

PERSONAL INFORMATION



Irakli Kardava

📍 Ul. Uniwersytetu Poznańskiego 4, 61-614 Poznań, Poland

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🌐 <https://irakar.faculty.wmi.amu.edu.pl>

Sex Male | **Date of birth** 01/11/1986 | **Nationality** Georgian | **Relationship status** Married, one daughter, one son.

WORK EXPERIENCE

- | | |
|------------|--|
| Since 2022 | Assistant Professor
Faculty of Mathematics and Computer Science of the Adam Mickiewicz University in Poznań, ul. Uniwersytetu Poznańskiego 4, 61-614 Poznań, Poland. |
| 2021-2022 | Senior Lecturer
Faculty of Mathematics and Computer Science of the Adam Mickiewicz University in Poznań, ul. Uniwersytetu Poznańskiego 4, 61-614 Poznań, Poland. |
| 2021 | Invited Lecturer
European University Viadrina, project: "Master of Digital Entrepreneurship", Europa-Universität Viadrina - Große Schärnstrasse 59, 15230 Frankfurt (Oder) Germany |
| 2020-2021 | Invited Lecturer
Faculty of Mathematics and Computer Science of the Adam Mickiewicz University in Poznań, ul. Uniwersytetu Poznańskiego 4, 61-614 Poznań, Poland.
- Conducting Lectures in English. |
| 2018-2022 | Assistant Professor
Sokhumi State University, Politkovskaia 61, Tbilisi, 0186, Georgia.
Department of Computer Science |
| 2017-2018 | Invited Associate Professor
Sokhumi State University, Politkovskaia 61, Tbilisi, 0186, Georgia.
Department of Computer Science |
| Since 2017 | Scientific Research Laboratory of Computer Innovation and Communication Technology
Sokhumi State University, Politkovskaia 61, Tbilisi, 0186, Georgia.
www.sou.edu.ge |
| 2016-2017 | Invited Assistant Professor
Sokhumi State University, Politkovskaia 61, Tbilisi, 0186, Georgia.
Department of Computer Science |
| Since 2016 | Informatics Research Institute
Sokhumi State University, Politkovskaia 61, Tbilisi, 0186, Georgia.
www.sou.edu.ge |
| 2015-2016 | Researcher and Programmer
Adam Mickiewicz University in Poznan, NanoBioMedicalCentre, ul. Umultowska |

85, PL 61614 Poznań, Poland. www.cnbm.amu.edu.pl

- Researching and creating software

2012-2019 **Lecturer of Programming**

Sokhumi State University, Politkovskaia 61, Tbilisi, 0186, Georgia.

www.sou.edu.ge

▪ Lectures to teach programming

2010-2011 **Researcher and Programmer**

Ilia Vekua Institute of Applied Mathematics of IvaneJavakhishvili Tbilisi State University, University Street, 0186, Tbilisi, Georgia. www.viam.science.tsu.ge

▪ Researching and creating software

EDUCATION AND TRAINING

2022 **PhD in Computer Science (Nostrification)**

Faculty of Mathematics and Computer Science of the Adam Mickiewicz University in Poznań, ul. Uniwersytetu Poznańskiego 4, 61-614 Poznań, Poland.

Since 19.12.2016 **PhD in Computer Science**

Sokhumi State University, Politkovskaia 61, Tbilisi, 0186, Georgia.

www.sou.edu.ge

2013-2016 **PhD student in Computer Sciences**

Sokhumi State University, Politkovskaia 61, Tbilisi, 0186, Georgia.

www.sou.edu.ge

2015-2016 **PhD Student in Computer Science**

Adam Mickiewicz University in Poznan, NanoBioMedical Centre, ul. Umultowska 85, PL 61614 Poznań, Poland. www.cnbm.amu.edu.pl

2010-2012 **Master of Computer Sciences**

Sokhumi State University, Politkovskaia 9, Tbilisi, 0186, Georgia. www.sou.edu.ge

2005-2009 **Bachelor of Computer Sciences**

Sokhumi State University, Politkovskaia 9, Tbilisi, 0186, Georgia. www.sou.edu.ge

2002-2006 **Engineer – Programmer**

Politechnical College of Tbilisi

Chkheidze 8, 0102, Tbilisi, Georgia

2013, September-October **Listener**

Ninth International Tbilisi Summer School in Logic, Language and Computation

Addr.: Chavchavdze Ave. 1, 0179, Tbilisi, Georgia

2011, September

Listener

Seventh International Tbilisi Summer School in Logic, Language and Computation
 Addr.: Chavchavdze Ave. 1, 0179, Tbilisi, Georgia

ADDITIONAL INFORMATION

Publications
 Projects
 Scholarship
 Conferences
 Research Interests
 Memberships

Publications:

1. Zygmunt Vetulani, Patrick Paroubek, **Irakli Kardava** (edit.) - *Human Language Technology as a Challenge for Computer Science and Linguistics – 2025*. - Adam Mickiewicz University Press. ISBN: 978-83-232-4541-4 (PDF) DOI: 10.14746/amup.9788323245414 – Poland, 2025.
2. Kvaratskhelia, Tamta, and **Irakli Kardava** - *The Precautionary Alignment Framework (PAF): Navigating Dual-Use AI, Geopolitical Risk, and the Enforcement of Procedural Consensus*. - In Human Language Technology as a Challenge for Computer Science and Linguistics – 2025, edited by Zygmunt Vetulani, Patrick Paroubek, and Irakli Kardava. Wydawnictwo Naukowe Uniwersytetu im. Adama Mickiewicza. <https://doi.org/10.14746/amup.9788323245414.8>. 2025.
3. Irakli Kardava – *A Morphology-Driven Approach to NLP for a Low-Resource, Highly Complex Language*. In Vietnam Journal of Computer Science, Vol. 13, No. 1, pp. 103–121. World Scientific Publishing, 2026. <https://doi.org/10.1142/S2196888825400056>
4. Irakli Kardava - *Automated Root Identification and Pattern Detection for Agglutinative Language Processing: Enhancing Machine Learning Models for Complex Morphological Structures*. In 2024 8th International Conference on Natural Language Processing and Information Retrieval (NLPPIR 2024), December 13–15, 2024, Okayama, Japan. ACM, New York, NY, USA, 5 pages. <https://doi.org/10.1145/3711542.3711547> - 2025.
5. I. Kardava - *Optimizations of Some Well-Known NLP Algorithms* - Proc. 10th Language & Technology Conference: Human Language Technologies as a Challenge for Computer Science and Linguistics April 21-23, 2023, Poznań, Poland. Wydawnictwo Naukowe UAM. DOI: 10.14746/amup.9788323241775
6. I. Kardava, E. Esiava - *Natural Language Processing in the State Decentralized Systems of Georgia* – GESJ, Computer Sciences and Telecommunications – ISSN 1512-1232. 2022
7. Kardava, I., Gulua, N., Antidze, J., Toklikishvili, B., Kvaratskhelia, T. (2022). Computer Application of Georgian Words. In: Vetulani, Z., Paroubek, P., Kubis, M. (eds) Human Language Technology. Challenges for Computer Science and Linguistics. LTC 2019. Lecture Notes in Computer Science(), vol 13212. Springer, Cham. https://doi.org/10.1007/978-3-031-05328-3_7 - 2022
8. Irakli Kardava, Nana Gulua, Beka Toklikishvili, Nugzar Meshveliani, Tamta Kvaratskhelia and Zygmunt Vetulani - *Individual Management of Mysql Server Data Protection and Time Intervals between Characters During the Authentication Process* - Proceedings of the World Congress on Engineering 2021 WCE 2021, -

- ISBN: 978-988-14049-2-3 ISSN: 2078-0958 (Print); ISSN: 2078-0966 (Online) - July 7-9, 2021, London, U.K.
9. Irakli Kardava, Nana Gulua, Jemal Antidze and Beka Toklikishvili - *Morphological Synthesis and Analysis of Georgian Words* – Proc. 9th Language & Technology Conference: Human Language Technologies as a Challenge for Computer Science and Linguistics May 17-19, 2019, Poznań, Poland.
 10. Irakli Kardava, Nana Gulua, Beka Toklikishvili and Jemal Antidze - *Training Process Automation for Computer Vision* - Proceedings of the World Congress on Engineering 2018 Vol I WCE 2018, July 4-6, 2018, London, U.K
 11. Luis Emerson Coy Romero, BłażejScheibe, **Irakli Kardava**, Stefan Jurga, RyszardAndruszkiewicz, SławomirMilewski, KatarzynaChybczyńska, Krzysztof Tadyszak, Ahmet Kertmen - *Spectroscopic and magnetic studies of highly dispersible superparamagnetic silica coated magnetite nanoparticles* - Journal of Magnetism and Magnetic Materials - Volume 433, Available online 14 March 2017.<http://dx.doi.org/10.1016/j.jmmm.2017.03.025>
 12. Irakli Kardava, Krzysztof Tadyszak, Nana Gulua, Stefan Jurga - *The software for automatic creation of the formal grammars used by speech recognition, computer vision, editable text conversion systems, and some new functions* - Proc. SPIE 10225, Eighth International Conference on Graphic and Image Processing (ICGIP 2016, Tokyo, Japan), 102251Q (February 8, 2017); doi:10.1117/12.2267687 ()
 13. Irakli Kardava - *Georgian Speechrecognizer in Famous Searching Systems and Management of Software Package by Voice Commands in Georgian Language (Advanced Version)*, Third International Conference on Advances in Computing, Electronics and Communication - Conference Proceedings, pages 4, October 2015, Zürich, Switzerland;
 14. Irakli Kardava - *Some Steps to Dialogue Between Human Brain and Artificial Intelligence*, Monograph, 64 pages. October 2015, ISBN-13: 978-3-659-76480-6, Lambert Academic Publishing, Copyright © OmniScriptum GmbH & Co. KG, Saarbrücken, Germany;
 15. Irakli Kardava, JemalAntidze and Nana Gulua - *Solving the Problem of the Accents for Speech Recognition Systems*, International Journal of Signal Processing Systems, pages 235-238. June 2015, USA;
 16. I.Kardava - *Georgian Speechrecognizer in Famous Searching Systems and Management of Software Package by Voice Commands in Georgian Language*, 2015 Tbilisi International Conference on Computer Science and Applied Mathematics - Conference Proceedings, pages 40-43. 2015, Georgia;
 17. J.Antidze, N.Gulua, **I.Kardava** - *The Software for Composition of Some Natural Languages' Words*, Lecture Notes on Software Engineering, vol.1, #3, pages 295-297. <http://www.lnse.org/show-29-75-1.html> August 2013, Singapore;
 18. J.Antidze, N.Gulua, I.Kardava - *The Software for Composing Georgian Words*, Transactions of II International Conference Dedicated to the 90th Anniversary of Georgian Technical University,367-371 pages. Georgia, 2012;

Projects:

1. Project Name: Natural (chemical technological) knowledge in Georgian and Oriental manuscripts preserved in the antiquities of Georgia; Project ID: FR-21-

- 620; Sponsor organisation: Rustaveli National Scientific Foundation; Role in Project: key personnel; Years: 2022-2025 Tbilisi, Georgia. Budget: 240000 GEL.
2. Project Name: Engineering studies in IT - an internationalized program of studies conducted by the Faculty of Mathematics and Computer Science of the Adam Mickiewicz University in Poznań; Project Number: POWR.03.03.00-00-M149 / 16-00; European Union - Ministry of Investment and Development. Role in the project: Teacher. Years: 2020-2021, Poland.
3. Project Name: Step-by-step to Knowledge; Sponsor organisation: Government of Turkey; Role in Project: Assistant Professor - Lecturer; Years: 2014; Ordu, Turkey.
4. Project Name: A Pattern Calculus with Hedge Variables; Sponsor organisation: Rustaveli National Scientific Foundation; Project ID: FR/611/4-102/12; Role in Project: Key personnel; Years: 2013-2015 Tbilisi, Georgia. Budget: 100000 GEL.
5. Rustaveli National Scientific Foundation - CLP (HC): Fundamentals, Implementation, Applications. Project ID:FR/325/4-120/14; Role in Project: Key personnel; Years: 2015-2017 Tbilisi, Georgia; Budget: 100000 GEL.

Scholarship:

- European Union - *Erasmus Mundus - Eminence II* –PhD Student-Researcher - Programmer - 2015-2016, Poznan, Poland;

Conferences:

1. 11th Language & Technology Conference: Human Language Technologies as a Challenge for Computer Science, Linguistics and Low Resourced Languages - *The Precautionary Alignment Framework (PAF): Navigating Dual-Use AI, Geopolitical Risk, and the Enforcement of Procedural Consensus* - Poznan, Poland. 2025
2. 2024 8th International Conference on Natural Language Processing and Information Retrieval - *Automated Root Identification and Pattern Detection for Agglutinative Language Processing* - Okayama, Japan. 2024.
3. Conference: 10th Language & Technology Conference: Human Language Technologies as a Challenge for Computer Science and Linguistics April 21-23, 2023, Poznań, Poland - *Optimizations of Some Well-Known NLP Algorithms*. Poznań, Poland, 2023.
4. World Congress on Engineering 2021 - *Individual Management of Mysql Server Data Protection and Time Intervals between Characters During the Authentication Process* - London, U.K., 2021;
5. Human Language Technologies as a Challenge for Computer Science and Linguistics - *Morphological Synthesis and Analysis of Georgian Words* - Poznan, Poland, 2019;
6. World Congress on Engineering 2018 - *Training Process Automation for Computer Vision* - London, U.K., 2018;
7. 2016 8th International Conference on Graphic and Image Processing (ICGIP 2016), *The Software for Automatic Creation of the Formal Grammars Using by Speech Recognition, Computer Vision, Editable Text Conversion Systems and Some New Functions*, Tokyo, Japan - 2016;

8. Third International Conference on Advances in Computing, Electronics and Communication - ACEC 2015, *Georgian Speechrecognizer in Famous Searching Systems and Management of Software Package by Voice Commands in Georgian Language (Advanced Version)*, Zürich, Switzerland - 2015;
9. Humboldt Kolleg Tbilisi, Georgia July 4-6, 2015 - Science in Georgia: Perspectives of development and the role of Humboldt Foundation, *Georgian Speechrecognizer in Famous Searching Systems and Management of Software Package by Voice Commands in Georgian Language*, Tbilisi, Georgia - 2015;
10. 2015 5th International Conference on Computer Communication and Management (ICCCM 2015), *Solving the Problem of the Accents for Speech Recognition Systems*, Rome, Italy - 2015;
11. 2015 Tbilisi International Conference on Computer Science and Applied Mathematics, *Georgian Speechrecognizer in Famous Searching Systems and Management of Software Package by Voice Commands in Georgian Language*, Tbilisi, Georgia - 2015;
12. 2013 2nd International Conference on Software and Computer Applications, *The Software for Composition of Some Natural Languages' Words*, Paris, France - 2013;
13. Second International Conference "Modern Problems in Applied Mathematics", *Morphological Analysis of Georgian Words Using Formal Grammar*, Ilia Vekua Institute of Applied Mathematics (VIAM) I. Javakhishvili Tbilisi State University (TSU) - 2013;
14. IV International Conference of the Georgian Mathematical Union, *Morphological Synthesis of Georgian Words Using Formal Grammar*, Sh. Rustaveli State University, Batumi, Georgia - 2012;
15. Scientific Conference of I. Vekua Institute of Applied Mathematics, *Automatic generation of word forms in Georgian*, Ilia Vekua Institute of Applied Mathematics (VIAM) of Ivane Javakhishvili Tbilisi State University (TSU) - 2013;
16. Scientific Conference of I. Vekua Institute of Applied Mathematics, *Morfological Synthesis of Georgian Words*, I. Vekua Institute of Applied Mathematics (VIAM) I. Javakhishvili Tbilisi State University (TSU) - 2012;
17. The Academy of Sciences of Abkhazia, Mathematicians Conference Dedicated to the memory of Professor Absava, *A Special Software for Teaching Georgian Language and Georgian Texts Computer Processing*, St. Andrew the first called Georgian university of the Patriarchate of Georgia - 2012;
18. XXV enlarged session of I. Vekua Institute of Applied Mathematics' seminar, *Computer Composition of the Georgian word-form by a stem and morphological categories*, Ilia Vekua Institute of Applied Mathematics (VIAM) of Ivane Javakhishvili Tbilisi State University (TSU) - 2011;
19. The sixth international symposium on Kartvelian studies, *Morphological Synthesis of Georgian Words*, I. Javakhishvili Tbilisi State University (TSU) - 2011;
20. Scientific Conference of I. Vekua Institute of Applied Mathematics, *Computer Composition of all Georgian Word-Forms for Given Lexical Unit*, I. Vekua Institute of Applied Mathematics (VIAM) I. Javakhishvili Tbilisi State University (TSU) - 2011;
21. II International Conference Dedicated to the 70th Anniversary of the Georgian National Academy of Sciences & the 120th Birthday of its First President Academician

- Nikoloz (Niko) Muskhelishvili, *Computer Composition of All Georgian Word-Forms for Given Lexical unit*, Sh. Rustaveli State University, Batumi - 2011;
22. Scientific Conference of Sokhumi State University, *Automation of Teaching Using "Moodle" System*, Sokhumi State University, Tbilisi, Georgia - 2011;
23. Scientific Conference of Sokhumi State University, *Building Georgian Words Using the Computer*, Sokhumi State University, Tbilisi, Georgia - 2011;

Chair:

- 11th Language & Technology Conference: Human Language Technologies as a Challenge for Computer Science, Linguistics and Low Resourced Languages, 2025, Poznan, Poland.

Editor:

- Zygmunt Vetulani, Patrick Paroubek, **Irakli Kardava** (edit.) - *Human Language Technology as a Challenge for Computer Science and Linguistics – 2025*. - Adam Mickiewicz University Press. ISBN: 978-83-232-4541-4 (PDF) DOI: 10.14746/amup.9788323245414 – Poland, 2025.

Research interests:

Artificial Intelligence, Computer Linguistics, Formal Languages and Grammars, Machine Learning, LLMs.

Memberships:

- Former member of the International Association of Computer Science and Information Technology (IACSIT, 9 Jurong Town Hall Road iHUB, Singapore 609431, www.iacsit.org) Since 2014.
- Former member of the Editorial Board of the SCIREA Journal of Computer (<http://scirea.org/journal/EditorialBoard?JournalID=52000#3003>) since 2017.
- Former member of IAENG International Association of Engineers. Since 2018. info@iaeng.org
- Former member of Computational Linguistics Research Group. UAM, faculty of Mathematics and Computer Science, department of Artificial Intelligence. Since 2020. <https://ai.wmi.amu.edu.pl/groups/cl/>
- Member of the LTC'2023 Organizing Committee, Poznań, Poland. www.ltc.amu.edu.pl
- Member of the LTC'2023 Program Committee, Poznań, Poland. www.ltc.amu.edu.pl
- Member of The 7th LRL Workshop: Filling Language Technology Gaps for Less-Resourced-Languages (LRL 2023) Program Committee, Poznań, Poland. www.ltc.amu.edu.pl/lrl23

PERSONAL SKILLS

Languages

- English
- Polish (B1)
- Russian
- Georgian (native)

Other skills

- Sound Director
- Lighting Director
- Director of Live Broadcasting