

Tudor Gîrba

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Education

- 2002 – 2005 **PhD in Computer Science at the University of Berne, Switzerland**
Title: Modeling History to Understand Software Evolution
Thesis received summa cum laude.
- 1996 – 2001 **Dipl. Eng. in Computer Science at the Politehnica University of Timisoara, Romania**

Work Experience

- 2015 – now **Software environmentalist/Founder at feenk gmbh**
The company offers training, coaching and consulting services to help companies make effective technical decisions and steer large systems. It also offers research and development services for Pharo systems.
<http://feenk.com>
- 2005 – 2015 **Software assessment consultant through netstyle.ch GmbH & Sw-eng. Software Engineering GmbH**
I helped companies manage large systems and data sets through explicit assessment.
<http://humane-assessment.com>
- 2011 – 2015 **Team & Innovation Lead at CompuGroup Medical Schweiz AG, Switzerland**
I got people to think different: from development techniques to product design. I worked with a team of up to 20 developers and with several other departments.
<http://compugroup-medical.ch>
- 2010 **Lecturer on formal methods in computer science at the University of Zürich, Switzerland**
- 2008 **Lecturer on software evolution at the University of Berne, Switzerland**
- 2005 – 2009 **Senior researcher at the University of Berne, Switzerland**
I worked with several dozen of PhD, Master and Bachelor students in the area of software evolution.
<http://scg.unibe.ch>
- 2002 – 2005 **Junior researcher at the University of Berne, Switzerland**
I conducted my PhD research and worked with a handful of students.
<http://scg.unibe.ch>

- 2002 **Co-founder of the LOOSE Research Group, Timisoara, Romania**
The group conducts research in the area of software evolution and maintenance.
<http://loose.upt.ro>
- 2001 – 2002 **Software engineer at S.C. Sava Technologies SRL, Timisoara, Romania**
I acted as coach and introduced various agile techniques in the company.
- 1997 – 2000 **Game programmer and designer at the Piron Group, Timisoara, Romania**

Dahl-Nygaard Junior Prize

- 2014 **Dahl-Nygaard Junior Prize**
This award is one of the most prestigious recognitions one can receive at my age in software engineering. I received the prize for my work on modeling and visualization of evolution and interplay of large numbers of objects. I was the only recipient of the prize that was not a university professor prior to receiving the prize, and I was specifically nominated for my work in bridging the gap between academia and industry.
<http://www.aito.org/Dahl-Nygaard/2014.html>

Other Awards

- 2015 **1st prize at European Smalltalk User Group Technology Innovation Awards**
Andrei Chis, Tudor Gîrba, Juraj Kubelka, Stefan Reichhart, Aleksei Syrel. GTSpotter.
- 2014 **1st prize at European Smalltalk User Group Technology Innovation Awards**
Andrei Chis, Tudor Gîrba, Aleksei Syrel. GTInspector.
- 2014 **Best student paper award at International Conference on Software Language Engineering**
<http://scg.unibe.ch/archive/papers/Chis14b-MoldableDebugger.pdf>
- 2009 **3rd prize at European Smalltalk User Group Technology Innovation Awards**
Philipp Bunge, Tudor Gîrba, Lukas Renggli, Jorge Ressoa, and David Röthlisberger. Scripting Browsers with Glamour
- 2008 **European Conference on Object-oriented Programming (ECOOP) distinguished paper award**
<http://scg.unibe.ch/archive/papers/Lien08bBackInTimeDebugging.pdf>
- 2007 **1st prize at European Smalltalk User Group Technology Innovation Awards**
Mircea Lungu and Michele Lanza and Tudor Gîrba. The Small Project Observatory
- 2006 **2nd prize at European Smalltalk User Group Technology Innovation Awards**
Michael Meyer and Tudor Gîrba. Mondrian: Scripting Visualizations

Skills

Software engineering	software and data assessment, agile development, object-oriented design and analysis, test-driven development, model-centric engineering, reengineering
Others	information visualization, visual languages, effective presentations, demo-driven innovation, semantic meetings, reflective organizations

Selected Engineering and Research Projects

<http://tudorgirba.com/projects>

2003 – now **Lead promoter and developer of the Moose analysis platform**

Moose is an extensive open-source platform for software and data analysis. It is supported by several international research groups and startups, and it is increasingly used in industrial projects. The research and development effort around Moose totals more than 200-man-years.

Its goal is to make crafting of new analysis tools so inexpensive that a new tool can be crafted in less than 15 minutes. Such a tool can be a metric, a query, an interactive visualization, a parser, or even a data browser.

In 2014, I received the Dahl-Nygaard Junior Prize (<http://www.aito.org/Dahl-Nygaard/>) for my work on Moose.

<http://moosetechnology.org>

<http://themoosebook.org>

2009 – now **Author of the humane assessment method**

Humane assessment is a method for making software engineering decisions. It deals with all facets of decision making, from where it fits in the development process, to how to make it practical through specialized tools.

It is made possible by the capabilities of Moose, and it is currently being used in several companies.

<http://humane-assessment.com>

2008 – now **Board member and core contributor to the Pharo programming language**

Pharo is a novel programming environment and language. It is currently supported by a consortium of companies and research groups. The core of the project receives regular contributions from more than 70 people.

<http://pharo.org>

2007 – now **Author of the demo-driven innovation method**

Demo-driven is a simple approach to innovation. It brings together design thinking, idea prototyping and storytelling. I used it repeatedly for working with both researchers and engineers.

<http://demodriven.com>

2011 – now **Founder of the Glamorous Toolkit, a project for reinventing the IDE**

The Glamorous Toolkit denotes the development environment for Pharo including an object inspector, a debugger, a search interface or a code playground. Together they form a novel and moldable IDE that can easily be contextualized to the specifics of a system during development. The project is built by a virtual team of researchers and engineers that I lead.

<http://gt.moosetechnology.org>

Software and Data Assessment Projects

Software assessment refers to the large amount of energy (~50% of their time) developers spend on trying to understand the system they are working on.

<http://humane-assessment.com>

2012 – now **Public courses on Steering Agile Architecture, Humane Assessment and Moose for professionals**

Through these courses I train professionals on how to deal with assessment problems both from a process and from a practical point of view.

<http://www.humane-assessment.com/courses>

2010 – now **Humane assessment coaching**

I coached teams to integrate humane assessment in the development process as a means to control software quality and the integrity of software architecture. This involved the creation and continuous checking of custom rules.

Customers: CompuGroup Medical AG Switzerland, Assurance Mutuelle MMA France, Informatik Leistungserbringer des Eidgenössischen Justiz- und Polizeidepartements (ISC-EJPD) Switzerland, Carl Zeiss Industrielle Messtechnik GmbH Germany, SBB AG

2010 – now **Developing custom analysis solutions**

I developed analysis tools that helped solve contextual problems in various systems such as: analysis of custom configuration systems, of parsing and analysis of systems written in domain specific languages, or visualization of dynamic information from custom log files.

Customers: SBB AG, CompuGroup Medical AG Switzerland, Assurance Mutuelle MMA France, Telecommunication company, Eidgenössischen Institut für Geistiges Eigentum (IGE) Switzerland, Keymile AG Switzerland

2005 – now **Strategic software assessment projects**

In these projects I helped companies make decisions concerning the software systems from their portfolios. Examples of projects: checking the software architecture conformance of a system, supporting design reviews, or leading a project to improve the performance of a critical system.

Customers: SBB AG, CompuGroup Medical AG Switzerland, Bundesamt für Migration Switzerland, Informatik Leistungserbringer des Eidgenössischen Justiz- und Polizeidepartements Switzerland, Bundesamt für Landwirtschaft Switzerland, Siemens AG Switzerland, Harman/Becker Automotive Systems GmbH Germany

Talks & Lectures

<http://tudorgirba.com/teaching>

2007 – 2016 **Keynote and invited speaker on topics related to software engineering, software assessment, and innovation at several international events**

Venues: ArchConf, ÜberConf, ECOOP, OOP, NDC Oslo, Lean Agile & Scrum Conference, speakerconf, GOTO Aarhus, Jazoon, CodeMotion Amsterdam, VISSOFT, Agile Tour Switzerland, ICSM, Agile Breakfast Switzerland, Entwicklertag, CHOOSE Forum, Club Qualimetrie, ESUG, PharoConf, SATTOSE, BENEVOL, /ch/open, GTTSE Summer School, Deep into Smalltalk Summer School, Swiss IT Intelligence Community, SI-SE Fachtagung Switzerland, SAP Inside Track Munich

2006 – 2015 **Invited lecturer at several European Universities on topics related to software engineering, effective innovation and visual communication**

Community Activity

<http://tudorgirba.com/cv>

2007 – now Executive Board Member (currently serving as President) of the Swiss Group on Object-oriented Systems and Environments (CHOOSE)

<http://choose.s-i.ch>

2013 - now Member of the Pharo Board

<http://pharo.org>

2011 – 2013 Core Team Member of the Lean, Agile & Scrum Swiss ICT Group

<http://www.swissict.ch/lean.html>

2006 – 2015 Co-organizer of events and conferences in the area of software engineering

2006 – 2015 Program Committee member for dozens of international conferences and workshops in the area of software evolution and modeling

2007 – 2011 Reviewer for international journals

Selected Publications (3 out of 70+)

<http://tudorgirba.com/publications>

1. Tudor Gîrba and Andrei Chiş. Pervasive Software Visualizations. In Proceedings of 3rd IEEE Working Conference on Software Visualization, VISSOFT'15 p. 1–5, IEEE, 2015.
2. Andrei Chiş, Tudor Gîrba, Oscar Nierstrasz, and Aliaksei Syrel. The Moldable Inspector. In Proceedings of the 2015 ACM International Symposium on New Ideas, New Paradigms, and Reflections on Programming & Software, Onward! 2015, ACM, 2015.
3. Andrei Chiş, Tudor Gîrba, and Oscar Nierstrasz. The Moldable Debugger: A Framework for Developing Domain-Specific Debuggers. Proceedings of the International Conference on Software Language Engineering, LNCS 8706 p. 102-121, Springer International Publishing, 2014.

Languages

Mother tongue	Romanian
Fluent	English
Basic/medium	German (B1), French, Italian

Bio

I started my career by co-founding a group for game development in 1997. In 2001 I joined a thirty-people software development company where I soon became the company coach, and I introduced agile development practices. During this period, I also co-founded a research group literally without any resources. The group carries software maintenance research, and in 2010 it got to host the International Conference on Software Maintenance, the most prestigious international conference in this research area.

In 2002 I moved to Switzerland to pursue research in the area of improving software engineering productivity. The results lead to some 70 scientific publications published in top international venues.

In parallel, to make my research practical I led the work on the Moose platform for software and data analysis (<http://moosetechnology.org>). During this time it became an international project supported by multiple research groups and companies. Since 2008 I am a core contributor to Pharo (<http://pharo.org>), a novel programming language and environment. Since 2011, I initiated the Glamorous Toolkit project (<http://gt.moosetechnology.org>) with the aim of reinventing the integrated development environment. In these projects, I initiate tracks and work directly with several dozen colleagues across the globe on multiple sub-projects dealing with concerns such as analysis tools, interactive visualizations, development environments, or code problem detections.

Starting with 2009, I authored a method that helps software engineering teams make informed decisions about their systems (<http://humane-assessment.com>). The method works particularly well in projects developed with agility. For example, through this method the team can steer the architecture effectively, split monolithic applications or guide migrations through automatic analysis tools.

To demystify innovation, I developed the demo-driven innovation method (<http://demodrive.com>) as a combination of design thinking, idea prototyping and storytelling. I am applying it in multiple contexts varying from research labs to engineering companies.

Between 2011 and 2015, I accepted an innovation lead & team lead position at CompuGroup Medical Schweiz AG. In this capacity, I worked closely with the engineering and product management teams to rethink the way they developed, communicated and designed products. For example: teams were self-organizing being able to actually affect the way they work; the legacy product was made to be deployable through a custom made continuous deployment infrastructure; the architecture was automatically checked and steered by the whole team; a new product was built following a demo-driven approach.

In 2015, I founded feenk gmbh (<http://feenk.com>) in order to bring the expertise in software assessment to a larger audience.

Even though I now work in industrial projects, in 2014 I received the Dahl-Nygaard Junior Prize award for my research contributions to object-oriented software engineering. This is one of the most important awards one can receive at my age in the area of software engineering. I am the only recipient of the award that is not a university professor.

Referees

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