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(Logic & Computer Sciences)



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Positions & Affiliations

• Teaching:

- Associate Professor of Mathematics (Logic & Computer Science) at the [University of Tabriz](#), Tabriz, IRAN (2013—Present).
- Assistant Professor of Mathematics (Logic & Computer Science) at the [University of Tabriz](#), Tabriz, IRAN (2007—2013).

• Research:

- Associate Researcher ([non-resident](#)) at the Logic Group, School of Mathematics, Institute for Research in Fundamental Sciences ( IPM), Tehran, IRAN (2010—Present).

Education & Degrees

• Postgraduate Studies:

- Ph.D. in *Theoretical Computer Science*, from University of Turku, Turku, FINLAND (2005) under the supervision of Professor [MAGNUS STEINBY](#).
Dissertation: *Varieties of Tree Languages*.
- Ph.D. in *Mathematical Logic*, from Polish Academy of Sciences, Warsaw, POLAND (2002) under the supervision of Professor [ZOFIA ADAMOWICZ](#).
Dissertation: *Herbrand Consistency in Arithmetics with Bounded Induction*.

• Undergraduate Studies:

- B.Sc. in Pure Mathematics, from [Sharif University of Technology](#), Tehran, IRAN (1997).

Publications

• Journal Papers:

- [KAAVE LAJEVARDI & SAEED SALEHI](#), [On the Arithmetical Truth of Self-Referential Sentences](#), to appear in *Theoria*. DOI: 10.1111/theo.12169
- [ZIBA ASSADI & SAEED SALEHI](#), [On Decidability and Axiomatizability of Some Ordered Structures](#), to appear in *Soft Computing*. DOI: 10.1007/s00500-018-3247-1
- [SAEED SALEHI & PAYAM SERAJI](#), [On constructivity and the Rosser property: a closer look at some Gödelean proofs](#), in *Annals of Pure and Applied Logic*, Vol. 169, No. 10 (2018) pages 971–980.
- [SAEED SALEHI](#), [On Axiomatizability of the Multiplicative Theory of Numbers](#), in *Fundamenta Informaticæ*, Vol. 159, No. 3 (2018) pages 279–296.
- [PARVIN SAFARI & SAEED SALEHI](#), [Kripke Semantics for Fuzzy Logics](#), in *Soft Computing*, Vol. 22, No. 3 (2018) pages 839–844.
- [SAEED SALEHI & PAYAM SERAJI](#), [Gödel-Rosser’s Incompleteness Theorem: generalized and optimized for definable theories](#), in *Journal of Logic and Computation*, Vol. 27, No. 5 (2017) pages 1391–1397.
- [AHMAD KARIMI & SAEED SALEHI](#), [Diagonal Arguments and Fixed Points](#), in *The Bulletin of the Iranian Mathematical Society*, Vol. 43, No. 5 (2017) pages 1073–1088.
- [SAEED SALEHI](#), [Gödel’s Incompleteness Phenomenon—Computationally](#), in *Philosophia Scientiæ*, Vol. 18, No. 3 (2014) pages 23–37.
- [SAEED SALEHI](#), [Herbrand Consistency of Some Finite Fragments of Bounded Arithmetical Theories](#), in *Archive for Mathematical Logic*, Vol. 52, No. 3–4 (2013) pages 317–333.
- [SAEED SALEHI](#), [Herbrand Consistency of Some Arithmetical Theories](#), in *The Journal of Symbolic Logic*, Vol. 22, No. 3 (2012) pages 807–827.
- [SAEED SALEHI](#), [Separating Bounded Arithmetical Theories by Herbrand Consistency](#), in *Journal of Logic and Computation*, Vol. 77, No. 3 (2012) pages 545–560.
- [SAEED SALEHI & MAGNUS STEINBY](#), [Varieties of Many-Sorted Recognizable Sets](#), in *Pure Mathematics and Applications*, Vol. 18, No. 3–4 (2007) pages 319–343.
- [SAEED SALEHI & MAGNUS STEINBY](#), [Tree Algebras and Varieties of Tree Languages](#), in *Theoretical Computer Science*, Vol. 377, No. 1–3 (2007) pages 1–24.
- [TATJANA PETKOVIĆ & SAEED SALEHI](#), [Positive Varieties of Tree Languages](#), in *Theoretical Computer Science*, Vol. 347, No. 1 (2005) pages 1–35.
- [SAEED SALEHI](#), [Polynomially Bounded Recursive Realizability](#), in *Notre Dame Journal of Formal Logic*, Vol. 46, No. 4 (2005) pages 407–417.
- [SAEED SALEHI](#), [Congruence Preserving Functions of Wilke’s Tree Algebras](#), in *Algebra Universalis*, Vol. 53, No. 4 (2005) pages 451–470.
- [SAEED SALEHI](#), [Varieties of Tree Languages Definable by Syntactic Monoids](#), in *Acta Cybernetica*, Vol. 17, No. 1 (2005) pages 21–41.
- [SAEED SALEHI](#), [Provably Total Functions of Basic Arithmetic](#), in *Mathematical Logic Quarterly*, Vol. 49, No. 3 (2003) pages 316–322.
- [MOHAMMAD ARDESHIR & WIM RUITENBURG & SAEED SALEHI](#), [Intuitionistic Axiomatizations for Bounded Extension Kripke Models](#), in *Annals of Pure and Applied Logic*, Vol. 124, No. 1–3 (2003) pages 267–285.
- [SAEED SALEHI](#), [Decidable Formulas of Intuitionistic Primitive Recursive Arithmetic](#), in *Reports on Mathematical Logic*, No. 36 (2002) pages 55–61.

- **Books:**

- SAEED SALEHI, [A Structural Theory for Varieties of Tree Languages: an algebraic study of the theory of formal tree languages and tree automata](#), VDM Verlag Dr. Müller, Germany (2010). ISBN: 9783639230550.

- **Conference Papers:**

- SAEED SALEHI, [Axiomatizing Mathematical Theories: Multiplication](#), in: A. Kamali-Nejad (ed.) *Proceedings of Frontiers in Mathematical Sciences*, Fundamental Education Publications (IRAN 2012) pages 165–176.
- SAEED SALEHI, [Computation in Logic and Logic in Computation](#), in: B. Sadeghi-Bigham (ed.), *Proceedings of the Third International Conference on Contemporary Issues in Computer and Information Sciences*, Brown Walker Press (USA 2012) pages 580–583.
- SAEED SALEHI, [A Completeness Property of Wilke’s Tree Algebras](#), in: B. Rován & P. Vojtáš (eds.) *Proceedings of the Mathematical Foundations of Computer Science 2003*, Lecture Notes in Computer Science 2747, Springer–Verlag (GERMANY 2003) pages 662–670.
- SAEED SALEHI, [Unprovability of Herbrand Consistency in Weak Arithmetics](#), in: Kristina Striegnitz (ed.) *Proceedings of the Student Session of the 6th European Summer School in Logic Language and Information* (FINLAND 2001) pages 265–274.

- **Preprints:**

- SAEED SALEHI & MOHAMMADSALEH ZARZA, [First-Order Continuous Induction, and a Logical Study of Real Closed Fields](#), arXiv:1509.00164 (01.11.2018); *Submitted*.
- SAEED SALEHI, [Theorems of Tarski’s Undefinability and Gödel’s Second Incompleteness—Computationally](#), arXiv:1509.00164 (01.06.2017).
- AHMAD KARIMI & SAEED SALEHI, [Theoremizing Yablo’s Paradox](#), arXiv:1406.0134 (01.06.2014).

Referee & Review

- **Referee for:**

- Theoretical Computer Science (TCS of Elsevier).
- Notre Dame Journal of Formal Logic (NDJFL).
- International Journal of Foundations of Computer Science (IJFCS of World Scientific).
- Bulletin of the Iranian Mathematical Society (BIMS of Springer).
- Discussiones Mathematicæ—General Algebra and Applications (DMGAA).
- Proceedings of the 24th International Workshop on Logic, Language, Information, and Computation (WoLLIC 2017) 18–21 July 2017, London, UK (LNCS 10388, Springer 2017).
- Proceedings of the 13th International Conference on Automata and Formal Languages (AFL’11) 17–22 August 2011, Debrecen, HUNGARY (edited by Pál Dömösi & Szabolcs Iván and published by the Institute of Mathematics and Computer Science of Nyíregyháza College).
- Proceedings of the 31st International Colloquium on Automata, Languages and Programming (ICALP’04) 12–16 July 2004, Turku, FINLAND (LNCS 3142, Springer–Verlag 2004).
- Iran National Science Foundation (INSF).
- Iranian Journal of Mathematical Sciences and Informatics (IJMSI).

- **Reviewer for:**

- Mathematical Reviews (MR) of the American Mathematical Society (AMS).
- Zentralblatt MATH (Zbl) of the European Mathematical Society (EMS).

Conferences & Visits

- **Organization:**

- Chair of *Tabriz Seminar on Mathematical Logic*, Univ. of Tabriz, IRAN, 27–28 October 2010.
- A member of the Scientific Committee of the 38th *Annual Iranian Mathematics Conference (AIMC'38)*, Zanjan University, Zanjan, IRAN, 3–6 September 2007.

- **Invited Talks/Lectures:**

- *Workshop on Proof Theory, Modal Logic and Reflection Principles (Wormshop 2017)*, Steklov Mathematical Institute, Moscow, RUSSIA, 17–20 October 2017.
Title: *Diagonal-Free Proofs of the Diagonal Lemma*.
- *Meta-Arithmetical Results and their Philosophical Meaning (Swamplandia 2016)*, Faculty of Arts and Philosophy, Ghent University, BELGIUM, 30 May 30 – 1 June 2016.
Title (Tutorial): *Gödel's Incompleteness Theorem: Constructivity of its Various Proofs*.
Title (Talk): *Theoremizing Paradoxes: Turning Puzzles into Proofs*.
- *IPM-Isfahan Workshop on Various Aspects of Modality (Isfahan 2016)*, IPM-Isfahan Branch, Isfahan, IRAN, 12 May 2016.
Title: *Turning Yablo's Paradoxes into Modality Theorems*.
- *The 10th International Tbilisi Summer School in Logic and Language (Tbilisi 2014)*, Ivane Javakhishvili Tbilisi State University, Tbilisi, GEORGIA, 22–27 September 2014.
Title: *Axiomatic Mathematics: Issues of Decidability in Logic*.
- *The 3rd International Conference on Contemporary Issues in Computer and Information Sciences (CICIS 2012)*, the Institute for Advanced Studies in Basic Sciences (IASBS), Zanjan, IRAN, 29–31 May 2012. Title: *Computation in Logic and Logic in Computation*.
- *Foundations and Trends in Computer Science (FTCS'08)*, Winter School by IPM School of Computer Science and United Nations University, IPM, Tehran, IRAN, 31 January – 10 February 2008. Title: *Logics in Computer Science*.
- *IPM Logic Conference (IPM-LC'07)*, IPM, Tehran, IRAN, 10–15 June 2007.
Title: *Modal Logic of Herbrand Consistency in Weak Arithmetics*.
- *Algebraic Theory of Automata and Logic (ATAL'06)*, a satellite event of the conference *Computer Science Logic (CSL'06)*, Szeged, HUNGARY, 30 September – 1 October 2006.
Title: *Characterizing Families of Tree Languages by Syntactic Monoids*.

- **Contributed Talks:**

- *The 5th World Congress and School on Universal Logic*, University of Istanbul, Istanbul, TURKEY, 20–30 June 2015. Title: *Theorems of Tarski and Gödel's Second Incompleteness—Computationally*.
- *Frontiers in Mathematical Sciences*—The Second Conference, Sharif University of Technology, Tehran, IRAN, 25–27 December 2013.
Title: *Diagonalizing Out by Fixed-Points and Self-Reference*.
- *Frontiers in Mathematical Sciences*—A Conference in Honor of Siavash Shahshahani, Sharif University of Technology, Tehran, IRAN, 25–27 December 2012.
Title: *Axiomatizing Mathematical Theories: Multiplication*.
- *The 14th Congress of Logic, Methodology and Philosophy of Science (CLMPS'2011)*, Nancy, FRANCE, 19–26 July 2011. Title: *Gödel's Incompleteness Phenomenon from Computational Viewpoint*.
- *The ASL European Summer Meeting, Logic Colloquium (LC'11)*, Barcelona, SPAIN, 11–16 July 2011. Title: *On Herbrand Consistency of Bounded Arithmetics*.
- *The International Workshop on Logical Approaches to Barriers in Computing and Complexity (LABCC'10)*, Alfried Krupp Wissenschaftskolleg, Greifswald, GERMANY, 17–20 February 2010.
Title: *Herbrand Consistency of ID_0 and $\text{ID}_0 + \Omega_1$* .

- *The 28th International Symposium on Mathematical Foundations of Computer Science (MFCS'03)*, Hotel Sorea, Bratislava, SLOVAKIA, 25–29 August 2003.
Title: *A Completeness Property of Wilke's Tree Algebras*.
- *The 10th International Conference on Automata and Formal Languages (AFL'02)*, Hotel Aranybika, Debrecen, HUNGARY, 13–18 August 2002. Title: *Tree Algebras*.
- The Student Session of *the 13th European Summer School in Logic, Language and Information (ESSLLI'01)*, Helsinki, FINLAND, 13–24 August 2001.
Title: *Unprovability of Herbrand Consistency in Weak Arithmetics*.
- *The ASL European Summer Meeting, Logic Colloquium (LC'01)*, Vienna, AUSTRIA, 6–11 August 2001. Title: *Unprovability of Herbrand Consistency in Weak Arithmetics*.
- *The ASL European Summer Meeting, Logic Colloquium (LC'00)*, Paris, FRANCE, 23–31 July 2000. Title: *A Generalized Realizability for Constructive Arithmetics*.
- *The ASL European Summer Meeting, Logic Colloquium (LC'99)*, Utrecht, THE NETHERLANDS, 1–6 August 1999. Title: *Intuitionistic Axiomatization of End-Extension Kripke Models*.
- **Poster Presentations:**
 - *The Fourth European Congress of Mathematics (4ECM)*, Stockholm, SWEDEN, 27 June – 2 July 2004. Title: *A Model-Theoretic Proof of an Incompleteness Theorem*.
- **Post-doctoral Visits:**
 - October 2006—September 2007: Department of Mathematics, Institute for Advanced Studies in Basic Sciences (IASBS), Zanjan, IRAN.
 - September 2006: *Research Group for Theoretical Computer Science and Logic*, Institute of Computer Science and Applied Mathematics, Universität Bern, Bern, SWITZERLAND.
 - April 2006: *Department of Philosophy*, Universiteit Utrecht, Utrecht, THE NETHERLANDS.

Teaching & Supervising

- **Taught Courses:**
 - (Post-)Graduate Courses:
Advanced Mathematical Logic . Recursion Theory . Proof Theory . Modal Logic . Topics in Mathematical Logic . Logic and Computation . Topics in Set Theory . Universal Algebra . Logical Number Theory . Advanced Computability Theory . Complexity Theory . Expert Systems and Knowledge Engineering . Symbolic Computing . Theory of Computer Science . Logic and Methodology of Research . Logic Programming
 - Undergraduate Courses:
The Foundations of Mathematics . Mathematical Logic . Theory of Sets . Theory of Automata and Formal Languages . Theory of Computability . Coding Theory . English for Mathematics . Calculus I . Calculus II . Foundations of Combinatorics . Foundations of Logic and Set Theory
- **Supervised Ph.D. Theses:**
 - ZAHRA SHEIKHOLESAMI (in progress) *Studying the Induction Principle and the Structure of Rational Numbers in Different Languages*.
 - MOHAMMADSALEH ZARZA (in progress) *Axiomatizations of Subfields of the Real Numbers*.
 - ZIBA ASSADI (in progress) *Decidability of the Multiplicative and Order Theory of Numbers*.
 - PARVIN SAFARI (2017) *Investigating Kripke Semantics for Fuzzy Logics*.
 - PAYAM SERAJI (2016) *Rosserizing and Effectivizing Some Proofs of the First Incompleteness Theorem*.
 - AHMAD KARIMI (2014) *Innovative Types in Unified Diagonal Argument*.

- **Supervised M.Sc. Theses:**

- ELAHEH ROKNI (2018) *Bounded Relations and their Relation to Primitive Recursive Relations.*
- YUSEF NOBAKHT (2017) *Necessary and Sufficient Conditions for Undecidability of Gödel Sentence and its Truth.*
- SHIVA KHELEGHI (2017) *Standard Proofs for Gödel's Second Incompleteness Theorem.*
- MOHAMMADAMIN TAREEGHEE (2016) *Yablo's Paradox in Second-Order Logic.*
- VALI DELARAMOGHANLOO (2015) *Yablo's Paradox and Gödel's Incompleteness Theorems.*
- SAJAD GHANIZADEHZARE (2015) *Kolmogorov Complexity and Characteristic Constants of Formal Theories of Arithmetic.*
- SONIA SARVARI MEHRABAD (2015) *On Proofs of the Incompleteness Theorems Based on Berry's Paradox.*
- MEHRNOOSH SAHAHI (2015) *The Incompleteness Theorems of Gödel and Rosser.*
- HOJJAT SHIRZADEH (2014) *The Shortest Definition of a Number in Peano Arithmetic.*
- PARINAZ GHAEMI (2014) *The Surprise Examination Paradox and the Second Incompleteness Theorem.*
- SHOKOUFEH SADEGHI BIGHAM (2014) *Undecidability of First-Order Logic.*
- MINA MOHAMMADIAN (2013) *Incompleteness in a General Setting.*
- SAFDAR ESMATI MEHRABANI (2012) *Nonstandard Models that are Definable in Peano Arithmetic.*
- FATEME AZARPEYVAND (2012) *Heterologicality and Incompleteness.*
- NAYYER JANGI BAHADOR (2012) *An Interpolation Theorem in First-Order Logic.*
- MARYAM SALEH MOHAMMADZED (2012) *A New Method for Service Discovery in Pervasive Computing Environment Using Active Databases.*
- MOHAMMAD JAVAD SHEIKHZADEH (2011) *An Optimized OMR Solution for Recognizing Multi-Choice Questionnaires.*
- TAHMURAS NOHEKHAN SHISHAVAN (2010) *A Dynamic Date Replication Method to Increase the Performance of Data Grids.*
- MAHDI ABEDINI (2010) *A Universal Approach to Self-Referential Paradoxes, Incompleteness and Fixed Points.*
- FARZAD ELMI (2010) *A Study of Algebraic Structures By Logical Tools.*

- **Supervised B.Sc. Theses:**

- AMIN ESMAILZADEH (2012) *The Philosophy and Logic of Mathematics.*
- MEHDI REZAYATI (2011) *Mathematical Logic and Set Theory.*
- MASOUD JAFARI (2011) *The Foundations of Mathematical Sciences and Set Theory.*
- FATEMEH KARIMI (2010) *The Foundations of Mathematics and their Problems.*

Internet Links & Identities

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- GOOGLE SCHOLAR: [xI4on2oAAAAJ](https://scholar.google.com/citations?user=xI4on2oAAAAJ)
- arXiv.org ID: [salehi_s_1](https://arxiv.org/a/salehi_s_1)
- Mathematics Genealogy Project: [93048](https://www.mathgenealogy.org/id?idi=93048)
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