

# Yuriy Tymchuk

## Research Assistant

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*I'm a software engineer / computer scientist and a hacker in general, who likes researching new ideas, developing impactful solutions, and teaching. Currently, my primary focus is software maintenance and evolution. I develop tools that assist software engineers to build healthy projects.*

### Achievements

**QualityAssistant:** My software-quality tool with a live feedback is integrated into the latest version of Pharo IDE. Expected usage: 30 commercial companies, 20 universities (for teaching).

**Live 3D visualizations video** [[youtu.be/CuimMwuZiGA](https://youtu.be/CuimMwuZiGA)]: was used in a couple of dozen presentations for demonstrating the idea of live programming.

### Employment

**Universität Bern** as *Research Assistant* Jan 2016 – Sep 2017 (expected)  
Research on software quality and evolutionary monitoring. Maintenance of the group's git server. I've invented a 3D visualization that allows detection of defects in software quality evolution. Teaching.  
`Pharo` `Moose` `Roassal` `Python` `Ruby` `Java` `git`

**Ukrainian Catholic University** as *Lecturer & Strategic Consultant* Jun 2015 – ongoing  
Planning the first year for the bachelor computer science program and a long term strategy for the Faculty of Applied Sciences. Teaching advanced programming for the data science master students.

**Università della Svizzera Italiana** as *Doctoral Assistant* Oct 2013 – Dec 2015  
Modeling of developer collaboration, based on the data mined from software repository. Research on code quality and code review, development of ViDI code review tool and QualityAssistant static analyzer. Teaching.  
`Pharo` `Moose` `Roassal` `Gephi` `Python` `Racket` `MongoDB`

**Innocode** as *Software engineer* Apr 2013 – Sep 2013  
Pre-project research concerning a leanbusiness.no web-application. Development of Relink project in Ruby on Rails. Increased performance of the team by introducing git-flow strategy.  
`Ruby on Rails` `JavaScript` `HTML/CSS` `git`

**RMoD, Inria** as *Intern* Jan 2013 – Apr 2013  
Research on AST metamodels. Development of FAST: a generic metamodel and symbol resolution algorithm.  
`Pharo` `Moose` `PetitParser`

**InterLogic** as *Software engineer* Aug 2012 – Jan 2013  
Development of a Java3D applet for ventilation system configuration with a backend in PHP and MySQL. I've developed a module in Scala which decreased the complexity by an order of magnitude in comparison with Java implementation.  
`Java` `Java3D` `Scala` `PHP` `MySQL`

<b>Unikernel Team</b> ( <i>freelance</i> ) as <i>Founder/Leader</i>	<i>Mar 2010 – Aug 2012</i>
Different websites made from scratch. Usually online shops, sometimes web apps with rich frontend.	
<code>HTML/CSS</code> <code>PHP</code> <code>CakePHP</code> <code>JavaScript</code> <code>Raphaël JS</code> <code>MySQL</code>	
<b>UARNet ISP</b> as <i>Network Administrator</i>	<i>Feb 2009 – Jul 2012</i>
On call assistance, network administration, minor web development.	
<code>FreeBSD</code> <code>Linux</code> <code>iptables</code> <code>Oracle RDBMS</code> <code>PHP</code>	

## Education

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<b>Ph.D. in Informatics</b> ( <i>ongoing</i> ) @ <i>University of Lugano &amp; University of Bern</i>	<i>2013 – 2017</i>
Thesis topic: "Treating Code Quality as a First Class Entity"	
<b>Master of Science</b> @ <i>Ivan Franko National University of Lviv</i>	<i>2012 – 2013</i>
Specialization in Informatics	
<b>Bachelor of Science</b> @ <i>Ivan Franko National University of Lviv</i>	<i>2008 – 2012</i>
Specialization in Informatics	
<b>Highschool diploma</b> @ <i>Lviv Physics and Mathematics Lyceum</i>	<i>2006 – 2008</i>
Specialization in Physics and Mathematics	
<b>Member of MASU</b> @ <i>Minor Academy of Sciences of Ukraine</i>	<i>2006 – 2008</i>
"Whimsical Bride" - the graduation research project about statistics theory	

## Additional Training

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<b>Design Science &amp; Design Thinking</b> @ <i>CUSO Winter School</i>	<i>2017</i>
<b>Hands-on Data Analysis with R</b> @ <i>CUSO Seminar</i>	<i>2016</i>
<b>Taming Big Data</b> @ <i>CUSO Winter School</i>	<i>2016</i>
<b>Search-Based Software Engineering</b> @ <i>International Summer School on Software Eng.</i>	<i>2014</i>

## Latest Tools, Frameworks, and Libraries

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⊕ Most of my projects are available at my GitHub account [ <a href="https://github.com/Uko">github.com/Uko</a> ]
<code>GitHubcello</code> <code>DeprecationAssistant</code> <code>MatchTool</code> <code>QualityAssistant</code> <code>Renraku</code> <code>ViDI</code> <code>Smalldromeda</code>

## Publications

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⊕ Besides academic publishing I have a coding blog: [ <a href="http://code.yuriy.tymchuk.uk/conferences">code.yuriy.tymchuk.uk/conferences</a> ]
<b>CuboidMatrix: Exploring Dynamic Structural Connections in Software Components using Space-Time Cube</b> , <i>T. Schneider, Y. Tymchuk, R. Salgado, and A. Bergel</i> , In Proceedings of VISSOFT'16 (4th IEEE Working Conference on Software Visualization), IEEE, 2016.
<b>Walls, Pillars and Beams: A 3D Decomposition of Quality Anomalies</b> , <i>Y. Tymchuk, L. Merino, M. Ghafari, and O. Nierstrasz</i> , In Proceedings of VISSOFT'16 (4th IEEE Working Conference on Software Visualization), pp. 126–135, IEEE, 2016.
<b>Code Review: Veni, ViDI, Vici</b> , <i>Y. Tymchuk, A. Mocci, and M. Lanza</i> , In Proceedings of SANER'15 (22nd International Conference on Software Analysis, Evolution, and Reengineering), pp. 151–160, IEEE, 2015.

**Collaboration in Open-source Projects: Myth or Reality?**, Y. Tymchuk, A. Mocci, and M. Lanza, In Proceedings of MSR'14 (11th Working Conference on Mining Software Repositories), pp. 304–307, ACM, 2014.

formal demonstrations.....

**ViDI: The Visual Design Inspector**, Y. Tymchuk, A. Mocci, and M. Lanza, In Proceedings of ICSE'15 (37th IEEE/ACM International Conference on Software Engineering), pp. 653–656, IEEE Press, 2015.

doctoral symposium.....

**Treating Software Quality as a First-Class Entity**, Y. Tymchuk, In Proceedings of ICSME'15 (31st International Conference on Software Maintenance and Evolution), pp. 594–597, IEEE, 2015.

workshops.....

**When QualityAssistant Meets Pharo: Enforced Code Critiques Motivate More Valuable Rules**, Y. Tymchuk, M. Ghafari, and O. Nierstrasz, In Proceedings of IWST'16 (International Workshop on Smalltalk Technologies), 2016.

**What if Clippy Would Criticize Your Code?**, Y. Tymchuk, In Proceedings of BENEVOL'15 (14th edition of the Belgian-Netherlands software evoLution seminar), 2015.

**Generic Name Resolution with Metamodels**, Y. Tymchuk, B. Arezki, A. Etien, N. Anquetil, and S. Ducasse, In Proceedings of BENEVOL'13 (12th edition of the Belgian-Netherlands software evoLution seminar), 2013.

theses.....

**Extending FAMIX metamodel to generate ASTs for Java and Smalltalk applications** (Mater's thesis), Y. Tymchuk, Ivan Franko National University of Lviv, Ukraine, 2013.

## Teaching

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**Ukrainian Catholic University** as *Lecturer*

Advanced Programming

*Fall 2016*

**Universität Bern** as *Teaching Assistant*

Compiler Construction

*Spring 2017*

Software Modeling and Analysis

*Fall 2016*

**Università della Svizzera Italiana** as *Teaching Assistant*

Bachelors Project

*Spring 2015*

Programming Fundamentals I

*Fall 2014, Fall 2015*

Software Atelier IV

*Spring 2014*

## Service

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**[IWST] International Workshop on Smalltalk Technologies**

Program Committee

*2017*

**[VISSOFT] IEEE Working Conference on Software Visualization**

Program Committee - NIER and Tool Demo Track

*2017*

Program Committee - NIER and Tool Demo Track

*2016*

Program Committee - Artifact Track

*2015*

## [GSoC] Google Summer of Code

Pharo Consortium Organization Admin and Student's Mentor  
European Smalltalk Users Group Student's Mentor

2017  
2015

## Personal Information

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**Date of Birth:** Aug 11, 1991

**Marital Status:** Married

**Place of Birth:** Lviv, Ukraine

**Nº of children:** 1

**Citizenship:** Ukrainian

## Languages

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**English:** Proficient

**Polish (spoken):** Intermediate

**Ukrainian:** Native Speaker

**Russian (spoken):** Intermediate

**Italian:** Basic

## Hobby

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Hiking picturesque or difficult mountains and reflecting amazing moments of this world with my camera ([https://500px.com/yuriy\\_tymchuk](https://500px.com/yuriy_tymchuk)). Few years ago I was still doing Kyokushinkai karate which allowed me to train my body as hard as I train my mind.

## Remarks for Nerds

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This cv is written in L<sup>A</sup>T<sub>E</sub>X, versioned with git, hosted on GitHub and built with Travis CI