

# Dr. Sourav Tarafder

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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

- 2016 | Tarafder, S., & Chakraborty, M. K., *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 (2016).
- 2015 | Loewe, B., & Tarafder, S. *Generalized Algebra-Valued Models of Set Theory.* *The Review of Symbolic Logic*, 8(1), pp. 192 – 205 (2015).
- 2015 | Tarafder, S., *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 (2015).

## Submitted for Publication

- Sourav Tarafder, *Cardinality and the Generalized Continuum Hypothesis in a Class of Paraconsistent Set Theories*.
- Santiago Jockwich Martinez, Sourav Tarafder, & Giorgio Venturi, *ZF and its interpretations*.
- Santiago Jockwich Martinez, Sourav Tarafder, & Giorgio Venturi, *Ideal objects for set theory*.
- Sourav Tarafder & Giorgio Venturi, *ZF between classicality and non-classicality*.
- Benedikt Lwe, Robert Passmann, & Sourav Tarafder, *Constructing illoyal algebra-valued models of set theory*.
- Sourav Tarafder & Giorgio Venturi, *Independence proofs in non-classical set theories*.

## Book chapter

- 2020 Soma Dutta & Sourav Tarafder, Consequence-inconsistency interderivability in paraconsistent logics and paraconsistent set theory, to appear in the Handbook of Logical Thought in India, Springer Nature, New Delhi.

## Research Visists

- 2020 – 2019 *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, Amsterdam, The Netherlands, 1 September, 2010 – 31 August, 2011.*

## Fellowships and Grants Awarded

- 2019
- Pesquisador visitante grant, FAPESP, Brazil; visiting researcher at the Institute of Philosophy and Human Sciences, University of Campinas, Brazil; 16 October, 2019 - 15 October, .
  - Travel grant from the University Grant Commission (UGC), India to present a contributed talk in the 16th CLMPST, Prague, Czech Republic, 2019.
- 2014
- Travel grant from the *Indo-European Research Training Network in Logic (IERT-NiL)* for a research visit to Amsterdam.
- 2013
- Travel grant from the *National Board for Higher Mathematics (NBHM)*, India for a research trip to Hamburg and Amsterdam.
- 2012
- Travel grant from the *University of Calcutta* for a research visit in Cambridge.
  - 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.

## Invited Talks and Paper Presentations

- 2019
- *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  $\mathbf{A}$  and the logic of  $\mathbf{V}(\mathbf{A})$* , 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  $\mathbf{LPS}_3$* , Merging Borders in Logic and Philosophy of Mathematics, Department of Philosophy, University of North Bengal, North Bengal, India, 17th November, 2016.
- 2015 • *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.
- *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.
- 2014 • *A glimpse of paraconsistent logic(s) and  $\mathbf{LPS}_3$* , 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.
- 2013 • *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  $\mathbf{LS}_3$  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.
- 2012 • *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

- 2017
- *19th Annual Seminar on Logic and its Applications*, Department of Pure Mathematics, University of Calcutta, Kolkata, India, 13 October – 15 October, 2017.
- 2015
- *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 Commerce, St. Xavier's College, Kolkata.
- 2019 – 2020
- Visiting Researcher, Institute of Philosophy and Human Sciences, University of Campinas, 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 logic.
- Non-classical logics, specially paraconsistent logic.
- Classical and non-classical set theories,
- Infinite game theory.

## Recognition and Honor

- Member of the “Calcutta Logic Circle” (India).
- Member of the “Association for Logic in India” (India).
- Member of the “Association for Symbolic Logic” (USA).