

Alessandro Rossini

Bergen, Norway
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22 Dec 1980, San Benedetto del Tronto, Italy
Italian
Male
Single, no children

Birth
Nationality
Gender
Marital status

Research experience

Software engineering,
Model-driven engineering

During the last five years, I have conducted extensive research in the field of software engineering, with particular emphasis on model-driven engineering (MDE). The main contribution of my PhD thesis has been the consolidation of two core techniques in MDE, namely metamodelling and model transformation, as well as the formalisation of two novel techniques in MDE, namely model versioning and deep metamodelling. The aim of my work has been to bridge the gap between theory and practice. My research has been carried out together with researchers from University of Bergen, Bergen University College, and Autonomous University of Madrid. The outcome of my research has led to several publications in highly ranked conferences and journals.

Technology and society,
Web technology, Free/open
source software

Besides my primary research in the field of software engineering, I have conducted research in the interdisciplinary field of technology and society, especially on the impact of information technology on society. My research interests also include other fields in software engineering (software development processes, empirical methods), web technologies (social networks, web standards, web accessibility), as well as free/open source software (quantitative and qualitative measurements, business models).

Work experience

Jan 2012 - Present

Lecturer

Department of Electrical and Electronic Eng., Bergen University College, Norway
Teaching of the Bachelor course Industrial Software Engineering (in Norwegian).

Feb 2011 - May 2011

Guest researcher

Department of Computer Engineering, Autonomous University of Madrid, Spain
Research on formal aspects of deep metamodelling.

Jan 2008 - Jan 2012

Research fellow

Department of Informatics, University of Bergen, Norway

75% research and development of the project [Diagram Predicate Framework](#), a diagrammatic specification framework founded on category theory and graph transformation which has been adopted to formalise aspects of model-driven engineering. 25% teaching in the Bachelor courses Program Development Methodologies (in Norwegian) and Software Engineering (in Norwegian), and in the Master course Software Security (in English).

Jun 2007 - Dec 2007

Software engineer

Integrator AS, Bergen, Norway

Management, analysis and design of the project AlarmCenter, a real-time system for the management of prison facilities, connecting different subsystems like alarms, pagers, intercoms, telephones, etc. Work based on UML and .NET platform.

May 2005 - Jul 2005

Software engineer (Internship)

IgTechnology S.p.A., Roma, Italy (now Indra S.A.)

Analysis, design, development and system administration of the project Gestione Servizi Interni (Internal Services Manager), a system for the management of human resources. Work based on UML, J2EE platform, Struts framework and Kodo JPA/JDO.

Oct 2004 - Mar 2005

Part-time trainer

Training agency Assodonna, Pescara, Italy

Teaching of the European Computer Driving Licence (ECDL)-like courses Computer Usage, File Management, Word Processing, Spreadsheets and Databases (in Italian).

Education

Jan 2008 - Dec 2011

Philosophiae Doctor (Ph.D.)

Department of Informatics, University of Bergen, Norway

Subject of the dissertation "[Diagram Predicate Framework meets Model Versioning and Deep Metamodelling](#)". Supervisors [Uwe Wolter](#) and [Khalid Azim Mughal](#). Opponents [Reiko Heckel](#) and [Einar Broch Johnsen](#).

Sep 2010

LASER 2010 Summer School on Empirical Software Engineering

Swiss Federal Institute of Technology (ETH), Zürich, Switzerland

Jan 2004 - Dec 2006

Master of Science (M.Sc.) in computer science, final mark 110/110 *cum laude*

Department of Computer Science, University of L'Aquila, Italy

Specialised curriculum in software engineering. One year stay as Erasmus exchange student at the Department of Informatics, University of Bergen, Norway. Subject of the dissertation "Problems of Versioning in MDA". Supervisor [Alfonso Pierantonio](#).

Sep 2004 - Jul 2005

Postgraduate diploma in web technology, final mark 30/30 *cum laude*

Department of Computer Science, University of L'Aquila, Italy

Sep 1999 - Dec 2003

Bachelor of Science (B.Sc.) in computer science, final mark 110/110 *cum laude*

Department of Computer Science, University of L'Aquila, Italy

General curriculum in computer science. Subject of the dissertation "Generation of Data-Intensive Web Applications Based on UML". Supervisor [Alfonso Pierantonio](#).

Computer skills

Software engineering
System administration

UML, EMF, SDL, Java, C#, PHP, JavaScript, SQL, HTML, CSS, XML, Eclipse, Visual Studio
GNU/Linux (Ubuntu, Debian, openSUSE, Fedora, Gentoo), Apache, Tomcat, PostgreSQL,
MySQL, SQLite, Subversion, Git

Desktop publishing

LaTeX, BibTeX, LibreOffice, Microsoft Office, Inkscape

Organisational skills

Jan 2012 - Present

Program Committee member for international conferences, e.g., [SLE 2012](#) (Poster track).

Jan 2011 - Present

External reviewer for international conferences, e.g., [ICMT 2011](#), [ACTIVE 2011](#), [ECMFA 2012](#), [MODELS 2012](#).

Aug 2010 - Present

Supporting member of [KDE e.V.](#)

Mar 2010 - Feb 2011

Chair of the PhD panel of the Faculty of Mathematics and Natural Sciences, University of Bergen, Norway.

Aug 2009 - Dec 2010

Web editor for the Department of Informatics, University of Bergen, Norway.

Aug 2009 - Jul 2010

Member of the council of the Department of Informatics, University of Bergen, Norway.

Nov 2001 - Oct 2007

Founding member of OpenLUG, Linux User Group of L'Aquila, Italy.

Jan 2000 - Present

Contributor to different free/open source software projects, e.g., [Ubuntu](#), [KDE](#), [digiKam](#).

Languages

Mother tongue

Other languages¹

English²

Norwegian (Bokmål)³

Spanish

Catalan

Italian

Understanding				Speaking				Writing	
Listening		Reading		Interaction		Production			
C1	Proficient	C2	Proficient	C1	Proficient	C1	Proficient	C1	Proficient
C1	Proficient	C1	Proficient	C1	Proficient	C1	Proficient	C1	Proficient
B2	Independent	B2	Independent	B2	Independent	B2	Independent	B1	Independent
B1	Independent	B1	Independent	A1	Basic	A1	Basic	A1	Basic

¹Common European Framework of Reference (CEF) level

²Course in Academic English at the University of Bergen

³Bestått eksamen i norsk språk og kultur trinn 3 ved Universitetet i Bergen med karakter B både skriftlig og muntlig

Other

Interests

Science, Technology, Photography, Languages, Linguistics, Literature, Cuisine, Wine, Music, Hiking, Snowboard, Travelling

Publications

- [1] Alessandro Rossini, Juan de Lara, Esther Guerra, Adrian Rutle and Yngve Lamo. “A Graph Transformation-Based Semantics for Deep Metamodelling”. In: *Proceedings of AGTIVE 2011: 4th International Symposium on Applications of Graph Transformations with Industrial Relevance*. Vol. 7233. Lecture Notes in Computer Science. Springer, 2012.
- [2] Adrian Rutle, Alessandro Rossini, Yngve Lamo and Uwe Wolter. “A formal approach to the specification and transformation of constraints in MDE”. In: *Journal of Logic and Algebraic Programming* 81.4 (2012), pp. 422–457. doi: [10.1016/j.jlap.2012.03.006](https://doi.org/10.1016/j.jlap.2012.03.006).
- [3] Alessandro Rossini. “Diagram Predicate Framework meets Model Versioning and Deep Metamodelling”. PhD thesis. Norway: Department of Informatics, University of Bergen, 2011. ISBN: 978-82-308-1900-5.
- [4] Florian Mantz, Alessandro Rossini, Gabriele Taentzer, Yngve Lamo and Uwe Wolter. “Formalising Metamodel Evolution based on Category Theory”. In: *Proceedings of NWPT 2011: 23rd Nordic Workshop on Programming Theory*. Västeås, Sweden, 2011, pp. 73–75.
- [5] Alessandro Rossini, Adrian Rutle, Khalid A. Mughal, Yngve Lamo and Uwe Wolter. “A Formal Approach to Data Validation Constraints in MDE”. In: *Proceedings of TTSS 2011: 5th International Workshop on Harnessing Theories for Tool Support in Software*. Ed. by Marcel Kyas, Sun Meng and Volker Stolz. Oslo, Norway, 2011, pp. 65–76. ISBN: 82-7368-371-0.
- [6] Alessandro Rossini. “How to blow 12.8 million NOK”. In: *På Høyden* (2011). http://nyheter.uib.no/?modus=vis_leserbrev&id=48010.
- [7] Kent Inge Fagerland Simonsen, Florian Mantz, Alessandro Rossini and Adrian Rutle. “Groovy and Grails meet Eclipse Modeling Framework”. In: *Proceedings of NIK 2010: 23rd Norsk Informatikkonferanse*. Gjøvik, Norway, 2010, pp. 34–43. ISBN: 978-82-519-2702-4.
- [8] Alessandro Rossini, Adrian Rutle, Florian Mantz, Yngve Lamo and Uwe Wolter. “Constraint-Aware Model Merging”. In: *Proceedings of NWPT 2010: 22nd Nordic Workshop on Programming Theory*. Turku, Finland, 2010, pp. 31–33. ISBN: 978-952-12-2478-2.
- [9] Florian Mantz, Alessandro Rossini, Adrian Rutle, Yngve Lamo and Uwe Wolter. “Towards a Formal Approach to Metamodel Evolution”. In: *Proceedings of NWPT 2010: 22nd Nordic Workshop on Programming Theory*. Turku, Finland, 2010, pp. 52–54. ISBN: 978-952-12-2478-2.
- [10] Alessandro Rossini and Adrian Rutle. “Computer Science and Society: Is a New Social Contract Possible?”. In: *Proceedings of ICSIT 2010: International Conference on Society and Information Technologies*. Orlando, Florida, USA: IIS, 2010, pp. 67–70. ISBN: 978-1-934272-85-5.
- [11] Adrian Rutle, Alessandro Rossini, Yngve Lamo and Uwe Wolter. “A Formalisation of Constraint-Aware Model Transformations”. In: *Proceedings of FASE 2010: 13th International Conference on Fundamental Approaches to Software Engineering*. Ed. by David Rosenblum and Gabriele Taentzer. Vol. 6013. Lecture Notes in Computer Science. Paphos, Cyprus: Springer, 2010, pp. 13–28. ISBN: 978-3-642-12028-2. doi: [10.1007/978-3-642-12029-9_2](https://doi.org/10.1007/978-3-642-12029-9_2).
- [12] Alessandro Rossini, Adrian Rutle, Yngve Lamo and Uwe Wolter. “A formalisation of the copy-modify-merge approach to version control in MDE”. In: *Journal of Logic and Algebraic Programming* 79.7 (2010), pp. 636–658. doi: [10.1016/j.jlap.2009.10.003](https://doi.org/10.1016/j.jlap.2009.10.003).
- [13] Adrian Rutle, Alessandro Rossini, Yngve Lamo and Uwe Wolter. “Constraint-Aware Model Transformations”. In: *Proceedings of NWPT 2009: 21st Nordic Workshop on Programming Theory*. Lingby, Danmark, 2009, pp. 89–91. ISBN: 978-87-643-0565-4.
- [14] Alessandro Rossini, Adrian Rutle, Federico Mancini, Dag Hovland, Khalid A. Mughal, Yngve Lamo and Uwe Wolter. “Data Validation Constraints in MDE”. In: *Proceedings of NWPT 2009: 21st Nordic Workshop on Programming Theory*. Lingby, Danmark, 2009, pp. 86–88. ISBN: 978-87-643-0565-4.
- [15] Adrian Rutle, Alessandro Rossini, Yngve Lamo and Uwe Wolter. “A Diagrammatic Formalisation of MOF-Based Modelling Languages”. In: *Proceedings of TOOLS 2009: 47th International Conference on Objects, Components, Models and Patterns*. Ed. by Manuel Oriol, Bertrand Meyer, Wil Aalst, John Mylopoulos, Michael Rosemann, Michael J. Shaw and Clemens Szyperski. Vol. 33. Lecture Notes in Business Information Processing. Zurich, Switzerland: Springer, 2009, pp. 37–56. ISBN: 978-3-642-02571-6. doi: [10.1007/978-3-642-02571-6_4](https://doi.org/10.1007/978-3-642-02571-6_4).
- [16] Adrian Rutle, Alessandro Rossini, Yngve Lamo and Uwe Wolter. “A Category-Theoretical Approach to the Formalisation of Version Control in MDE”. In: *Proceedings of FASE 2009: 12th International Conference on Fundamental Approaches to Software Engineering*. Ed. by Marsha Chechik and Martin Wirsing. Vol. 5503. Lecture Notes in Computer Science. York, UK: Springer, 2009, pp. 64–78. ISBN: 978-3-642-00592-3. doi: [10.1007/978-3-642-00593-0_5](https://doi.org/10.1007/978-3-642-00593-0_5).
- [17] Adrian Rutle, Alessandro Rossini, Yngve Lamo and Uwe Wolter. “Automatic Definition of Model Transformations at the Instance Level”. In: *Proceedings of NWPT 2008: 20th Nordic Workshop on Programming Theory*. Tallin, Estonia, 2008, pp. 80–81.
- [18] Adrian Rutle, Alessandro Rossini, Yngve Lamo and Uwe Wolter. “Version Control in MDE”. In: *Proceedings of NWPT 2008: 20th Nordic Workshop on Programming Theory*. Tallin, Estonia, 2008, pp. 78–79.

- [19] Adrian Rutle and Alessandro Rossini. “A Tentative Analysis of the Factors Affecting the Industrial Adoption of MDE”. In: *Proceedings of ChaMDE 2008: 1st International Workshop on Challenges in Model-Driven Software Engineering*. Toulouse, France, 2008, pp. 57–61.
- [20] Antonio Cicchetti and Alessandro Rossini. “Weaving Models in Conflict Detection Specifications”. In: *Proceedings of SAC 2007: 22nd ACM Symposium on Applied Computing*. Seoul, Korea: ACM, 2007, pp. 1035–1036. ISBN: 1-59593-480-4. doi: [10.1145/1244002.1244227](https://doi.org/10.1145/1244002.1244227).
- [21] Antonio Cicchetti and Alessandro Rossini. *Conflict Detection Specifications for the Singleton Design Pattern*. Tech. rep. 2006.
- [22] Alessandro Rossini and Graziano Liberati. ““Model-View-Controller e ZNF: dalla teoria alla pratica” (Model-View-Controller and ZNF: from theory to practice)”. In: *PHP Journal (in Italian)* 57.4 (2005), pp. 8–9.

Presentations

- [1] A Graph Transformation-Based Semantics for Deep Metamodelling. [ACTIVE 2011](#), Budapest, Hungary, 5 Oct 2011.
- [2] A Formal Approach to Data Validation Constraints in MDE. [TTSS 2011](#), Oslo, Norway, 13 Sep 2011.
- [3] Action plan for PhD-education at the Faculty of Mathematics and Natural Sciences. PhD gathering of the Department of Mathematics, University of Bergen, Norway, 25 Nov 2010.
- [4] Constraint-Aware Model Merging. [NWPT 2010](#), Turku, Finland, 11 Nov 2010.
- [5] PhD panel at the Faculty of Mathematics and Natural Sciences. PhD seminar of the Department of Biology, University of Bergen, Norway, 19 Oct 2010.
- [6] Data Validation Constraints in MDE. [NWPT 2009](#), Lingby, Denmark, 16 Oct 2009.
- [7] A Category-Theoretical Approach to the Formalisation of Version Control in MDE. [FASE 2009](#), York, UK, 25 Mar 2009.
- [8] Version Control in MDE. [NWPT 2008](#), Tallinn, Estonia, 20 Nov 2008.
- [9] Computer Science and Society: Is a New Social Contract Possible?. University of Bergen, Norway, 4 Feb 2009, 22 Sep 2009, 2 Feb 2010, 29 Sep 2010, 31 Jan 2011, 26 Sep 2011, 1 Feb 2012.
- [10] “Free software ed open source” (Free software and open source). University of Pesaro, Italy, 13 Apr 2005.
- [11] “Kernel tuning”. LinuxDay 2004, L’Aquila, Italy, 27 Nov 2004.
- [12] “GNU/Linux: una finestra sul futuro” (GNU/Linux: a window to the future). Festa dell’unità 2004, L’Aquila, Italy, 13 Jul 2004.
- [13] “Hardening the box”. Seminari 2004 OpenLUG, L’Aquila, Italy, 2 Jun 2004.
- [14] “Impacchettiamo GNU/Linux” (Let’s package GNU/Linux). Seminari 2004 OpenLUG, L’Aquila, Italy, 26 May 2004.
- [15] “Cambiamenti in PHP 5/ZendEngine 2.0” (Changes in PHP 5/ZendEngine 2.0). LinuxDay 2003, L’Aquila, Italy, 29 Nov 2003.
- [16] “Linux in pratica” (Linux in practice). LinuxDay 2002, L’Aquila, Italy, 23 Nov 2002.