Dr. Sourav Tarafder

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Personal Homepage

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Education

- 2017 Doctor of Philosophy in Pure Mathematics, University of Calcutta. Title: Non-Classical Set Theories and Logics Associated with them.
- 2008 Master of Science, Department of Pure Mathematics, University of Calcutta.
- 2006 Bachelor of Science in Mathematics Honours, Asutosh College, University of Calcutta.

Publications

Refereed Papers in Journals

- Sourav Tarafder, Non-classical foundations of set theory. The Journal of Symbolic Logic. 87(1), pp. 347 376.
 Sourav Tarafdan & Cianzia Wanturi. 75 hotereen classicality and non-
 - Sourav Tarafder & Giorgio Venturi, ZF between classicality and nonclassicality. Studia Logica. 110, pp. 189 – 218.
 - Santiago Jockwich Martinez, Sourav Tarafder, & Giorgio Venturi, *Ideal objects for set theory.* Journal of Philosophical Logic. **51**, pp. 583 602.
- Benedikt Löwe, Robert Paßmann, & Sourav Tarafder, Constructing illoyal algebra-valued models of set theory. Algebra Universalis, 82, 46.



DOI: https://doi.org/10.1007/s00012-021-00735-4.

• Sourav Tarafder & Giorgio Venturi, Independence proofs in non-classical set theories. The Review of Symbolic Logic, 1 – 32. DOI: https://doi.org/10.1017/S1755020321000095.

Benedikt Löwe & Sourav Tarafder, Generalized algebra-valued models of set theory. The Review of Symbolic Logic, 8(1), pp. 192 – 205.

Refereed Papers in Conference Proceedings

- Sourav Tarafder & Mihir Kr. Chakraborty, A paraconsistent logic obtained from an algebra-valued model of set theory. Beziau, J. Y., Chakraborty, M. K. and Dutta, S., editors, New Directions in Paraconsistent Logic, 5th WCP, Kolkata, India, February 2014, Springer Proceedings in Mathematics & Statistics, Vol. 152. New Delhi: Springer, pp. 165 – 183.
- Sourav Tarafder, Ordinals in an algebra-valued model of a paraconsistent set theory. In Banerjee, M. and Krishna, S., editors. Logic and Its Applications, 6th International Conference, ICLA 2015, Mumbai, India, January 8 – 10, 2015, Lecture Notes in Computer Science, Vol. 8923. Berlin: Springer-Verlag, pp. 195 – 206.

Submitted for Publication

• Sourav Tarafder, Basic Mathematics Beyond Classicality.

• Santiago Jockwich Martinez, Sourav Tarafder, & Giorgio Venturi, *Quotient models for a class of non-classical set theories.*

• Santiago Jockwich Martinez, Sourav Tarafder, & Giorgio Venturi, ZF and its interpretations.

Book Chapter

2020 Soma Dutta & Sourav Tarafder, Consequence-inconsistency interderivability in paraconsistent logics and paraconsistent set theory. In: Sarukkai S., Chakraborty M. (eds) Handbook of Logical Thought in India, Springer, New Delhi. DOI: https://doi.org/10.1007/978-81-322-1812-8_38-1.

Others

• Sourav Tarafder. Abstract of the PhD thesis: Non-classical set theories and logics associated with them. The Bulletin of Symbolic Logic, 25(4), p. 451.

• Sourav **Tarafder**. Abstract of the contributed talk: *Foundation of mathematics in a class of paraconsistent set theories* (presented in the 2019 European Summer Meeting of the Association for Symbolic Logic: Logic Colloquium 2019, Prague, Czech Republic), **The Bulletin of Symbolic Logic**, **25**(4), p. 526.

Research Visists

2019 - 2020	Institute of Philosophy and Human Sciences, University of Campinas, Brazil, 16 October, 2019 – 15 October, 2020.
2018	The Institute of Mathematical Sciences, Chennai, India, 2 June – 16 June, 2018.
2017	The Institute of Mathematical Sciences, Chennai, India, 19 June – 31 June, 2017.
2016	The Institute of Mathematical Sciences, Chennai, India, 23 October – 1 November, 2016.
2015	The Institute of Mathematical Sciences, Chennai, India, 10 June – 23 June, 2015.
2014	Short term research visit to the University of Amsterdam, Amsterdam, The Netherlands, 1 June – 10 June, 2014.
2013	Short term research visit to the University of Hamburg, Hamburg, Germany, 1 June – 30 June, 2013.
2012	Short term research visit to the Isaac Newton Institute for Mathematical Sciences, Cambridge University, Cambridge, England, 21 April – 27 May, 2012.
2010 - 2011	Institute for Logic, Language and Computation, University of Amsterdam, Ams-

terdam, The Netherlands, 1 September, 2010 - 31 August, 2011.

Fellowships and Grants Awarded

Research Grants

2019	Pesquisador visitante grant, FAPESP, Brazil; visiting researcher at the Institute of Philosophy and Human Sciences, University of Campinas, São Paulo, Brazil; 16 October, 2019 - 15 October, 2020.
2012	Visiting Fellowship; Isaac Newton Institute for Mathematical Sciences, Cambridge University; 21 April, 2012 – 27 May, 2012.
2010	Erasmus Mundus External Cooperation Window (EMECW 13) fellowship; visiting Ph.D. student at the Institute for Logic, Language and Computation, University of Amsterdam; 1 September, 2010 – 31 August, 2011.

2009 Council for Scientific and Industrial Research, National Eligibility Test (CSIR – NET) fellowship; Doctoral student; Department of Pure Mathematics, University of Calcutta; 15 October, 2009 – 14 October, 2014.

Travel Grants

- 2019 Travel grant from the University Grant Commission (UGC), India, to present a contributed talk in the 16th CLMPST, Prague, Czech Republic, 5 10 August, 2019.
- 2014 Travel grant from the Indo-European Research Training Network in Logic (IERT-NiL) for a short term research visit to the Institute for Logic, Language and Computation, University of Amsterdam, Amsterdam, The Netherlands.
- 2013 Travel grant from the *National Board for Higher Mathematics (NBHM)*, India, for a short term research visit to the University of Hamburg, Hamburg, Germany and the Institute for Logic, Language and Computation, University of Amsterdam, Amsterdam, The Netherlands.
- 2012 Travel grant from the *University of Calcutta*, India, for a short term research visit to the Isaac Newton Institute for Mathematical Sciences, Cambridge, UK.

Invited Talks and Paper Presentations

• Constructing illoyal algebra-valued models of set theory, Annual Conference of the Australasian Association for Logic, will be virtually hosted by the University of Queensland and the University of Melbourne, Australia. 23 June - 25 June, 2021.

• What is a set?, A National Webinar on "A Few Basic Foundational Aspects of Mathematics", organized by the Department of Mathematics, Sree Chaitanya College, Habra, India, 18 June & 25 June, 2021.

• ZF between classicality and non-classicality, UNICAMP-Konstanz Philosophy of Set Theory Seminar, organized jointly by the University of Campinas, Brazil and the University of Konstanz, Germany, 11 March - 24 June, 2021.

• Quotient models for a class of non-classical set theories, 9th Indian Conference on Logic and its Applications (ICLA 2021), organized online by the Association for Logic in India, 4 March - 7 March, 2021.

• *Models of non-classical set theories*, organized by the Association for Logic in India under the Conseil International de Philosophie et des Sciences Humaines (CIPSH), UNESCO, on the occasion of World Logic Day, 14 January, 2021.

• Cardinality in a model of paraconsistent set theory, Studies in mathematical logic, University of São Paulo, Brazil, 5th - 6th December, 2019.

• Foundations of mathematics in a model of paraconsistent set theory, Logic Colloquium, 2019, European Summer Meeting of the Association for Symbolic Logic, Prague, Czech Republic, 11th August - 16th August, 2019.

• Constructing illoyal algebra-valued models of set theory, 16th International Congress on Logic, Methodology and Philosophy of Science and Technology, Prague, Czech Republic, 5th August - 10th August, 2019.

• *Paraconsistent set theory*, Pre-conference workshop, 8th Indian Conference on Logic and its Applications (ICLA 2019), Department of Computer Science and Engineering, Indian Institute of Technology (IIT), Delhi, India, 1st March - 5th March, 2019.

- 2017 Logic of an algebra **A** and the logic of **V**^(**A**), 19th Annual Seminar on Logic and its Applications, Department of Pure Mathematics, University of Calcutta, Kolkata, India, 13th October - 15th October, 2017.
- 2016 A three-valued paraconsistent logic **LPS**₃, Merging Borders in Logic and Philosophy of Mathematics, Department of Philosophy, University of North Bengal, North Bengal, India, 17th November, 2016.
- A paraconsistent set theory, International Seminar on History and Philosophy of Mathematics II: Pluralism in Mathematics, Ramakrishna Mission Institute of Culture, Gol Park, Kolkata, India, 10th December 12th December, 2015.

• Natural numbers in a model of some paraconsistent set theory, Annual Meet of Calcutta Logic Circle: Logic and its Applications, Indian Institute of Bio-Social Research and Development, Kolkata, India, 6th November - 8th November, 2015.

• Non-classical set theories and logics associated with them, Institute of Mathematical Sciences, Chennai, India, 23rd June, 2015.

• Ordinals in an algebra-valued model of a paraconsistent set theory, 6th Indian Conference on Logic and its Applications, Indian Institute of Technology (IIT), Bombay, India, 8th January - 10th January, 2015.

A glimpse of paraconsistent logic(s) and LPS₃, International Seminar on History and Philosophy of Mathematics 2014, Bose Institute, Kolkata, India, 20th February - 22nd February, 2014.

• A paraconsistent logic obtained from an algebra-valued model of set theory, 5th World Congress on Paraconsistent Logic, Indian Statistical Institute, Kolkata, India, 13th February - 17th February, 2014.

 A new three valued paraconsistent logic, International Seminar on Logic and Cognition (SLC 2013), Jadavpur University, Kolkata, India, 30th October - 1st November, 2013.

• The logic LS₃ and its comparison with other three-valued paraconsistent logics, 13th Asian Logic Conference (ALC 2013), Sun Yat-sen University, Guangzhou, China, 16th September - 20th September, 2013.

• The Boolean-valued model construction with algebras of non-standard logics, Postgraduate Workshop on Alternative Set Theory, University of Amsterdam, Amsterdam, The Netherlands, 22nd June - 24th June, 2013.

• Set theory, Annual Meet on Logic and its Application: Celebrating the Alan Turing Year, Indian Institute of Bio-Social Research and Development, Kolkata, India, 29th September - 1st October, 2012.

• Algebra-valued models of set theories, Semantics and Syntax: A Legacy of Alan Turing, Isaac Newton Institute for Mathematical Science, Cambridge University, Cambridge, UK, 9th January - 6th July, 2012.

• *Foundation of mathematics*, Reading Russell on the Centenary of Principia Mathematica (1910 - 1913), Rabindra Bharati University in Collaboration with Indian Council of Philosophical Research, Kolkata, India, 24th January - 25th January, 2012.

• Delivered a talk in students session in the 4th Indian School on Logic and its Applications (ISLA), Sikkim Manipal University, Manipal, 9 January – 20 January, 2012.

2011 Delivered a talk in *Logic and its Application*, Annual meet of Calcutta Logic Circle, Indian Institute of Bio-Social Research and Development, Kolkata, India, 2 September – 4 September, 2011.

Conferences, Seminars, and Workshops Organized

- 2022 *21st CLC Annual Meet*, Calcutta Logic Circle, Online International Conference, 14 January 17 January, 2022.
- 2017 19th Annual Seminar on Logic and its Applications, Department of Pure Mathematics, University of Calcutta, Kolkata, India, 13 October – 15 October, 2017.
- International Seminar on History and Philosophy of Mathematics II: Pluralism in Mathematics, Ramakrishna Mission Institute of Culture, Gol Park, Kolkata, 10 December – 12 December, 2015.
 - Logic and its Application, IBRAD, Kolkata, 6 November 8 November, 2015.
- 2014 Logic and its Application, IBRAD, Kolkata, 17 October 19 October, 2014.

• I was an International BRICS Committee member in the Organizing Committee of the 5th World Congress on Paraconsistent Logic, Indian Statistical Institute, Kolkata, 13 February – 17 February, 2014.

2013 Logic and Cognition; Celebrating 25 years of Calcutta Logic Circle, Jadavpur University, Kolkata, 30 October – 1 November, 2013.

- 2012 Logic and Its Application, Celebrating the Alan Turing Year, IBRAD, Kolkata, 29 September – 1 October, 2012.
- 2011 Logic and its Application, IBRAD, Kolkata, 2 September 4 September, 2011.

Positions Held

2014 – Till date	Assistant Professor, Business Mathematics and Statistics, Department of Com- merce, St. Xavier's College, Kolkata.
2019 - 2020	Visiting Researcher, Institute of Philosophy and Human Sciences, University of Campinas, São Paulo, Brazil.
Session 2014 – 2015	Guest Faculty, M. Phil. course, School of Cognitive Science, Jadavpur University.
Session 2013 – 2014	Guest Faculty, M. Sc. in Mathematics, Department of Mathematics, Presidency University.
Session 2013 – 2014	Guest Faculty, M.Phil. course, School of Cognitive Science, Jadavpur University.
2011 - 2014	Senior Research Fellow (CSIR – NET), Department of Pure Mathematics, University of Calcutta.
2009 - 2011	Junior Research Fellow (CSIR – NET), Department of Pure Mathematics, University of Calcutta.
2008 - 2009	Lecturer, B. Tech. Division, Pailan College of Management and Technology.

Research Interests

- Classical and non-classical set theories
- Classical logic
- Non-classical logics, specially paraconsistent logic
- Infinite game theory

Recognition and Honor

- Executive Committee Member of the "Association for Logic in India" (India).
- Member of the "Calcutta Logic Circle" (India).
- Member of the "Association for Symbolic Logic" (USA).