



## Natela Archvadze

### Associate Professor Computer Sciences

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### Basic Education

1973-1978

Ivane Javaxishvili Tbilisi State University, Faculty of Cybernetics and Applied Mathematics  
**Degree** – Applied Mathematics

1979-1982

Georgia Academy of Science, Post Graduate Course, PhD  
**Scientific Degree** – Candidate of physical of mathematical Sciences (Information Technology)

21.06.2004

I.Javaxishvili Tbilisi State University, Tbilisi  
– The scientific-pedagogical title of the Docent by specializacion of 05.13.11 Mathematical Support and Software for computers, Systems, Complex and Networks.

### Professional Experience

2009 up today

Ivane Javaxishvili Tbilisi State University, Faculty of Exact and Natural Sciences, department of Computer Sciences, Associated Professor.

2006 – 2008

Niko Musxelishvili Institute of Computational Mathematics, Director  
Georgian Academy of Science, Niko Musxelishvili Institute of Computational Mathematics, Programming Department, Scientific Researcher

1982 -2006

1978 – 1982

Georgian Academy of Science, Niko Musxelishvili Computer Center, Programming Department, Programmer

### Computer Programms

MS Windows, MS Office – MS Word, MS Excel, PowerPoint, Outlook Express, Internet Explorer; Databases – MS Access, Borland Delphi;  
Programming languages: C, C++, Pascal, Basic, Haskell, Lisp, F#.

### Manuals

2008

N.Archvadze, L.Shetsiruli. Programming language LISP. Tbilisi. “Universal”. ISBN 978-9941-12-258-3. 143 p, 2008. (ge)

2009

I.Khutsishvili, T.Davitashvili, N.Archvadze, A.Chitaladze, K.Gelashvili. Programming language C. Tbilisi Staty University. 2009. pp.219. ISBN 978-9941-13-104-2.(ge)

2009

N.Archvadze, L.Shetsiruli. Programming language C++. Fundamentals of programming. Shota Rustaveli State University. Batumi, 2009, 129 pp. ISBN 978-9991-409-41-7. (ge)

## Selected Publications

№	Authors	Publication title	Proceedings	Year
1	<b>Natela Archvadze,</b> Merab Pkhovelishvili, Lia Shetsiruli, Otar Ioseliani	The algorithm of parallel programming using “small delay”.	SCCTW'2016 South-Caucasus Computing and Technology Workshop <a href="https://indico.cern.ch/event/572800/contributions/2319259/attachments/1347569/2032637/WOR1.pdf">https://indico.cern.ch/event/572800/contributions/2319259/attachments/1347569/2032637/WOR1.pdf</a>	2016
2	<b>N.Archvadze</b>	Article. Eprints TSU	The Automatic Synthesis of the Functional Programming Language Haskell's Programs <a href="http://eprints.tsu.ge/238/1/N.Archvadze%20Eprints.pdf">http://eprints.tsu.ge/238/1/N.Archvadze%20Eprints.pdf</a>	2016
3	<b>N.Archvadze,</b> M.Pkhovelishvili	Several Issues of Parallel Programs Verification for Functional Languages through Kripke Structure.	The International Scientific Conference "Information and Computer Technologies, Modelling, Control". Proceedings ISBN 978-991-20-575-0. pp.545-547.	2015
4	<b>N.Archvadze,</b> M.Pkhovelishvili, L.Shetsiruli	Questions of Database Interfaces in the Georgian language	<a href="https://sites.google.com/site/prikladnaalingvistika2014/predvaritelnaa-programma">https://sites.google.com/site/prikladnaalingvistika2014/predvaritelnaa-programma</a> <a href="https://sites.google.com/site/prikladnaalingvistika2014/annotacii-dokladov-2014">https://sites.google.com/site/prikladnaalingvistika2014/annotacii-dokladov-2014</a>	2014
5	Natela Archvadze, Otari Ioseliani, Lia Shetsiruli, Merab Pkhovelishvili	THE AUTOMATIC SYNTHESIS OF HASKELL FUNCTIONS.	Electronic Scientific Journal: "Computer Sciences and Telecommunications" <a href="http://gesj.internet-academy.org.ge/en/title_en.php?b_sec=&amp;section_l=c_omp">http://gesj.internet-academy.org.ge/en/title_en.php?b_sec=&amp;section_l=c_omp</a> pp.20-26	2014
6	Natela Archvadze, Merab Pkhovelishvili, Otari Ioseliani,Lia Shetsiruli	Function Templates for the Synthesis of Functional Programs	International Journal of Computer and Information Technology (ISSN: 2279 – 0764) Volume 03 – Issue 06, November 2014 <a href="http://www.ijcit.com/Vol3Issue6.php">http://www.ijcit.com/Vol3Issue6.php</a> Global Impact Factor: 0.687 <a href="http://www.ijcit.com/archives/volume3/issue6/Paper030610.pdf">http://www.ijcit.com/archives/volume3/issue6/Paper030610.pdf</a> pp.1241-1244	2014
7	L.Shetsiruli, <b>N.Archvadze,</b> M.Pkhovelishvili	Model Checking for Functional Programs	Международная научно-практическая интернет-конференция «Современные тенденции развития математики и её прикладные аспекты». 17 мая 2012 года, Донецк, Украина. <a href="http://elementy.ru/events/431054">http://elementy.ru/events/431054</a>	2013
8	<b>N.Archvadze,</b> M.Pkhovelishvili	POSSIBILITY OF FUNCTIONAL PROGRAMS VERIFICATION THROUGH APPLICATION OF MODEL CHECKING	Electronic Scientific Journal: “Computer Sciences and Telecommunications”. <a href="http://gesj.internet-academy.org.ge/en/title_en.php?b_sec=&amp;section_l=c_omp">http://gesj.internet-academy.org.ge/en/title_en.php?b_sec=&amp;section_l=c_omp</a> ISSN 1512-1232. pp. 51-58.	2013
9	<b>N. Archvadze,</b> M.Pkhovelishvili	Reforming the Trees – C# and F# Comparison.	Proceedings of the IV International Conference on “Problems of Cybernetics and Informatics" (PCI2012). pp .93-96. <a href="http://www.pci2012.science.az/1/00.pdf">www.pci2012.science.az/1/00.pdf</a>	2012

10	<b>N.Archvadze,</b> M.Pkhovelishvili, L.Shetsiruli	Proceedings of the 5th International Conference on Application of Information and Communication Technologies	Universal attitude to the program verification. IEEE Catalog number CFP 1156H-ART. ISBN 978-1-61284-832-7. pp. 652-656. <a href="http://aict.info/2011/?page=488800">http://aict.info/2011/?page=488800</a>	2011
11	<b>Archvadze N.N.,</b> Pkhovelishvili M.G., Shetsiruli L.D.	Proceedings of the International Conference on System Analysis and Information Technologies	Several issues of programs synthesis. ISSN 2075-4086. pp. 403. <a href="http://sait.kpi.ua/books/sait2011.ebook.pdf/view">http://sait.kpi.ua/books/sait2011.ebook.pdf/view</a>	2011
12	<b>N.Archvadze,</b> M.Pkhovelishvili, L.Shetsiruli	Proceedings of the Eleventh International Conference Pattern Recognition and Information Processing (PRIP'2011).	The complexity of program synthesis from examples. ISBN 978-985-448-772-7. pp. 275-279. <a href="http://lsi.bas-net.by/conferences/prip2011/">http://lsi.bas-net.by/conferences/prip2011/</a>	2011
13	<b>N.Archvadze,</b> M. Nizharadze	The International Scientific Conference "Information and Computer Technologies, Modelling, Control". Proceedings	Typical Template Verification for List Editing In Haskell Language. pp 170–172. ISSN 1512-3979.	2011
14	<b>Арчвадзе Н.Н.,</b> Пхovelishvili М.Г., Шецирuли Л.Д.	Построение обобщенных рекурсивных форм для функциональных языков и их применение в задачах верификации программ.	Electronic Scientific Journal: "Computer Sciences and Telecommunications" No. 3(26), pp. 133-141. ISSN 1512-1232. <a href="http://gesj.internet-academy.org.ge">http://gesj.internet-academy.org.ge</a>	2010
15	<b>N. Archvadze,</b> G.Silagadze, L.Shetsiruli, M. Pkhovelishvili.	Proceedings of the Third International Conference "Problems of Cybernetics and Informatics".	Several issues of program verification. ISBN 978-9952-453-15-8. Volume I. pp.71-74 <a href="http://www.pci2010.science.az/1/17.pdf">http://www.pci2010.science.az/1/17.pdf</a>	2010
17	T.Gachechiladze, H.Meladze, G.Tsertsvadze, <b>N.Archvadze,</b> T.Davitashvili	Proceedings of the Conference "Knowledge - Ontology - Theory" (KONT-09)	About a theory of canonically conjugate fuzzy subsets. pp. 65-70 <a href="http://math.nsc.ru/conference/zont09/reports.html">http://math.nsc.ru/conference/zont09/reports.html</a>	2009
18	<b>N. Archvadze,</b> M. Pkhovelishvili, L. Shetsiruli, M. Nizharadze	Program Recursive Forms and Programming Automatization for Functional Languages.	WSEAS TRANSACTIONS on COMPUTERS. Volume 8, pp. 1256-1265, <a href="http://www.wseas.us/e-library/transactions/computers/2009/29-531.pdf">http://www.wseas.us/e-library/transactions/computers/2009/29-531.pdf</a>	2009
19	<b>Archvadze N.,</b> Pkhovelishvili M., Shetsiruli L., Nizharadze.	Proceedings of the International Scientific Conference eRa-4 (The Conference for the contribution of Information Technology)	Representation of trees by means of lists in functional programming languages and modern search realisations. <a href="http://era.teipir.gr/index.php?option=com_content&amp;task=blogsection&amp;id=21&amp;Itemid=34">http://era.teipir.gr/index.php?option=com_content&amp;task=blogsection&amp;id=21&amp;Itemid=34</a>	2009
20	<b>Archvadze N.,</b> Pkhovelishvili M., Shetsiruli L .	Problems of Verification of Functional Programs.	Bulletin of the Georgian Academy Sciences.vol.3. no.3, pp 57-60. <a href="http://www.science.org.ge/moambe/3-3/Archvadze.pdf">http://www.science.org.ge/moambe/3-3/Archvadze.pdf</a>	2009
21	<b>N.Archvadze,</b> M.Pkhovelishvili	Article	The Imperative and Functional Paradigms Bulletin of St.Andrew First-Called Georgian University of the Patriarchy of Georgia pp. 127-130 ISSN 1987-734X.	2009
22	<b>Archvadze N.,</b> Pkhovelishvili M., Shetsiruli L., Nizharadze M.	Computing and Computational Intelligence. Proceeding of the 3nd European Computing Conference	A recursion forms and their verification by using the undictive methods. pp.357-361. <a href="http://www.wseas.org/conferences/2009/tbilisi/Program.pdf">http://www.wseas.org/conferences/2009/tbilisi/Program.pdf</a>	2009