

# SAEED SALEHI, Ph.D.



Associate Professor of Mathematics

(Logic & Computer Science)

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## Position & Affiliation

### • 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 ([IPMI](#)), Tehran, Iran (2010—Present).

## Education & Degrees

### • Postgraduate Studies:

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

### • Graduate Studies:

- M.Sc. in Mathematical Logic, from School of Exact Sciences (now the Cardinal Stefan Wyszyński University), Warsaw, Poland (2001).  
Thesis: *Decidable Formulas of Intuitionistic Primitive Recursive Arithmetic*.

### • Undergraduate Studies:

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

## Referee & Review

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- **Referee for:**

- Iran National Science Foundation ([INSF](#)).
- 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](#)).
- *Discussiones Mathematicae—General Algebra and Applications* ([DMGAA](#)).
- Iranian Journal of Mathematical Sciences and Informatics ([IJMSI](#)).
- *Mathematical Sciences* (Quarterly Journal [MSQJ](#)).
- Proceedings of the 13<sup>th</sup> 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 31<sup>st</sup> International Colloquium on Automata, Languages and Programming ([ICALP'04](#)) 12–16 July 2004, Turku, Finland (LNCS 3142, Springer–Verlag 2004).

- **Reviewer for:**

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

## Honors & Awards

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- The First Rank in the National Mathematical Olympiad for University Students, Iran, 1997 (in both the [first](#) and the [second](#) rounds).
- The First Ranked Graduate of Mathematics (from Sharif Univ. of Tech., Tehran) Iran, 1997.
- One of the Top Undergraduate Students in Sharif University of Technology, Tehran, Iran, 1996.

## Conferences & Visits

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- **Organization:**

- Chair of *Tabriz Seminar on Mathematical Logic*, Univ. of Tabriz, Iran, 27 – 28 October 2010.
- A member of the Scientific Committee of the 38<sup>th</sup> *Annual Iranian Mathematics Conference* ([AIMC'38](#)), Zanzan University, Zanzan, Iran, 3 – 6 September 2007.

- **Invited Talks/Lectures:**

- *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 10<sup>th</sup> 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 3<sup>rd</sup> International Conference on Contemporary Issues in Computer and Information Sciences* ([CICIS 2012](#)), the Institute for Advanced Studies in Basic Sciences (IASBS), Zanzan, 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 5<sup>th</sup> 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 14<sup>th</sup> 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)*, Alfred Krupp Wissenschaftskolleg, Greifswald, Germany, 17 – 20 February 2010. Title: *Herbrand Consistency of  $\mathbf{I}\Delta_0$  and  $\mathbf{I}\Delta_0 + \Omega_1$* .
  - *The 38<sup>th</sup> Annual Iranian Mathematics Conference (AIMC'38)*, Zanjan University, Zanjan, Iran, 3 – 6 September 2007. Title: *Modal Logic of Herbrand Consistency in Weak Arithmetics*.
  - *The 28<sup>th</sup> 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 10<sup>th</sup> 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 13<sup>th</sup> 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.
- September & October 2005: [Department of Mathematics](#), University of Turku, Turku, Finland.

## Publications

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### • Refereed Journal Papers:

- [PARVIN SAFARI](#) & SAEED SALEHI, [Kripke Semantics for Fuzzy Logics](#), in *Soft Computing*, to appear (2016) 6 pages.
- SAEED SALEHI & [PAYAM SERAJI](#), [Gödel-Rosser's Incompleteness Theorem, generalized and optimized for definable theories](#), in *Journal of Logic and Computation*, to appear (2016) 7 pages.
- [AHMAD KARIMI](#) & SAEED SALEHI, [Diagonal Arguments and Fixed Points](#), in *The Bulletin of the Iranian Mathematical Society*, to appear (2016) 15 pages.
- SAEED SALEHI, [Gödel's Incompleteness Phenomenon—Computationally](#), in *Philosophia Scientiæ*, Vol. 18, No. 3 (2014) pages 22–37.
- 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.

### • 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.
- **Submitted Papers and Preprints:**
  - SAEED SALEHI & PAYAM SERAJI, [Constructibility and Rosserizability of the Proofs of Boolos and Chaitin for Gödel’s Incompleteness Theorem](#), *Submitted for Publication*; arXiv:1612.02549 (08.12.2016).
  - KAAVE LAJEVARDI & SAEED SALEHI, [On a Certain Fallacy: probably committed by Gödel](#), *Submitted for Publication*; arXiv:11607.04055 (14.07.2016).
  - SAEED SALEHI, [Theorems of Tarski’s Undefinability and Gödel’s Second Incompleteness—Computationally](#), *Submitted for Publication*; arXiv:1509.00164 (01.09.2015).
  - AHMAD KARIMI & SAEED SALEHI, [Theoremizing Yablo’s Paradox](#), arXiv:1406.0134 (01.06.2014).