 Vogrinc), *Journal of the Indian Mathematical Society*, 2011, 79 (1-4), 137-143

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

Selected Talks	Combinatory Analysis 2018: A Conference in Honor of George Andrews' 80th birthday, Pennsylvania State University, State College, USA, July 2018 (*contributed talk*)
	Department Seminar, Department of Mathematics, North Eastern Hill University, Shillong, India, May 2018 (*invited talk*)
	Department Seminar, Mathematical Sciences, Tezpur University, Tezpur, India, May 2018 (*invited talk*)
	Vienna Discrete Mathematics Seminar, Technische Universität Wien, April 2018
	Combinatorics Working Seminar, Universität Wien, Austria, April 2018
	80th Sminaire Lotharingien de Combinatoire, Institut Camille Jordan - Btiment Braconnier, Universit Claude Bernard Lyon 1, France, March 2018 (*contributed talk*)
	PhD Colloquium, Fakultät für Mathematik, Universität Wien, Austria, March 2018 (*invited talk*)
	Combinatorics Working Seminar, Universität Wien, Austria, December 2017
	First Interdisciplinary Symposium of the Vienna Doctoral Schools, Universität Wien, Austria, September 2017 (*contributed talk*)
	Mini-Conference on Networks and Games, Indian Statistical Institute, Kolkata, India, July 2017 (*invited talk*)
	Combinatorics Working Seminar, Universität Wien, June 2017
	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 (*contributed talk*)
	Department Seminar, Mathematical Sciences, Tezpur University, Tezpur, India, November 2016 (*invited talk*)
	ALEA in Europe Young Researcher's Workshop, Technische Universität Wien, Austria, September 2016 (*contributed talk*)
	3rd Algorithmic and Ennumerative Combinatorics Summer School, Research Institute for Symbolic Computation, Johannes Kepler Universität Linz, August 2016 (*contributed talk*)
	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 (*contributed talk*)
	Combinatorics Working Seminar, Universität Wien, November 2015
	Cotton College, Guwahati, India, February 2013 (*invited talk*)
	St. Mary's College, Shillong, India, September 2010 (*invited talk*)
	ICM International Satellite Conference on Rings and Near Rings, North Eastern Hill University, Shillong, India, September 2010 (*invited talk*)
Selected Conferences/Workshops attended	81st Sminaire Lotharingien de Combinatoire - Krattenthalerfest, Bifeb, Strobl, Austria, September 2018
	4th Algorithmic and Ennumerative Combinatorics Summer School, Research Institute for Symbolic Computation, Johannes Kepler Universität Linz, Austria, July-August 2018
	Combinatory Analysis 2018: A Conference in Honor of George Andrews' 80th birthday, Pennsylvania State University, State College, USA, July 2018
	80th Sminaire Lotharingien de Combinatoire, Institut Camille Jordan - Btiment Braconnier, Universit Claude Bernard Lyon 1, France, March 2018
	Workshop on Computer Algebra in Combinaroics, Erwin Schrödinger International Institute for

Mathematics and Physics, Universität Wien, Austria, November 2017

Workshop on Enumerative Combinaroics, Erwin Schrödinger International Institute for Mathematics and Physics, Universität Wien, Austria, October 2017

ALEA in Europe Workshop, Technische Universität Wien, Austria, October 2017

First Interdisciplinary Symposium of the Vienna Doctoral Schools, Universität Wien, Austria, September 2017

2nd VDS Summer School, Universitätszentrum Obergurgl, Austria, September 2017

European Conference on Combinatorics, Graph Theory and Applications, Technische Universität Wien, Austria, August-September 2017

Mini-Conference on Networks and Games, Indian Statistical Institute, Kolkata, India, July 2017

Elliptic Hypergeometric Functions in Combinatorics, Integrable Systems and Physics, Erwin Schrödinger International Institute for Mathematics and Physics, Universität Wien, Austria, March 2017

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 Ennumerative 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, Bhubaneshwar, 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, Mathematics for JEE/ISI/CMI entrance exams, Inspire Academics, Tezpur, India, May 2018

Teacher, Mathematical Olympiads for high school students, Birjhora Higher Secondary School, Bongaigaon, India, July 2017

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 (Indian Mathematical Society), Mathematics (MDPI), Axioms (MDPI), British Journal of Mathematics and Computer Science, Asian Research Journal of Mathematics, CSAE 2018 (ACM)

Reviewer of 17 items for *Mathematical Reviews, American Mathematical Society*

Reviewer of 6 items for *Zentralblatt Math, European Mathematical Society – Springer*

MEMBERSHIPS

American Mathematical Society, (ordinary member) 2015 - present

Ramanujan Mathematical Society, (life member) since 2018

SKILLS

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

REFERENCES

Prof. Ilse Fischer
University of Vienna
Vienna, Austria
Phone: *available on request*
Email: *available on request*

Prof. Lothar Göttsche
The Abdus Salam ICTP
Trieste, Italy
Phone: *available on request*
Email: *available on request*

Prof. Nayandeep D. Baruah
Tezpur University
Tezpur, India
Phone: *available on request*
Email: *available on request*

Prof. Sujatha Ramdorai
University of British Columbia
Vancouver, Canada
Phone: *available on request*
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