CURRICULUM VITAE*

ALI SADEGH DAGHIGHI

Contact Information.

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Education.

- Ph.D., Set Theory (September 2017)
  Amirkabir University of Technology, Tehran
  Dissertation: *Interactions of large cardinal axioms, generalized continuum hypothesis and forcing*
  Supervisor: Massoud Pourmahdian
- M.Sc., Mathematical Logic (September 2011)
  Amirkabir University of Technology, Tehran
  Thesis: *Extending partial automorphisms in graphs and metric spaces*
  Supervisor: Massoud Pourmahdian
- B.Sc., Pure Mathematics (September 2009)
  Sharif University of Technology, Tehran.

Research Interests.

- Main: Mathematical logic, especially set theory (e.g. very large cardinals, forcing axioms, tree property, pcf theory, and non-well founded sets), and model theory (e.g. Abstract Elementary Classes, stability, and classification theory).
- Secondary: Philosophical logic, Philosophy of mathematics.

Affiliations.

- Institute for Research in Fundamental Sciences (IPM), March 2019 - Present.
- European Set Theory Society (ESTS), January 2016 - Present.
- Iranian Association for Logic (IAL), December 2014 - Present.
- Amirkabir Logic Group (AUTLG), March 2012 - Present.

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*Last update: February 2021.

Academic Appointments.

- Visiting Research Fellow: Institute for Research in Fundamental Sciences (IPM) (January 2021 - Present).
- Non-resident researcher: Institute for Research in Fundamental Sciences (IPM) (March 2019 - March 2020).
- Member of the board of directors: Iranian Association for Logic (IAL) (January 2019 - Present).
- Chief Editor: News Bulletin of the Iranian Association for Logic (IAL) (August 2016 - August 2017).
- Research Assistant: Institute for Research in Fundamental Sciences (IPM) (January 2014 - December 2015).
- Coordinator: Logic Group at Amirkabir University of Technology (March 2012 - January 2015).

Organizing Experience.

- Member of the Organizing Committee at *8th Annual Conference of the Iranian Association for Logic*, Tarbiat Modares University, Tehran, February 2019.
- Member of the Organizing Committee at *Inernational Logic Day Workshop 2021*, Amirkabir University of Technology, Tehran, January 2021.
- Member of the Organizing Committee at *Inernational Logic Day Workshop 2020*, Tarbiat Modares University, Tehran, January 2020.
- Member of the Organizing Committee at *7th Annual Conference of the Iranian Association for Logic*, Khajeh Nasir Toosi University of Technology, Tehran, December 2019.
- Organizer at *Amirkabir Logic Group Bi-Weekly Seminars*, Amirkabir University of Technology, Tehran, Spring and Fall 2014-2015.

Books.

- *Landscapes in Logic*, Ali Sadegh Daghighi, Jamshid Derakhshan, Melvin Fitting, Dov Gabbay, Massoud Pourmahdian, and Adrian Rezus (editors), College Publications, London, 2020-2021, In preparation.
- *Logic Around the World*, Ali Sadegh Daghighi and Massoud Pourmahdian (editors), Andisheh and Farhang-e Javidan Publications, Tehran, 2017, ISBN: 978-600-6386-99-7.

Journal Papers.

- *On Some Properties of Shelah Cardinals*, with Massoud Pourmahdian, Bulletin of the Iranian Mathematical Society, 2018, Volume 44, Issue 5, pp 1117 - 1124.
- *The definable tree property for successors of cardinals*, with Massoud Pourmahdian, Archive for Mathematical Logic, 2016, Volume 55, Issue 5, pp 785 - 798.

- *The foundation axiom and elementary self-embeddings of the universe*, with Mohammad Golshani, Joel David Hamkins, and Emil Jerabek, Infinity, computability, and metamathematics: Festschrift celebrating the 60th birthdays of Peter Koepke and Philip Welch, S. Geschke, B. Lowe, and P. Schlicht, Eds., Coll. Publ., London, 2014, vol. 23, pp. 89 - 112.

Conference Papers.

- *Shelah Cardinals: A Fleeting Glimpse*, 5th Annual Conference of the Iranian Association for Logic, Amirkabir University of Technology, Tehran, December 2017.
- *On Large Cardinal Strength of Definable Tree Property*, 3rd Annual Conference of the Iranian Association for Logic, Tarbiat Modares University, Tehran, December 2015.
- *On the Independent Nature of Global and Well-founded Universes of Mathematics*, 2nd Annual Conference of the Iranian Association for Logic, University of Tehran, Tehran, December 2014.

Invited Lectures.

- *Some Metaphysical Challenges from Set Theory*, Workshop on Logic and Religion, January 2021, Logic Day Ceremony, Sao Paulo, Brazil.
- *A Glimpse of the Mathematical Multiverse*, Logic Day Ceremony, January 2021, Al-Mustansiriya University, Baghdad, Iraq.
- *Forcing and multiverse theory in mathematics*, Logic Seminars, May 2019, Institute for Research in Fundamental Sciences - Isfahan branch, Isfahan, Iran.
- *On Khayyam's Innovations in Mathematics*, National Mathematics Day Celebrations, May 2019, University of Isfahan, Isfahan, Iran.
- *On the History and Future of Advanced Research in Set Theory*, General Lecture Series, May 2019, Mathematics House of Isfahan, Isfahan, Iran.
- *Multiverse Conceptions in Set Theory*, Lecture Series in Philosophy of Mathematics, December 2018, Sharif University of Technology, Tehran, Iran.
- *On Epistemological Foundations of Mathematics and Science*, Think Tank Lecture Series, October 2018, National Library of Iran, Tehran, Iran.

Attended Events.

- Workshop on Inner Model Theory by Ralf Schindler, November 2019, Institute for Research in Fundamental Sciences, Tehran, Iran.
- IPM Set Theory Conference, Institute for Research in Fundamental Sciences, Tehran, Iran, October 2019.
- Workshop on the history of logic by Piergiorgio Odifreddi, February 2019, Institute for Research in Fundamental Sciences, Tehran, Iran.

- 6th Annual Conference of the Iranian Association for Logic, January 2019, Shahid Beheshti University, Tehran, Iran.
- Short course on model theory of separably closed valued fields by Martin Hils, Institute for Research in Fundamental Sciences, Tehran, Iran, November 2018.
- IPM Conference on Model Theory of Valued Fields, Institute for Research in Fundamental Sciences, Tehran, Iran, October 2018.
- Workshop on Limits to Set-theoretic Definability of Constructions by Wilfrid Hodges, Institute for Research in Fundamental Sciences, Tehran, Iran, June 2018.
- Short course on Forcing, forcing axioms and a hope for having them at cardinals other than $\aleph_1$ by Mirna Dzamonja, Institute for Research in Fundamental Sciences, Tehran, Iran, December 2017.
- Short course on Forcing with symmetric systems as side condition and adding few new reals by David Aspero, Institute for Research in Fundamental Sciences, Tehran, Iran, December 2017.
- 5th Annual Conference of the Iranian Association for Logic, Amirkabir University of Technology, Tehran, Iran, December 2017.
- Workshop on Creature Forcing by Heike Mildenberger, Institute for Research in Fundamental Sciences, Tehran, Iran, April 2017.
- 4th Annual Conference of the Iranian Association for Logic, Sharif University of Technology, Tehran, Iran, December 2016.
- 3rd Annual Conference of the Iranian Association for Logic, Tarbiat Modarres University, Tehran, Iran, December 2015.
- IPM Conference on Set Theory and Model Theory, Institute for Research in Fundamental Sciences, Tehran, Iran, October 2015.
- Workshop on Forcing by Kai Hauser, Institute for Research in Fundamental Sciences, Tehran, Iran, January 2015.
- Workshop on Descriptive Set Theory by Vladimir Kanovei, Institute for Research in Fundamental Sciences, Tehran, Iran, January 2015.
- 2nd Annual Conference of the Iranian Association for Logic, University of Tehran, Tehran, Iran, December 2014.
- IMS Graduate Summer School in Logic, National University of Singapore, Singapore, June 2014.
- 4th Annual National Conference on Mathematical Logic and its Applications, Shahid Beheshti University, Tehran, Iran, November 2013.
- 3rd Annual National Conference on Mathematical Logic and its Applications, Shahid Bahonar University, Kerman, Iran, November 2012.
- Logic Conference on Algebra, Combinatorics and Model Theory, Koc University, Istanbul, Turkey, August 2011.
- 2nd Annual National Conference on Mathematical Logic and its Applications, University of Isfahan, Isfahan, Iran, November 2011.

- 1st Annual National Conference on Mathematical Logic and its Applications, University of Tabriz, Tabriz, Iran, March 2011.

Honors.

- Member of the Iranian National Elites Foundation, July 2018.
- Selected graduate student for the Ph.D. curriculum without enterance exam by the Exceptional Talents Office at Amirkabir University of Technology, Class 2011.
- 2nd rank graduated master student of mathematics, Amirkabir University of Technology, September 2011.
- Graduated student of the special schools of the National Organization for Development of Exceptional Talents (NODET), Mirza Kuchak Khan NODET High School, Rasht, Iran, Class 2004.

Other Skills.

- Language Skills: Native in Persian. Fluent in English. Familiar with Arabic, Latin, and Italian.
- Computer Skills: LaTeX, Powerpoint, Mathematica, Maple, Java.

Personal Interests.

- Classical Music, Classical Literature, Languages, Writing, Movies, Architecture, Astronomy.

References.

- Joel David Hamkins
  Professor of Logic, Faculty of Philosophy, University of Oxford
  Sir Peter Strawson Fellow in Philosophy, Oxford University College
  Email: joeldavid.hamkins@philosophy.ox.ac.uk
- Massoud Pourmahdian
  Head of the School of Mathematics, Institute for Research in Fundamental Sciences (IPM)
  Faculty Member at Department of Mathematics and Computer Science, Amirkabir University of Technology.
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- Mohammad Golshani
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