

# Radu Marinescu

*Curriculum Vitae*

## Personal Data

**Name** Radu Marinescu  
**Birth Date** June 10, 1974 (Galați, Romania)  
**Civil Status** Married, with one son



**Work** Department of Computer and Software Engineering  
Faculty of Automation and Computers  
“Politehnica” University of Timișoara  
**Address** Vasile Pârvan Bvd. 2, RO-300223, Timișoara, Romania  
**Phone / Fax** +40 256 404058  
**E-mail** radu.marinescu@cs.upt.ro  
**Home page** <http://www.cs.upt.ro/~radum>  
**Languages** Romanian (mother tongue)  
Fluent in English and German; French (reading only)

## Employment History

**2015-present** Group Head for Code Quality  
Endava Ltd. (<http://www.endava.com>)

**2013-present** *Full Professor of Software Engineering*  
Faculty of Automation and Computers, “Politehnica” University of Timișoara

**2008-2016** *Co-Founder*  
Intooitus Ltd. (spin-off company)

**2007-2013** *Associate Professor of Software Engineering* Faculty of Automation and Computers, “Politehnica” University of Timișoara

**2003-2012** *Senior Researcher / Founding Head of the LOOSE Research Group*  
e-Austria Research Institute, Timișoara

**2004-2007** *Assistant Professor of Software Engineering (șef de lucrări)*  
Faculty of Automation and Computers, “Politehnica” University of Timișoara

**1998-2004** *Teaching Assistant (asistent universitar)*  
Faculty of Automation and Computers, “Politehnica” University of Timișoara

**1997-2002** *Guest Researcher*  
Forschungszentrum Informatik Karlsruhe (FZI), Germany

## Education

- 2012**    **Habil.**    *Assessment and Improvement of Object-Oriented Design*  
Defended habilitation thesis at TU Cluj-Napoca on 20.07 2012
- 2002**    **Ph.D.**    “Politehnica” University of Timișoara and TU Karlsruhe (*magna cum laude*)  
Thesis: *Measurement and Quality in Object-Oriented Design*
- 1998**    **M.Sc.**    “Politehnica” University of Timișoara  
Thesis: *An Object-Oriented Metrics Suite on Coupling*
- 1997**    **B.Sc.**    “Politehnica” University of Timișoara and TU Karlsruhe  
Thesis: *The Use of Software Metrics in the Design of Object-Oriented Systems*

## Research Interests

*Maintenance and evolution of complex software systems*

*Quantitative assessment of software systems*

*Software visualization*

*Static and dynamic analysis of software systems*

*Design (and re-design) of software systems*

## Research Projects

### International Grants

- 2009-2011**    **PI**    *Continuous Assessment and Improvement of Code and Design Quality*

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IBM Faculty Award (John W. Backus Award)  
Amount: **75.000 USD** (25.000 USD per year)
- 2006**    **PI**    *Detecting and Correcting Design Flaws using Eclipse*

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IBM Faculty Award (Eclipse Innovation Award)  
Amount: **22.000 USD**
- 2006**    **Co-PI**    *NOREX - Network of reengineering expertise*

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Swiss National Science Foundation (SNF), IB7320-110997/2005  
Amount: **22.000 USD**
- 2002-2005**    **Team**    *RELEASE - Research Links to Explore and Advance Software Evolution*

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European Science Foundation (ESF) Project no. 106/2002
- 2002-2006**    **Team**    *Pilot Phase for International e-Technology Park and Institute “e- Austria”*

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Austrian Ministry BMBWK GZ 45.527/1-VI/B/7a/2002
- 1996-1999**    **Team**    *Framework-based Approach for Mastering Object-Oriented Software Evolution*

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European Commission, ESPRIT Project 21975/1996

## National Grants

<b>2007-2010</b>	<b>Co-PI</b>	<i>Methods and Tools for Continuous Quality Assurance in Complex Software Systems</i> <hr/> CNCS PNII - IDEAS 357/2007; Amount: <b>652.817 RON</b> (~170.000 EUR)
<b>2006-2008</b>	<b>PI</b>	<i>Distributed environment for controlling and optimizing the evolution of sw. systems</i> <hr/> CNCSIS CEEX Grant 5880/2006 ; Amount: <b>140.000 RON</b> (~37.000 EUR)
<b>2005-2007</b>	<b>PI</b>	<i>Design quality assurance in enterprise software systems</i> <hr/> CNCSIS CEEX Grant 3147/2005 ; Amount: <b>120.000 RON</b> (~35.000 EUR)
<b>2005-2006</b>	<b>PI</b>	<i>Modeling, analysis and verification of software systems</i> <hr/> CNCSIS Grant 27688/2005, A1/GR181/2006 ; Amount: <b>50.000 RON</b> (~15.000 EUR)

## Awards. Honors. Scholarships

<b>2014</b>	<i>Most Influential Paper Award</i> Intl. Conference on Software Maintenance and Evolution, Victoria, Canada <hr/> Award for article " <i>Detection strategies: metrics-based rules for detecting design flaws</i> " 10 years after its publication, for becoming a seminal work that has opened a new research area
<b>2014</b>	<i>Nomination for the Awards of the Romanian Academy</i> <hr/> The 2012 paper " <i>Assessing technical debt by identifying design flaws in software systems</i> " was nominated the Awards of Romanian Academy (the most prestigious national awards)
<b>2011</b>	<i>Visiting Researcher</i> IBM T.J. Watson Research Center, Hawthorne (NY), USA <hr/> Visited the Software Development Governance Team, working on methods for assessing technical debt (August-September)
<b>2009</b>	<i>IBM John W. Backus Award</i> <hr/> The award was granted by IBM Research in a worldwide competition to two midlevel career scientists who " <i>have done the most to improve programmer productivity, whether through languages, optimizations, tools, methodology or any other techniques</i> ". The jury included <i>Turing Award</i> (i.e. the equivalent of the Nobel Prize in Computer Science) winners Frederic P. Brooks and Frances Allen, as well as outstanding software engineering researchers like Grady Booch, Erich Gamma, David Harel.
<b>2006</b>	<i>IBM Eclipse Innovation Award</i> <hr/> This award was granted by IBM Research in a world-wide competition for envisioning an enhancement of the Eclipse platform that would support programmers with a means of detecting on-the-fly design and code problems.
<b>2007</b>	<i>"Bologna Professor" Award</i> <hr/> This award was granted by the <i>National Alliance of Student Organizations in Romania</i> (ANOSR), at national level based on the recommendations of students, as a sign of recognition for exceptional professorship qualities.
<b>2003</b>	<i>Magna cum laude - Ph.D. distinction</i> (TU Karlsruhe) <hr/> The PhD committee granted the " <i>magna cum laude</i> " distinction.

## Invited Speaker

- 2015**    **May**    *Confessions of a Worldly Software Miner (Keynote)*  
12th Working Conference on Mining Software Repositories (MSR), Florence (IT)
- MSR is on of the conferences with the biggest impact in software engineering, with a special focus on software maintenance.*
- 2014**    **Sep**    *Detection Strategies: 10 Year Later*  
30th International Conference on Software Maintenance (ICSM), Victoria (CA)
- ICSM is the premier scientific event in the field of software maintenance. Invited keynote in conjunction with the "Most Influential Paper Award"
- 2013**    **Mar**    *Assessing technical debt by identifying design flaws in software systems*  
(invited talk) 17th Conference on Software Maintenance and Reengineering (CSMR) - PPAP Workshop
- CSMR is the premier European conference on the theory and practice of maintenance, reengineering and evolution of software systems
- 2012**    **Mar**    *Pragmatic Design Quality Assessment* (invited tutorial)  
16th Conference on Software Maintenance and Reengineering (CSMR)
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- CSMR is the premier European conference on the theory and practice of maintenance, reengineering and evolution of software systems
- 2011**    **Nov**    *Design Quality Assessment in Practice*  
16th CREST Open Workshop, University College London (UCL)
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- UCL is ranked as the 3rd European university, and the 20th world-wide (according to ARWU)
- Sep**    *Assessing and improving design quality in object-oriented systems*  
IBM T.J. Watson Research Center, Hawthorne, NY, USA
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- T.J.Watson is the headquarters for the IBM Research Division, the largest industrial research organization in the world
- Jul**    *Pragmatic Design Assessment*  
University of Valladolid, Spain
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- University of Valladolid is one the oldest universities world-wide and the computer science department has gained notoriety by hosting the programming contests of ACM
- 2010**    **Aug**    *How can metrics help you become a better software engineer?*  
Huawei Technologies, Shanghai, China
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- Huawei is a Global Fortune 500 company and the second-largest supplier of mobile telecom infrastructure equipment in the world
- 2007**    **Sep**    *Object-Oriented Metrics in Practice*  
Frequentis A.G., Vienna, Austria
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- Frequentis is an Austrian high-tech company that develops communication and information solutions for safety-critical applications.

**May** *iPlasma: Integrated Platform for Quality Assessment of Object-Oriented Design*  
Annual Conference of the National Research Council (CNCSIS), Cluj-Napoca

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Invited talk due to the “highly significant research results” obtained in one of the national research grants

**Jan** *Metrics and Visualizations Techniques for Characterizing, Evaluating and Improving Object-Oriented Design*  
TU München (TUM), Fakultät für Informatik, Germany

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TUM is ranked 1st among German universities, and in top 50 world-wide (according to ARWU)

**2005** **Apr** *iPlasma: Integrated Platform for Quality Assessment of Object-Oriented Design*  
CHOOSE Forum, Bern, Switzerland

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CHOOSE is the Swiss Group for Object-Oriented Systems and Environments, and is a special interest group of the SI (Swiss Informatics Society).

**2004** **Nov** *Measurement and Quality in Object-Oriented Design*  
REVEAL Group, Università della Svizzera Italiana, Lugano, Switzerland

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REVEAL is a world-wide leading research group in software visualization

**Sep** *iPlasma: Integrated Platform for Quality Assessment of Object-Oriented Design*  
KIT, Karlsruhe, Germany

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One of nine German Excellence Universities, the KIT is one of the leading universities in science and engineering in Europe

**2003** **Feb** *Measurement and Quality in Object-Oriented Design*  
Software Composition Group (SCG), University Bern, Switzerland

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University of Bern is one of the top 200 universities in the world (according to ARWU). SCG is a leading research group in software evolution

## Professional Activities

### Editorial Board Member

**2011-present** *Journal of Software: Evolution and Process* (Wiley)

### Project Reviewer

**2007-present** *European Commission, Directorate General Information Society and Media*  
Expert Evaluator within the 6th and 7th Framework Program (FP6, FP7)

**2011** *Netherlands Organization for Scientific Research (NWO)*  
Expert Evaluator

**2004, 2011-present** *Romanian National Scientific Research Council (CNCSIS, CNCS)*  
Expert Evaluator for various project types

## Journal Reviewer (selection)

- 1 *IEEE Transactions on Software Engineering* (IEEE Computer Society)
- 2 *Transactions on Systems, Man, and Cybernetics-Part C: Applications and Reviews*
- 3 *Empirical Software Engineering* (Springer)
- 4 *ACM Transactions on Software Engineering and Methodology* (ACM)

## Committee Member

- 2012-2013** *Steering Committee Member*  
European Conference on Software Maintenance and Reengineering (CSMR)
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- 2011-2013** *Vice-President ; President of the Engineering Sciences Board*  
National Scientific Research Council (CNCS)
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- CNCS is a consultative body of the Minister of Education and Science, that supports fundamental research in all fields of science (equivalent of NSF, DFG etc.)
- 2011-2011** *Member*  
Advisory Board for Research Development and Innovation (CCCDI)
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- CCCDI is the main advisory board of the specialized state authority for research, development and innovation
- 2011-2012** *Member of the Board on Computers, IT and Information Systems*  
National Council for Titles, Diplomas and Certificates (CNATDCU)
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- CNATDCU is a national advisory body that evaluates and validates academic titles
- 2007-present** *Member*  
ERCIM Working Group Software Evolution (EVOL)
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- EVOL is a working group of ERCIM (European Research Consortium for Informatics and Mathematics) focused on understanding the phenomenon of software evolution

## Chair / Co-Chair

- 2013** *Doctoral Symposium Co-Chair*  
17th European Conference on Software Maintenance and Reengineering (CSMR)
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- 2012** *European Track Chair*  
16th European Conference on Software Maintenance and Reengineering (CSMR)
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- 2011** *Doctoral Symposium Co-Chair*  
18th Working Conference on Reverse Engineering (WCRE)
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- 2010** *General Chair*  
26th IEEE International Conference on Software Maintenance (ICSM)
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- ICSM is the premier international (world wide) event in the field of software maintenance. Australian Research Council Ranking (ARC): **A**

## Doctoral (Ph.D.) Committee Member

**2015**    **Sep**    *Universita della Svizzera Italiana Lugano (Switzerland)*

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Title: Self-Adaptive IDEs  
PhD Candidate: Roberto Minelli  
Advisor: prof. Michele Lanza

**2011**    **Jul**    *Universidad de Valladolid (Spain)*

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Title: Refactoring Planning for Design Smell Correction in Object-Oriented Software  
PhD Candidate: Francisco Javier Pérez García  
Advisor: dr. Yania Crespo González-Carvajal

**2009**    **Oct**    *Universita della Svizzera Italiana Lugano (Switzerland)*

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Title: Macroscopic Analysis of the Evolution of Software Systems  
PhD Candidate: Mircea Lungu  
Advisor: prof. Michele Lanza

## Publications

### Five Selected Publications

- 1 Radu Marinescu - *Assessing technical debt by identifying design flaws in software systems*, *IBM Journal of Research and Development*, ISSN 0018-8646, Vol. 56, No. 5, 2012
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**Nominated for the Awards of the Romanian Academy 2014**; Google Scholar: **130** citations

- 2 Radu Marinescu. *Detection Strategies: Metrics-Based Rules for Detecting Design Flaws*. 20th IEEE International Conference on Software Maintenance (ICSM), IEEE Computer Society Press, 2004
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**Most Influential Paper Award 2014** ; Google Scholar: **600** citations

- 3 Michele Lanza, Radu Marinescu - *Object-Oriented Metrics in Practice*. Springer Verlag, ISBN 978-3540244295, 2006 (reprinted in 2010)
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**Top 10 publications world-wide on Software Metrics** ; Google Scholar: **1050** citations

- 4 Radu Marinescu - *Measurement and Quality in Object-Oriented Design*. 21st IEEE International Conference on Software Maintenance (ICSM 2005), IEEE Computer Society Press, 2005
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Google Scholar: **398** citations

- 5 Radu Marinescu - *Detecting Design Flaws via Metrics in Object-Oriented Systems*. 39th International Conference and Exhibition on Technology of Object-Oriented Languages and Systems (TOOLS39), IEEE Computer Society Press, 2001
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Google Scholar: **141** citations