Oscar Nierstrasz — Curriculum Vitæ

March 14, 2018

1 Personal Data

Name	Oscar Marius Nierstrasz
Residence	Fluhmattweg 41, CH-3122 Kehrsatz, Switzerland
Telephone	+41 31 961 7065
Mobile	+41 78 628 0817
Work	Institut für Informatik (INF), Universität Bern, Neubrückstrasse 10
	CH-3012 Berne, Switzerland
Telephone	+41 31 631 4618
Secretary	+41 31 631 4692
E-mail	Oscar.Nierstrasz@acm.org
Home page	http://scg.unibe.ch/oscar
ORCID	http://orcid.org/0000-0002-9975-9791
Google Scholar	https://scholar.google.com/citations?user=Yi00hUYAAAAJ
Birthdate	October 15, 1957 (Laren, The Netherlands)
Citizenship	Canada, Switzerland and Italy
Civil status	Married, with one daughter
Hobbies	Running, skiing, photography, genealogy, hunting wild mushrooms.
Languages	English (mother tongue).
	Fluent in Dutch, German, French and Italian.
	Passive fluency in Swiss German (Bernese dialect).

2 Employment History

1996-present	*Full Professor of Computer Science (ordinarius)*
	Institut für Informatik und angewandte Mathematik, Universität Bern
1994-1996	*Associate Professor of Computer Science (extraordinarius)*
	Institut für Informatik und angewandte Mathematik, Universität Bern
1987-1994	*Maître d'Enseignement et de Recherche (Assistant Professor)*, CUI, Université de Genève
1986-87	*Maître-Assistant*, CUI, Université de Genève
1985	*Visiting researcher*, Research Institute of Crete.
1984	*Research assistant*, University of Toronto
1981-83	*Lecturer*, University of Toronto
1982 (summer)	*Research assistant*, Consiglio Nazionale delle Ricerche, Pisa, Italy.
1980-81	*Teaching assistant*, University of Toronto
1979 (summer)	*Research assistant*, University of Waterloo, Ontario.
1977-78 (summers)	Manufacturer's Life Insurance Company, Toronto

University education

Ph.D.	1984, Department of Computer Science, University of Toronto.
	Thesis: *Message Flow Analysis*. Supervisor: Prof. D. Tsichritzis
M.Sc.	1981, Department of Computer Science, University of Toronto.
	Thesis: *Automatic Coordination and Processing of Electronic Forms in TLA (an Intelligent Office Information System)*. Supervisor: Prof. D. Tsichritzis
B.Math	1979, Departments of Pure Mathematics and Combinatorics and Optimization, University of Waterloo.

Research interests

Software engineering. Programming Languages. Software evolution. Reverse Engineering.

3 Professional Activities

Editor-In-Chief Journal of Object Technology[1] (2010-2013).

Editorial Board Member Annals of Software Engineering, Editorial board (1996-2002); ACM Transactions on Software Engineering and Methodology, Associate Editor (TOSEM — 2005-2008); Object Oriented Systems, Editorial board (Chapman & Hall — 1994-1999); Springer Software and Systems Modeling, Associate Editor (SoSyM — 2004-2006); Springer LNCS, Series Editor (SL2 — Programming Techniques and Software Engineering — 2004-2012); Science of Computer Programming, Advisory Board (SCP — 2014-present); PeerJ CS[2] (2015-present).

Journal Reviewer ACM Computing Surveys, ACM Transactions on Programming Languages and Systems (TOPLAS), ACM Transactions on Software Engineering and Methodology (TOSEM), ACTA Informatica, Communications of the ACM (CACM), The Computer Journal, IEEE Transactions on Software Engineering (TSE), IEEE PDT, IEEE Computer, IEEE Software, Information & Software Technology, Elsevier Journal of Systems and Software, Software, Practice & Experience, Kluwer Design Automation for Embedded Systems.

Project Reviewer Australian Research Council (ARC), Hasler Foundation, Switzerland, Interuniversity Consortium, Italy (CINECA), Institut national de recherche en informatique et en automatique, France (INRIA), Natural Sciences and Engineering Research Council of Canada (NSERC), Netherlands Organisation for Scientific Research (NWO), Science Foundation Ireland (SFI), Swiss National Science Foundation (SNSF), US National Science Foundation (NSF).

Committee Member ESEC, Steering Committee (1999-2009); Models, Steering Committee (2005-2013); NSERC[3], General Selection Committee (GSC-330) for Computing & Information Sciences (2003-2006); SARIT[4] Board (2004-2012); Software Composition, Steering Committee (2005-2013); AOSA, Steering Committee for the Aspect-Oriented Software Development Conference (AOSD, 2010-2014); SATToSE[5] Steering Committee (2013-present); SIRA[6] Board (2012-present); SI[7] Board (2012-present); Swiss National Science Foundation Research Council, Division 2 (2012-present).

---

[1] http://jot.fm
[2] https://peerj.com/computer-science/
[3] Natural Sciences and Engineering Research Council of Canada
[4] Swiss Association for Research in Information Technology
[5] Seminar on Advanced Techniques & Tools for Software Evolution
[6] Swiss Informatics Research Association
[7] Swiss Informatics Society

Chair, vice-chair, etc. Organizing Chair, ECOOP 91; Conference Co-Chair, ECOOP 96; Chairman, CHOOSE (1992-1996, 2003-2007, 2015-2017); Vice-Chair, CHOOSE[8] (1990-92); Manager, AITO[9] (1992-1999), Vice-President AITO (2006-2007).

Organizer, co-organizer Agent Technology Spring School 2000[10]; ECOOP 89 workshop on Object-Based Concurrent Programming; ECOOP 93 workshop on Object-Oriented Distributed Programming; ECOOP 94 workshop on Coordination Languages; ECOOP 2000 workshop on Pervasive Component Systems; OOPSLA 2004 workshop on Revival of Dynamic Languages; ICSM 2010 Doctoral Symposium; FOSD 20010 (2nd Workshop on Feature-Oriented Software Development); FOSD Schloss Dagstuhl Workshop (Feature-Oriented Software Development); SATToSE 2013 (6th Seminar on Advanced Techniques & Tools for Software Evolution); Tutorials Co-Chair for ICSE 2012 (International Conference on Software Engineeering)

Programme Chair ECOOP 93[11]; WWW 94[12]; ESEC 99[13]/FSE-7[14]; MoDELS[15] 2006; CASTA[16] 2009.

PC Member AOSD 2003[17]; CAiSE 91[18], 2001, 2002; CD 2002[19]; COOMPL 2013[20]; Coordination 96, 97, 99, 2002, 2007; CoopIS 2001[21]; CSMR 2011[22]; CSMR-WCRE-ERA 2014[23]; CTIS 98[24]; C5[25] 2011, 2012; DBPL-3 (91); DMIS-3 (92); DLS 05[26], 06, 07, 08, 2014; DSE 2007[27]; Dyla07[28]; East EurOOPe 93; EDOC 2001[29]; EDOC 2002; ECOOP 89, 92, 94, 95, 97, 98, 99, 2003, 2004, 2009; ESEC 95, 97; ESEC-FSE 2009 Doctoral Symposium; ESOP 96[30], 99, 2003; ESS 93[31]; ETSM[32] 2009; Euromicro CBSE 2004[33], 2005; EVOL[34] 2006; FAMOOSr[35] Workshop 2007, 2008, 2009; FASE 2008[36]; FOAL 2001[37], 2003; FOSD[38] 2009; FMOODS 96[39]; FSE-6 (98);

---

[8] Subgroup of the Swiss Informatics Society (SI) for Object Oriented Systems and Environments.
[9] Association Internationale pour les Technologies Objets — sponsoring foundation for ECOOP
[10] Troisième Cycle Suisse Romande
[11] European Conference on Object-Oriented Programming.
[12] World Wide Web Conference.
[13] European Software Engineering Conference
[14] Foundations of Software Engineering
[15] Model Driven Engineering Languages and Systems
[16] Context-Aware Software Technology and Applications
[17] Aspect-Oriented Software Development
[18] Conference on Advanced Information Systems Engineering
[19] International Working Conference on Component Deployment
[20] International Workshop on Combined Object-Oriented Modeling and Programming Languages
[21] International Conference on Cooperative Information Systems
[22] European Conference on Software Maintenance and Reengineering
[23] European Conference on Software Maintenance and Reengineering/Working Conference on Reverse Engineering
[24] International Workshop on Coordination Technologies for Information Systems
[25] International Conference on Creating, Connecting and Collaborating through Computing
[26] Dynamic Languages Symposium at OOPSLA
[27] International Workshop on Dynamic Software Evolution
[28] ECOOP Workshop on Dynamic Languages and Applications
[29] International Conference on Enterprise Distributed Object Computing
[30] European Symposium On Programming
[31] European Simulation Symposium
[32] International Symposium on Emerging Trends in Software Metrics
[33] Component-Based Software Engineering
[34] International ERCIM Workshop on Software Evolution
[35] FAMIX and Moose in Reengineering
[36] Fundamental Approaches to Software Engineering
[37] Foundations of Aspect Oriented Languages
[38] International Workshop on Feature-Oriented Software Development
[39] First IFIP International Workshop on Formal Methods for Open Object-Based Distributed Systems.

GPCE 2012[40]; ICMT 2011[41]; ICPC[42] 2008, 2012; ICSE 97[43], 2000, 2015; ICSE NIER 2013[44]; ICSM[45] 2010, 2011, 2012, 2013; ICSR 94[46]; IDM 2005[47]; ISOOMS 94[48]; ISOTAS 93[49]; ISOTAS 96; IWPSE 2004[50], 2005; IWST[51] 2009; LIVE 2013[52]; LMO 96[53], 97; MoDELS/UML 2005; Models@run.time 2008; OOERM 95[54]; OOPSLA 89[55], 93, 96, 98, 2001, 2002, 2011 (external review committee); OOPSLA Onward![56] 2008, 2011; OOPS[57] 2010, 2011; PCODA 2010[58]; RAM-SE[59] 2009, 2010; SC 2005[60]; SE 2011, 2012, 2013[61]; SEAA-EDISON[62] 2010; SIGMOD 95; SIGSOFT 96; SLE 2014[63]; SLE 2012 Doctoral Symposium; Smalltalk Directions 2012; SUITE[64] 2009, 2010; TOOLS 90, 91; TOOLS Europe 92, 93, 94, 2007, 2008, 2010; TOOLSEE 2001[65]; VLDB 96[66]; WETSoM[67] 2010; WASDeTT[68] 2008, 2013; WPDRTS 2001[69]; XM 2012[70]; XP 2012, 2013

---

[40]Generative Programming and Component Engineering
[41]International Conference on Model Transformation
[42]International Conference on Program Comprehension
[43]International Conference on Software Engineering
[44]New Ideas and Emerging Results
[45]IEEE International Conference on Software Maintenance
[46]International Conference on Software Reusability
[47]Ingénierie Dirigée par les Modèles
[48]International Symposium on Object-Oriented Methodologies and Systems
[49]International Symposium on Object Technologies for Advanced Software.
[50]International Workshop on Principles of Software Evolution
[51]International Workshop on Smalltalk Technologies
[52]International Workshop on Live Programming
[53]Langages et Modeles Objets.
[54]Object-Oriented and Entity-Relationship Modeling Conference
[55]ACM SIGPLAN Object-Oriented Programming Systems, Languages and Applications
[56]ACM Conference on New Ideas in Programming and Reflections on Software
[57]Special track on Object-Oriented Programming Languages and Systems at SAC 2010
[58]Program Comprehension through Dynamic Analysis
[59]Workshop on Reflection, AOP and Meta-Data for Software Evolution
[60]Software Composition
[61]Software Engineering
[62]Euromicro Special track on Evolution of Distributed, Internet-based and Service-Oriented applicatioNs
[63]International Conference on Software Language Engineering
[64]Intl. Workshop on Search-Driven Development — Users, Infrastructure, Tools and Evaluation
[65]TOOLS Eastern Europe
[66]Very Large Data Bases
[67]Workshop on Emerging Trends in Software Metrics
[68]International Workshop on Advanced Software Development Tools and Techniques
[69]Workshop on Parallel and Distributed Real-Time Systems
[70]Extreme Modeling Workshop

4 Scholarships, honours and awards

2016	VISSOFT 2016 Best Paper Award for "Towards Actionable Visualisation in Software Development" by Leonel Merino, Mohammad Ghafari and Oscar Nierstrasz
	IWST 2016 Best Paper Award (1st prize) for "Optimizing Parser Combinators" by Jan Kurš, Jan Vrany, Mohammad Ghafari, Mircea Lungu and Oscar Nierstrasz
	IWST 2016 Best Paper Award (2nd prize) for A Promising Approach for Debugging Remote Promises by Max Leske, Andrei Chiş and Oscar Nierstrasz
2014	IWST14 Best Paper Award (3rd prize) for "The Moldable Inspector: A framework for domain-specific object inspection" by Andrei Chiş, Tudor Girba and Oscar Nierstrasz
	ACM TOSEM Distinguished Referee
2013	Dahl-Nygaard Senior Prize for contributions to the field of Object-Orientation
2012	EAPLS best paper award at TOOLS 2012 for "Incremental Dynamic Updates with First-class Contexts" by Erwann Wernli, Mircea Lungu and Oscar Nierstrasz
2008	ECOOP Distinguished Paper award for "Practical Object-Oriented Back-in-Time Debugging" by Adrian Lienhard, Tudor Girba and Oscar Nierstrasz
2007	Visiting Professor, Swinburne University of Technology
2006	ACM Recognition of Service Award
1999	Franqui lecturing chair, Vrije Universiteit Brussel
1985-87	NSERC[71] post-doctoral fellowship
1983/84	UofT open scholarship
1982/83	NSERC post-graduate scholarship
1981/82	Ontario Graduate Scholarship
1979-81	NSERC post-graduate scholarship
1976-79	Descartes Scholarship, University of Waterloo
1976	Descartes Mathematics Competition, first prize
	Canadian Mathematics Olympiad, third prize
	Canadian Association of Physicists Contest, third prize

5 Invited/Keynote Speaker

— Keynote Speaker at SCAM 2013 (13th IEEE International Working Conference on Source Code Analysis and Manipulation — Eindhoven, The Netherlands, 22-23 September 2013)

— Keynote Speaker at ECOOP 2013 (27th European Conference on Object-Oriented Programming — Montpellier, France, July 1-5, 2013)

— Keynote Speaker at Karlsruher Entwicklertag 2013 (Karlsruhe, Germany, June 5-7, 2013)

— Keynote Speaker at BENEVOL 2012 (11th BElgian-NEtherlands software eVOLution symposium — Delft, The Netherlands, Dec 3-4, 2012)

— Keynote speaker, ICPC 2012 (20th IEEE International Conference on Program Comprehension — Passau, Germany, June 11-13, 2012)

— Keynote speaker, IWRE 2012 (3rd India Workshop on Reverse Engineering, co-located with ISEC '12 — Kanpur, India, Feb 22, 2012)

— Keynote speaker, TOOLS 2011 (49th International Conference on Objects, Models, Components and Patterns — Zurich, Switzerland, 27 June - 1 July 2011)

— Invited Speaker, SOFSEM 2010 (36th International Conference on Current Trends in Theory and Practice of Computer Science, Principles of Software Construction track — Spindleruv Mlyn, Czech Republic, January 23-29, 2010)

— Invited Speaker, SVPP 2008 (Software Variability: a Programmers' Perspective — Brussels, Belgium, August 8-9, 2008)

— Keynote Speaker, ASWEC 2007 (18th Australian Conference on Software Engineering — Melbourne, April 10-13, 2007)

— Keynote speaker at NODe 2006 (NET.ObjectDays 2006 — Erfurt, Germany, Sept. 18-21, 2006)

— Invited Speaker, GPCE'05 (Generative Programming and Component Engineering — Tallinn, Estonia, Sep 29 - Oct 1, 2005)

— Invited Speaker, ESEC/FSE'05 (European Software Engineering Conference — Lisbon, Portugal, Sept. 5-9, 2005)

— Invited speaker, UML 2004 — Lisbon, Portugal, Oct. 11-15, 2004.

— Keynote speaker, CBSE7 (International Symposium on Component-Based Software Engineering —Edinburgh, Scotland, May 24-25, 2004)

— Speaker, SI-SE 2004 ("Components – The Future of Software Engineering?" — Zürich, March 18-19, 2004)

— Speaker, SI-SE 2003 (Software Sanierung — Zürich, March 13-14, 2003)

— Invited Speaker, FMCO 2002 (First International Symposium on Formal Methods for Components and Objects — Leiden, The Netherlands, Nov. 5-8, 2002)

— Invited Speaker, Industrielle Software Produktion 2002 — Stuttgart, Sept. 19-20, 2002

— Keynote speaker, GCSE 2001 (Third International Conference on Generative and Component-Based Software Engineering — Erfurt, Germany Sept 10-13, 2001)

— Invited speaker, the Component Based Software Day (CWI, Amsterdam — April 27, 2001)

— Speaker, Software Architectures and Component Technology — Twente, The Netherlands, January 20-21, 2000

— Invited speaker, EESI System Architecture Colloquia — TUE Eindhoven, NL, Oct. 6, 1999

— Invited speaker, FMOODS 99 — Florence, Italy, Feb 15-18, 1999

— Invited speaker, Architectural Approaches to Software Engineering — Open University, UK, Dec 8-9, 1998

6 Research Projects

— "Agile Software Analysis", SNSF project No. 200020-162352, Funding: 708'852 SFr., Jan. 2013 - Dec. 2015

— "Agile Software Assessment", SNSF project No. 200020-144126/1, Funding: 650'000 SFr., Jan. 2013 - Dec. 2015

— "Synchronizing Models and Code", SNSF Project No. 200020-131827, Funding: 337'337 SFr., Oct. 2010 - Sept. 2012.

— "Bringing Models Closer to Code", SNSF Project No. 200020-121594, Funding: 395'304 SFr., Oct. 2008 - Sept. 2010.

— "Enabling the evolution of J2EE applications through reverse engineering and quality assurance", Hasler Foundation, Funding: 352'820 SFr., Oct. 2008 - Sept. 2010.

— "Analyzing, capturing and taming software change", SNSF Project No. 200020-113342, Funding: 260'152 SFr., Oct. 2006 - Sept. 2008.

— "NOREX: Network of Reengineering Expertise", SCOPES 2005-2008: Scientific Co-operation between Eastern Europe and Switzerland, Nov 1, 2005 - Oct 31, 2007.

— Software Evolution Working Group, ERCIM, Oct. 2004-present (ongoing).

— "A Unified Approach to Composition and Extensibility", SNSF Project No. 200020-105091/1, Funding: 264,915 SFr., Oct. 2004 - Sept. 2006.

— "Tools and Techniques for Decomposing and Composing Software", SNSF Project No. 2000-067855.02. Funding: 259,212 SFr., Oct. 2002 - Sept. 2004.

— "Meta-models and Tools for Evolution Towards Component Systems", SNSF Project No. 20-61655.00. Funding: 216,614 SFr., Oct. 2000 - Sept. 2002.

— "Pervasive Component Systems" (PECOS), EU IST-1999-20398 / Swiss BBW 00.0170. Funding: 400,326 SFr., Oct. 2000 - Sept. 2002.

— "A Framework Approach to Composing Heterogeneous Applications", SNSF Project No. 20-53711.98. Funding: 313,122 SFr., Oct. 1998 - Sept. 2000.

— "Framework-based Approach for Mastering Object-Oriented Software Evolution" (FAMOOS), ESPRIT Project 21975 / Swiss BBW Nr. 96.0015. Funding: 748,900 SFr., Sept. 1996 - Dec. 1999.

— "COORDINA: Coordination Models and Languages", EU ESPRIT Working Group 24512, Swiss BBW Nr. 96.00335-1. Funding: 32,360 SFr. (travel only), Aug. 1997 - Aug. 2000

— "Infrastructure For Software Component Frameworks", SNSF Project No. 2000-46947.96. Funding: 276,137 SFr., Oct. 1996 - Sept. 1998.

— "Composing Active Objects", Swiss National Science Foundation (SNSF) Project No. 2140610.94. Funding: 308,793 SFr., Oct. 1994 - Sept. 1996.

7 Teaching

7.1 Courses (University of Berne)

— Introduction to Databases (1995-1998)

— Introduction to C++ (1996-1998)

— Introduction to Software Engineering (1995-2018)

— Object-Oriented Programming with Java (1998-2018)

— Software Composition Seminar (1995-2018)

— Programming Languages (1995-2006, 2008, 2010, 2012, 2014)

— Concurrent Programming (1998, 2000, 2001 (Tokyo), 2002, 2004, 2006, 2009, 2010, 2012, 2015, 2017)

— Object-Oriented Software Reengineering (1999, 2000, 2002, 2004, 2006)

— Dynamic Object-Oriented Programming with Smalltalk (2006, 2007, 2009)

— Metamodeling Seminar (2008)

— Compiler Construction (2008, 2011, 2013, 2015, 2017)

— Software Design and Evolution (2011, 2014)

— Software Modeling and Analysis (2016)

7.2   PhD Theses supervised or co-supervised

1. Nevena Milojković, "Augmenting Type Inference with Lightweight Heuristics," Ph.D. thesis, University of Bern, June 2017.

2. Haidar Osman, "Empirically-Grounded Construction of Bug Prediction and Detection Tools," Ph.D. thesis, University of Bern, December 2017.

3. Yuriy Tymchuk, "Quality-Aware Tooling," Ph.D. thesis, University of Bern, December 2017.

4. Andrea Caracciolo, "A Unified Approach to Architecture Conformance Checking," Ph.D. thesis, University of Bern, March 2016.

5. Andrei Chiş, "Moldable Tools," Ph.D. thesis, University of Bern, September 2016.

6. Jan Kurš, "Parsing For Agile Modeling," Ph.D. thesis, University of Bern, October 2016.

7. Boris Spasojević, "Developing Ecosystem-aware Tools," Ph.D. thesis, University of Bern, December 2016.

8. Niko Schwarz, "Scaleable Code Clone Detection," Ph.D. thesis, University of Bern, February 2014.

9. Erwann Wernli, "Run-time Variability with First-class Contexts," Ph.D. thesis, University of Bern, November 2013.

10. Fabrizio Perin, "Reverse Engineering Heterogeneous Applications," Ph.D. thesis, University of Bern, November 2012.

11. Jorge Ressia, "Object-Centric Reflection," Ph.D. thesis, University of Bern, October 2012.

12. Toon Verwaest, "Bridging the Gap between Machine and Language using First-Class Building Blocks," Ph.D. thesis, University of Bern, March 2012.

13. Adrian Kuhn, "Software Cartography and Code Navigation," Ph.D. thesis, University of Bern, April 2011.

14. Lukas Renggli, "Dynamic Language Embedding With Homogeneous Tool Support," Ph.D. thesis, University of Bern, October 2010.

15. David Röthlisberger, "Augmenting IDEs with Runtime Information for Software Maintenance," Ph.D. thesis, University of Bern, May 2010.

16. Marcus Denker, "Sub-method Structural and Behavioral Reflection," Ph.D. thesis, University of Bern, May 2008.

17. Adrian Lienhard, "Dynamic Object Flow Analysis," Ph.D. thesis, University of Bern, December 2008.

18. Orla Greevy, "Enriching Reverse Engineering with Feature Analysis," Ph.D. thesis, University of Bern, May 2007.

19. Juan Carlos Cruz, "A Group Based Approach for Coordinating Active Objects," Ph.D. thesis, University of Bern, Bern, June 2006.

20. Markus Gaelli, "Modeling Examples to Test and Understand Software," Ph.D. thesis, University of Bern, November 2006.

21. María Laura Ponisio, "Exploiting Client Usage to Manage Program Modularity," Ph.D. thesis, University of Bern, Bern, June 2006.

22. Gabriela Arévalo, "High Level Views in Object-Oriented Systems using Formal Concept Analysis," Ph.D. thesis, University of Bern, Bern, January 2005.

23. Alexandre Bergel, "Classboxes — Controlling Visibility of Class Extensions," Ph.D. thesis, University of Bern, November 2005.

24. Tudor Gîrba, "Modeling History to Understand Software Evolution," Ph.D. thesis, University of Bern, Bern, November 2005.

25. Matthias Rieger, "Effective Clone Detection Without Language Barriers," Ph.D. thesis, University of Bern, June 2005.

26. Nathanael Schärli, "Traits — Composing Classes from Behavioral Building Blocks," Ph.D. thesis, University of Bern, February 2005.

27. Michele Lanza, "Object-Oriented Reverse Engineering — Coarse-grained, Fine-grained, and Evolutionary Software Visualization," Ph.D. thesis, University of Bern, May 2003.

28. Franz Achermann, "Forms, Agents and Channels — Defining Composition Abstraction with Style," Ph.D. thesis, University of Bern, January 2002.

29. Tamar Richner, "Recovering Behavioral Design Views: a Query-Based Approach," Ph.D. thesis, University of Bern, May 2002.

30. Sander Tichelaar, "Modeling Object-Oriented Software for Reverse Engineering and Refactoring," Ph.D. thesis, University of Bern, December 2001.

31. Markus Lumpe, "A Pi-Calculus Based Approach to Software Composition," Ph.D. thesis, University of Bern, Institute of Computer Science and Applied Mathematics, January 1999.

32. Jean-Guy Schneider, "Components, Scripts, and Glue: A conceptual framework for software composition," Ph.D. thesis, University of Bern, Institute of Computer Science and Applied Mathematics, October 1999.

33. Luca Deri, "A Component-based Architecture for Open, Independently Extensible Distributed Systems," Ph.D. thesis, University of Bern, June 1997.

34. Simon Moser, "Measurement and Estimation of Software and Software Processes," Ph.D. thesis, University of Bern, December 1996.

35. Igor Metz, "Bintree Lab: Ein Framework von Datenstrukturen und Algorithmen für Bintrees," Ph.D. thesis, University of Bern, October 1995.

7.3 Masters and Diploma Theses supervised or co-supervised

1. Andreas Hohler, "Big Commit Analysis — Towards an Infrastructure for Commit Analysis," Masters thesis, University of Bern, January 2018.

2. Pascal Gadient, "Security in Android Applications," Masters thesis, University of Bern, August 2017.

3. Manuel Leuenberger, "Nullable Method Detection — Inferring Method Nullability From API Usage," Masters thesis, University of Bern, February 2017.

4. Roger Stebler, "An empirical investigation into the usage of a live debugger," Masters thesis, University of Bern, June 2017.

5. Max Leske, "Improving live debugging of concurrent threads," Masters thesis, University of Bern, August 2016.

6. Michael Rüfenacht, "Error Handling in PEG Parsers — Local Error Recovery for PetitParser," Masters thesis, University of Bern, August 2016.

7. Bledar Aga, "Marea — A Tool for Breaking Dependency Cycles Between Packages," Masters thesis, University of Bern, January 2015.

8. Aliya Ibragimova, "CiteWise — The Citation Search Engine," Masters thesis, University of Bern, June 2015.

9. Cedric Reichenbach, "DoodleDebug, Clustered — Morphing DoodleDebug into a clustered setup using fat clients," Masters thesis, University of Bern, August 2015.

10. Oskar Truffer, "Continuous Integration with Architectural Invariants — A case study about architectural monitoring in practice," Masters thesis, University of Bern, December 2015.

11. Olivier Flückiger, "Compiled Compiler Templates for V8 or: How I Learned to Stop Worrying and Love JavaScript," Masters thesis, University of Bern, February 2014.

12. Nicole Haenni, "Information Needs in Software Ecosystems Development — A Contribution to Improve Tool Support Across Software Systems," Masters thesis, University of Bern, September 2014.

13. Aaron Karper, "Efficient regular expressions that produce parse trees," Masters thesis, University of Bern, December 2014.

14. Dennis Schenk, "Quicksilver — A Framework for Hierarchical Data Analysis," Masters thesis, University of Bern, September 2014.

15. Simon Vogt, "Clone detection that scales," Masters thesis, University of Bern, February 2014.

16. Erik Aeschlimann, "St1-PL/1: Extracting quality information from PL/1 legacy ecosystems," Masters thesis, University of Bern, December 2013.

17. Raffael Krebs, "Vera — An extensible Eclipse Plug-In for Java Enterprise Application Analysis," Masters thesis, University of Bern, April 2012.

18. Andrea Quadri, "Chameleon: Decoupling Instrumentation from Development Tools with Explicit Meta-Events," Masters thesis, University of Bern, January 2012.

19. Camillo Bruni, "Optimizing Pinocchio," Masters thesis, University of Bern, January 2011.

20. David Gurtner, "Safe Dynamic Software Updates in Multi-Threaded Systems with ActiveContext," Masters thesis, University of Bern, April 2011.

21. Daniel Langone, "Subjectopia — Unifying Subjectivity," Masters thesis, University of Bern, February 2011.

22. Peter Loretan, "Software Cartography — A Prototype for Thematic Software Maps," Masters thesis, University of Bern, April 2011.

23. David Erni, "Codemap—Improving the Mental Model of Software Developers through Cartographic Visualization," Masters thesis, University of Bern, January 2010.

24. Marcel Härry, "Augmenting Eclipse with Dynamic Information," Masters thesis, University of Bern, May 2010.

25. Philipp Bunge, "Scripting Browsers with Glamour," Masters thesis, University of Bern, April 2009.

26. Sandro De Zanet, "Grammar Generation with Genetic Programming — Evolutionary Grammar Generation," Masters thesis, University of Bern, July 2009.

27. Julien Fierz, "Compass: Flow-Centric Back-In-Time Debugging," Masters thesis, University of Bern, January 2009.

28. Lea Hänsenberger, "Defect Isolation As Responsibility of the Framework — Automated API Migration from JUnit to JExample," Masters thesis, University of Bern, September 2009.

29. Matthias Junker, "Kumpel: Visual Exploration of File Histories," Masters thesis, University of Bern, January 2009.

30. Dominique Matter, "Who Knows about That Bug? — Automatic Bug Report Assignment with a Vocabulary-Based Developer Expertise Model," Masters thesis, University of Bern, June 2009.

31. Andrea Brühlmann, "Enriching Reverse Engineering with Annotations," Masters thesis, University of Bern, April 2008.

32. Anselm Strauss, "Dynamic Aspects — An AOP Implementation for Squeak," Masters thesis, University of Bern, November 2008.

33. Niklaus Haldimann, "TypePlug — Pluggable Type Systems for Smalltalk," Masters thesis, University of Bern, April 2007.

34. Stefan Reichhart, "Assessing Test Quality — TestLint," Masters thesis, University Bern, April 2007.

35. Florian Thalmann, "Musical Composition with Grid Diagrams of Transformations," Masters thesis, University of Bern, March 2007.

36. Pascal Zumkehr, "Changeboxes — Modeling Change as a First-Class Entity," Masters thesis, University of Bern, February 2007.

37. Christoph Hofer, "Implementing a Backward-In-Time Debugger," Masters thesis, University of Bern, September 2006.

38. Adrian Kuhn, "Semantic Clustering: Making Use of Linguistic Information to Reveal Concepts in Source Code," Masters thesis, University of Bern, March 2006.

39. Philippe Marschall, "Persephone: Taking Smalltalk Reflection to the sub-method Level," Masters thesis, University of Bern, December 2006.

40. Michael Meyer, "Scripting Interactive Visualizations," Masters thesis, University of Bern, November 2006.

41. Lukas Renggli, "Magritte — Meta-Described Web Application Development," Masters thesis, University of Bern, June 2006.

42. David Röthlisberger, "Geppetto: Enhancing Smalltalk's Reflective Capabilities with Unanticipated Reflection," Masters thesis, University of Bern, January 2006.

43. Mauricio Seeberger, "How Developers Drive Software Evolution," Masters thesis, University of Bern, January 2006.

44. Rafael Wampfler, "Eg — a Meta-Model and Editor for Unit Tests," Masters thesis, University of Bern, November 2006.

45. Markus Kobel, "Parsing by Example," Masters thesis, University of Bern, April 2005.

46. Christoph Wysseier, "Interactive 3-D Visualization of Feature-Traces," Masters thesis, University of Bern, Switzerland, November 2005.

47. Thomas Bühler, "Detecting and Visualizing Phases in Software Evolution," Masters thesis, University of Bern, September 2004.

48. Michael Freidig, "Trace Based Object-Oriented Application Testing," Masters thesis, University of Bern, January 2004.

49. Marc-Philippe Horvath, "Automatic Recognition of Class Blueprint Patterns," Masters thesis, University of Bern, October 2004.

50. Adrian Lienhard, "Bootstrapping Traits," Masters thesis, University of Bern, November 2004.

51. Florian Minjat, "Vers une modélisation transverse et modulaire des collaborations par couplage des traits et des classboxes," Masters thesis, Ecole des mines de Nantes, September 2004.

52. David Vogel, "Management and Security of Collaborative Web Environments," Masters thesis, University of Bern, June 2004.

53. Tobias Aebi, "Extracting Architectural Information using Different Levels of Collaboration," Masters thesis, University of Bern, September 2003.

54. Frank Buchli, "Detecting Software Patterns using Formal Concept Analysis," Masters thesis, University of Bern, September 2003.

55. Stefan Kneubühl, "Typeful Compositional Styles," Masters thesis, University of Bern, April 2003.

56. Andreas Schlapbach, "Enabling White-Box Reuse in a Pure Composition Language," Masters thesis, University of Bern, January 2003.

57. Daniele Talerico, "Grouping in Object-Oriented Reverse Engineering," Masters thesis, University of Bern, June 2003.

58. Daniel Schweizer, "Navigation in Object-Oriented Reverse Engineering," Masters thesis, University of Bern, June 2002.

59. Georges Golomingi Koni-N'sapu, "A Scenario Based Approach for Refactoring Duplicated Code in Object Oriented Systems," Masters thesis, University of Bern, June 2001.

60. Thomas F. Hofmann, "OPENSPACES, An Object-Oriented Framework for Configurable Coordination of Heterogeneous Agents," Masters thesis, University of Bern, April 2001.

61. Christian Kaufmann, "Software Engineering im Spannungsfeld Theorie und Praxis," Masters thesis, University of Bern, 2001.

62. Nathanael Schärli, "Supporting Pure Composition by Inter-language Bridging on the Meta-level," Masters thesis, University of Bern, September 2001.

63. Lukas Steiger, "Recovering the Evolution of Object Oriented Software Systems Using a Flexible Query Engine," Masters thesis, University of Bern, June 2001.

64. Roger Blum, "Entwicklung eines Prototypen für die aktive Schicht ALFRED," Masters thesis, University of Bern, May 2000.

65. Fredi Frank, "An Associative Documentation Model," Masters thesis, University of Bern, October 1999.

66. Michael Held, "Scripting für CORBA," Masters thesis, University of Bern, March 1999.

67. Michele Lanza, "Combining Metrics and Graphs for Object Oriented Reverse Engineering," Masters thesis, University of Bern, October 1999.

68. Tobias Röthlisberger, "Compiler Framework for the Java Virtual Machine," Masters thesis, University of Bern, May 1999.

69. Manuel Günter, "Explicit Connectors for Coordination of Active Objects," Masters thesis, University of Bern, March 1998.

70. Daniel Kühni, "APROCO: A Programmable Coordination Medium," Masters thesis, University of Bern, October 1998.

71. Roland Loser, "Objekt-orientierter Compilerentwurf," Masters thesis, University of Bern, January 1998.

72. Benno Burkhardt, "Erweiterung objektorientierter Methoden für den konzeptuellen Datenbankentwurf," Masters thesis, University of Bern, October 1997.

73. Jürg Gertsch, "Fruitlets — a Kind of Mobile Component," Masters thesis, University of Bern, June 1997.

74. Georg Lörincze, "Modellierung, Analyse und Simulation von Regeln in der aktiven Schicht AL-FRED," Masters thesis, University of Bern, April 1997.

75. Matthias Rieger, "Implementing the FACE Object Model in C++," Masters thesis, University of Bern, June 1997.

76. Sander Tichelaar, "A Coordination Component Framework for Open Distributed Systems," Masters thesis, University of Groningen, NL — University of Bern, CH, May 1997.

77. Pierre Viret, "Viewing C++ Objects as Communicating Processes," Masters thesis, Laboratoire de Téléinformatique, Ecole Polytechnique Fédérale de Lausanne (EPFL), CH, March 1996.

8 Publications

H-index: 45.

All publications are available online: `http://scg.unibe.ch/staff/oscar/onpubs`.

8.1 Invited papers

1. Oscar Nierstrasz, "The Death of Object-Oriented Programming," *FASE 2016*, Perdita Stevens and Andrzej Wasowski (Eds.), LNCS, vol. 9633, Springer-Verlag, 2016, pp. 3–10.

2. Oscar Nierstrasz, "Agile software assessment with Moose," *SIGSOFT Softw. Eng. Notes*, vol. 37, no. 3, May 2012, pp. 1–5.

3. Oscar Nierstrasz and Mircea Lungu, "Agile software assessment," *Proceedings of International Conference on Program Comprehension (ICPC 2012)*, 2012, pp. 3–10.

4. Oscar Nierstrasz and Tudor Gîrba, "Lessons in Software Evolution Learned by Listening to Smalltalk," *SOFSEM 2010*, J. van Leeuwen et al. (Ed.), LNCS, vol. 5901, Springer-Verlag, 2010, pp. 77–95.

5. Oscar Nierstrasz, "Modeling Change as a First-Class Entity," *ASWEC '07: Proceedings of the 2007 Australian Software Engineering Conference*, IEEE Computer Society, Washington, DC, USA, 2007, pp. 3, abstract of invited talk.

6. Oscar Nierstrasz, Alexandre Bergel, Marcus Denker, Stéphane Ducasse, Markus Gaelli and Roel Wuyts, "On the Revival of Dynamic Languages," *Proceedings of Software Composition 2005*, Thomas Gschwind and Uwe Aßmann (Eds.), vol. 3628, LNCS 3628, 2005, pp. 1–13, Invited paper.

7. Oscar Nierstrasz, Stéphane Ducasse and Tudor Gîrba, "The Story of Moose: an Agile Reengineering Environment," *Proceedings of the European Software Engineering Conference (ESEC/FSE'05)*, ACM Press, New York, NY, USA, September 2005, pp. 1–10, Invited paper.

8. Oscar Nierstrasz, Stéphane Ducasse and Serge Demeyer, "Object-oriented Reengineering Patterns — an Overview," *Proceedings of Generative Programming and Component Engineering (GPCE 2005)*, Michael Lowry Robert Glück (Ed.), LNCS 3676, 2005, pp. 1–9, Invited paper.

9. Oscar Nierstrasz, Stéphane Ducasse and Serge Demeyer, "Objektorientierte Re-Engineering-Muster: ein Überblick," *ObjektSpektrum*, vol. 2005, no. 6, 2005, pp. 46–51, German translation of "Object-oriented Reengineering Patterns — an Overview" (GPCE 05).

10. Oscar Nierstrasz, "Software Evolution as the Key to Productivity," *Radical Innovations of Software and Systems Engineering in the Future*, A. Knapp M. Wirsing and S. Balsamo (Eds.), LNCS, vol. 2941, Springer-Verlag, 2004, pp. 274–282.

11. Oscar Nierstrasz, "Putting Change at the Center of the Software Process," *International Symposium on Component-Based Software Engineering (CBSE) 2004*, I. Crnkovic, J.A. Stafford, H.W. Schmidt and K. Wallnau (Eds.), LNCS, vol. 3054, Springer-Verlag, 2004, pp. 1–4, Extended abstract of an invited talk.

12. Oscar Nierstrasz and Franz Achermann, "A Calculus for Modeling Software Components," *FMCO 2002 Proceedings*, S. Graf F. S. De Boer, M. M. Bonsangue and W-P. de Roever (Eds.), LNCS, vol. 2852, Springer-Verlag, 2003, pp. 339–360.

13. Oscar Nierstrasz, "Software Evolution as the Key to Productivity," *Proceedings Radical Innovations of Software and Systems Engineering in the Future*, Venice, Italy, October 2002, preprint.

14. Oscar Nierstrasz and Markus Lumpe, "Komponenten, Komponentenframeworks und Gluing," *HMD — Theorie und Praxis der Wirtschaftsinformatik*, September 1997, pp. 8–23.

15. Gerti Kappel and Oscar Nierstrasz, "Prototyping in einer objektorientierten Entwicklungsumgebung," *Handbuch der Modernen Datenverarbeitung*, vol. 145, January 1989, pp. 116–125.

16. Dennis Tsichritzis and Oscar Nierstrasz, "Fitting Round Objects into Square Databases," *Proceedings ECOOP '88*, S. Gjessing and K. Nygaard (Eds.), LNCS, vol. 322, Springer-Verlag, Oslo, April 1988, pp. 283–299.

17. Oscar Nierstrasz, "What is the 'Object' in Object-oriented Programming?," *Proceedings of the CERN School of Computing*, vol. CERN 87-04, Renesse, the Netherlands, September 1986, pp. 43–53.

8.2 Refereed Papers in International Journals

1. Leonel Merino, Mohammad Ghafari and Oscar Nierstrasz, "Towards Actionable Visualization for Software Developers," *Journal of Software: Evolution and Process*, vol. 30, no. 2, 2018, pp. e1923–n/a.

2. Jan Kurš, Jan Vraný, Mohammad Ghafari, Mircea Lungu and Oscar Nierstrasz, "Efficient parsing with parser combinators," *Science of Computer Programming*, 2017.

3. Max Leske, Andrei Chiş and Oscar Nierstrasz, "Improving live debugging of concurrent threads through thread histories," *Science of Computer Programming*, 2017.

4. Nevena Milojković, Clément Béra, Mohammad Ghafari and Oscar Nierstrasz, "Mining Inline Cache Data to Order Inferred Types in Dynamic Languages," *Science of Computer Programming, Elsevier, Special Issue on Adv. Dynamic Languages*, 2017.

5. Andrei Chiş, Marcus Denker, Tudor Gîrba and Oscar Nierstrasz, "Practical domain-specific debuggers using the Moldable Debugger framework," *Computer Languages, Systems & Structures*, vol. 44, Part A, 2015, pp. 89–113, Special issue on the 6th and 7th International Conference on Software Language Engineering (SLE 2013 and SLE 2014).

6. Jan Kurš, Mircea Lungu, Rathesan Iyadurai and Oscar Nierstrasz, "Bounded seas," *Computer Languages, Systems & Structures*, vol. 44, Part A, 2015, pp. 114 - 140, Special issue on the 6th and 7th International Conference on Software Language Engineering (SLE 2013 and SLE 2014).

7. Oscar Nierstrasz and Jan Kurš, "Parsing for agile modeling," *Science of Computer Programming*, vol. 97, Part 1, 2015, pp. 150–156.

8. Camille Teruel, Erwann Wernli, Stéphane Ducasse and Oscar Nierstrasz, "Propagation of Behavioral Variations with Delegation Proxies," *Transactions on Aspect-Oriented Software Development XII*, vol. 8989, 2015, pp. 63-95.

9. Amir Aryani, Fabrizio Perin, Mircea Lungu, Abdun Naser Mahmood and Oscar Nierstrasz, "Predicting dependencies using domain-based coupling," *Journal of Software: Evolution and Process*, vol. 26, no. 1, 2014, pp. 50–76.

10. Mircea Lungu, Michele Lanza and Oscar Nierstrasz, "Evolutionary and Collaborative Software Architecture Recovery with Softwarenaut," *Science of Computer Programming*, vol. 79, 2014, pp. 204 - 223.

11. Erwann Wernli, Mircea Lungu and Oscar Nierstrasz, "Incremental Dynamic Updates with First-class Contexts," *Journal of Object Technology*, vol. 12, no. 3, August 2013, pp. 1:1-27.

12. Adrian Lienhard, Tudor Gîrba and Oscar Nierstrasz, "Specifying Dynamic Analyses by Extending Language Semantics," *Transactions on Software Engineering*, vol. 38, no. 3, 2012, pp. 694–706.

13. Jorge Ressia, Alexandre Bergel, Oscar Nierstrasz and Lukas Renggli, "Modeling Domain-Specific Profilers," *Journal of Object Technology*, vol. 11, no. 1, April 2012, pp. 1-21.

14. Jorge Ressia, Tudor Gîrba, Oscar Nierstrasz, Fabrizio Perin and Lukas Renggli, "Talents: an environment for dynamically composing units of reuse," *Software: Practice and Experience*, 2012.

15. Niko Schwarz, Mircea Lungu and Oscar Nierstrasz, "Seuss: Decoupling responsibilities from static methods for fine-grained configurability," *Journal of Object Technology*, vol. 11, no. 1, 2012.

16. David Röthlisberger, Marcel Härry, Alex Villazón, Danilo Ansaloni, Walter Binder, Oscar Nierstrasz and Philippe Moret, "Exploiting Dynamic Information in IDEs Improves Speed and Correctness of Software Maintenance Tasks," *Transactions on Software Engineering*, 2011.

17. Adrian Kuhn, David Erni, Peter Loretan and Oscar Nierstrasz, "Software Cartography: Thematic Software Visualization with Consistent Layout," *Journal of Software Maintenance and Evolution (JSME)*, vol. 22, no. 3, April 2010, pp. 191–210.

18. Gisèle Douta, Haydar Talib, Oscar Nierstrasz and Frank Langlotz, "CompAS: A new approach to commonality and variability analysis with applications in computer assisted orthopaedic surgery," *Information and Software Technology*, vol. 51, no. 2, 2009, pp. 448-459.

19. Niklaus Haldimann, Marcus Denker and Oscar Nierstrasz, "Practical, Pluggable Types for a Dynamic Language," *Journal of Computer Languages, Systems and Structures*, vol. 35, no. 1, April 2009, pp. 48–64.

20. Lukas Renggli and Oscar Nierstrasz, "Transactional Memory in a Dynamic Language," *Journal of Computer Languages, Systems and Structures*, vol. 35, no. 1, April 2009, pp. 21–30.

21. Alexandre Bergel, Stéphane Ducasse, Oscar Nierstrasz and Roel Wuyts, "Stateful Traits and their Formalization," *Journal of Computer Languages, Systems and Structures*, vol. 34, no. 2-3, 2008, pp. 83–108.

22. Mariangiola Dezani-Ciancaglini, Paola Giannini and Oscar Nierstrasz, "A Calculus of Evolving Objects," *Scientific Annals of Computer Science*, vol. XVIII, 2008, pp. 63-98.

23. Robert Hirschfeld, Pascal Costanza and Oscar Nierstrasz, "Context-Oriented Programming," *Journal of Object Technology*, vol. 7, no. 3, March 2008.

24. Stéphane Ducasse, Oscar Nierstrasz, Nathanael Schärli, Roel Wuyts and Andrew P. Black, "Traits: A Mechanism for fine-grained Reuse," *TOPLAS: ACM Transactions on Programming Languages and Systems*, vol. 28, no. 2, March 2006, pp. 331–388.

25. Stéphane Ducasse, Oscar Nierstrasz and Matthias Rieger, "On the Effectiveness of Clone Detection by String Matching," *Journal of Software Maintenance and Evolution: Research and Practice (JSME)*, vol. 18, no. 1, January 2006, pp. 37–58.

26. Oscar Nierstrasz, Stéphane Ducasse and Nathanael Schärli, "Flattening Traits," *Journal of Object Technology*, vol. 5, no. 4, May 2006, pp. 129–148.

27. Franz Achermann and Oscar Nierstrasz, "A Calculus for Reasoning about Software Components," *Theoretical Computer Science*, vol. 331, no. 2-3, 2005, pp. 367–396.

28. Alexandre Bergel, Stéphane Ducasse, Oscar Nierstrasz and Roel Wuyts, "Classboxes: Controlling Visibility of Class Extensions," *Journal of Computer Languages, Systems and Structures*, vol. 31, no. 3-4, December 2005, pp. 107–126.

29. Alexandre Bergel, Stéphane Ducasse and Oscar Nierstrasz, "Analyzing Module Diversity," *Journal of Universal Computer Science*, vol. 11, no. 10, November 2005, pp. 1613–1644.

30. Roel Wuyts, Stéphane Ducasse and Oscar Nierstrasz, "A Data-centric Approach to Composing Embedded, Real-time Software Components," *Journal of Systems and Software — Special Issue on Automated Component-Based Software Engineering*, vol. 74, no. 1, 2005, pp. 25–34.

31. Serge Demeyer, Theo Dirk Meijler, Oscar Nierstrasz and Patrick Steyaert, "Design Guidelines for Tailorable Frameworks," *Communications of the ACM*, vol. 40, no. 10, October 1997, pp. 60–64.

32. Simon Moser and Oscar Nierstrasz, "The Effect of Object-Oriented Frameworks on Developer Productivity," *IEEE Computer*, September 1996, pp. 45–51.

33. Oscar Nierstrasz and Theo Dirk Meijler, "Research Directions in Software Composition," *ACM Computing Surveys*, vol. 27, no. 2, June 1995, pp. 262–264.

34. Mariagrazia Fugini, Oscar Nierstrasz and Barbara Pernici, "Application Development Through Reuse: The ITHACA Tools Environment," *SIGOIS Bulletin*, vol. 13, no. 2, August 1992, pp. 38–47.

35. Oscar Nierstrasz, Simon Gibbs and Dennis Tsichritzis, "Component-Oriented Software Development," *Communications of the ACM*, vol. 35, no. 9, September 1992, pp. 160–165.

36. Dennis Tsichritzis, Oscar Nierstrasz and Simon Gibbs, "Beyond Objects: Objects," *IJICIS (International Journal of Intelligent & Cooperative Information Systems)*, vol. 1, no. 1, 1992, pp. 43–60.

37. Simon Gibbs, Dennis Tsichritzis, Eduardo Casais, Oscar Nierstrasz and Xavier Pintado, "Class Management for Software Communities," *Communications of the ACM*, vol. 33, no. 9, September 1990, pp. 90–103.

38. Gerti Kappel, Jan Vitek, Oscar Nierstrasz, Betty Junod and Marc Stadelmann, "Scripting Applications in the Public Administration Domain," *SIGOIS Bulletin*, vol. 10, no. 4, December 1989, pp. 21–32.

39. Dennis Tsichritzis, Eugene Fiume, Simon Gibbs and Oscar Nierstrasz, "KNOs: KNowledge Acquisition, Dissemination and Manipulation Objects," *ACM TOOIS (Transactions on Office Information Systems)*, vol. 5, no. 1, January 1987, pp. 96–112.

40. Oscar Nierstrasz, "Hybrid: A Unified Object-Oriented System," *IEEE Database Engineering*, vol. 8, no. 4, December 1985, pp. 49–57.

41. Dennis Tsichritzis and Oscar Nierstrasz, "End User Objects," *Büroautomation '85 (German Chapter of the ACM, Berichte 25)*, October 1985, pp. 215–232.

42. Dennis Tsichritzis, Fausto Rabitti, Simon Gibbs, Oscar Nierstrasz and John Hogg, "A System for Managing Structured Messages," *IEEE Transactions on Communications*, vol. 30, no. 1, January 1982, pp. 66–73.

43. C.B. Collins, Ian P. Goulden, David M. Jackson and Oscar Nierstrasz, "A Combinatorial Application of Matrix Riccati Equations and their q-analogue," *Discrete Mathematics*, vol. 36, 1981.

8.3   Refereed Papers in International Conferences

1. Yuriy Tymchuk, Mohammad Ghafari and Oscar Nierstrasz, "JIT Feedback — what Experienced Developers like about Static Analysis," *26th IEEE International Conference on Program Comprehension (ICPC 2018)*, 2018, To appear.

2. Mohammad Ghafari, Pascal Gadient and Oscar Nierstrasz, "Security Smells in Android," *17th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM)*, September 2017, pp. 121-130.

3. Manuel Leuenberger, Haidar Osman, Mohammad Ghafari and Oscar Nierstrasz, "Harvesting the Wisdom of the Crowd to Infer Method Nullness in Java," *Proceedings of the 17th International Working Conference on Source Code Analysis and Manipulation*, SCAM 2017, IEEE, 2017.

4. Manuel Leuenberger, Haidar Osman, Mohammad Ghafari and Oscar Nierstrasz, "KOWALSKI: Collecting API Clients in Easy Mode," *Proceedings of the 33rd International Conference on Software Maintenance and Evolution*, ICSME 2017, IEEE, 2017.

5. Leonel Merino, Johannes Fuchs, Michael Blumenschein, Craig Anslow, Mohammad Ghafari, Oscar Nierstrasz, Michael Behrisch and Daniel Keim, "On the Impact of the Medium in the Effectiveness of 3D Software Visualization," *VISSOFT'17: Proceedings of the 5th IEEE Working Conference on Software Visualization*, IEEE, 2017, pp. 11–21.

6. Leonel Merino, Mohammad Ghafari, Craig Anslow and Oscar Nierstrasz, "CityVR: Gameful Software Visualization," *ICSME'17: Proceedings of the 33rd IEEE International Conference on Software Maintenance and Evolution (TD Track)*, IEEE, 2017, pp. 633–637.

7. Nevena Milojković, Mohammad Ghafari and Oscar Nierstrasz, "Exploiting Type Hints in Method Argument Names to Improve Lightweight Type Inference," *25th IEEE International Conference on Program Comprehension*, 2017.

8. Nevena Milojković, Mohammad Ghafari and Oscar Nierstrasz, "It's Duck (Typing) Season!," *25th IEEE International Conference on Program Comprehension (ERA Track)*, 2017.

9. Haidar Osman, Andrei Chiş, Jakob Schaerer, Mohammad Ghafari and Oscar Nierstrasz, "On the Evolution of Exception Usage in Java Projects," *Proceedings of the 24rd IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER)*, February 2017, pp. 422–426.

10. Haidar Osman, Andrei Chiş, Claudio Corrodi, Mohammad Ghafari and Oscar Nierstrasz, "Exception Evolution in Long-lived Java Systems," *Proceedings of the 14th International Conference on Mining Software Repositories*, MSR '17, 2017.

11. Haidar Osman, Mohammad Ghafari, Oscar Nierstrasz and Mircea Lungu, "An Extensive Analysis of Efficient Bug Prediction Configurations," *Proceedings of the 13th International Conference on Predictive Models and Data Analytics in Software Engineering*, PROMISE, ACM, New York, NY, USA, 2017, pp. 107–116.

12. Andrea Caracciolo, Bledar Aga, Mircea Lungu and Oscar Nierstrasz, "Marea: a Semi-automatic Decision Support System for Breaking Dependency Cycles," *Proceedings of the 23rd IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER)*, March 2016, to appear.

13. Andrei Chiş, Tudor Gîrba, Juraj Kubelka, Oscar Nierstrasz, Stefan Reichhart and Aliaksei Syrel, "Moldable, context-aware searching with Spotter," *Proceedings of the 2016 ACM International Symposium on New Ideas, New Paradigms, and Reflections on Programming and Software*, Onward! 2016, ACM, New York, NY, USA, 2016, pp. 128–144.

14. Leonel Merino, Mohammad Ghafari and Oscar Nierstrasz, "Towards Actionable Visualisation in Software Development," *VISSOFT'16: Proceedings of the 4th IEEE Working Conference on Software Visualization*, IEEE, 2016.

15. Leonel Merino, Mohammad Ghafari, Oscar Nierstrasz, Alexandre Bergel and Juraj Kubelka, "MetaVis: Exploring Actionable Visualization," *VISSOFT'16: Proceedings of the 4th IEEE Working Conference on Software Visualization*, IEEE, 2016.

16. Nevena Milojković and Oscar Nierstrasz, "Exploring Cheap Type Inference Heuristics in Dynamically Typed Languages," *Proceedings of the 2016 ACM International Symposium on New Ideas, New Paradigms, and Reflections on Programming and Software, Onward! 2016*, ACM, New York, NY, USA, 2016, pp. 43–56.

17. Haidar Osman, Manuel Leuenberger, Mircea Lungu and Oscar Nierstrasz, "Tracking Null Checks in Open-Source Java Systems," *Proceedings of the 23rd IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER)*, March 2016.

18. Boris Spasojević, Mircea Lungu and Oscar Nierstrasz, "A Case Study on Type Hints in Method Argument Names in Pharo Smalltalk Projects," *Proceedings of the 23rd IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER)*, vol. 1, March 2016, pp. 283-292.

19. Yuriy Tymchuk, Leonel Merino, Mohammad Ghafari and Oscar Nierstrasz, "Walls, Pillars and Beams: A 3D Decomposition of Quality Anomalies," *VISSOFT'16: Proceedings of the 4th IEEE Working Conference on Software Visualization*, IEEE, 2016, pp. 126–135.

20. Andrea Caracciolo, Mircea Lungu and Oscar Nierstrasz, "A Unified Approach to Architecture Conformance Checking," *Proceedings of the 12th Working IEEE/IFIP Conference on Software Architecture (WICSA)*, ACM Press, May 2015, pp. 41-50.

21. Andrei Chiş, Tudor Gîrba, Oscar Nierstrasz and Aliaksei Syrel, "The Moldable Inspector," *Proceedings of the 2015 ACM International Symposium on New Ideas, New Paradigms, and Reflections on Programming and Software*, Onward! 2015, ACM, New York, NY, USA, 2015, pp. 44–60.

22. Leonel Merino, Mircea Lungu and Oscar Nierstrasz, "Explora: A Visualisation Tool for Metric Analysis of Software Corpora," *VISSOFT'15: Proceedings of the 3rd IEEE Working Conference on Software Visualization*, IEEE, 2015, pp. 195–199.

23. Andrea Caracciolo, Mircea Lungu and Oscar Nierstrasz, "How Do Software Architects Specify and Validate Quality Requirements?," *European Conference on Software Architecture (ECSA)*, Lecture Notes in Computer Science, vol. 8627, Springer Berlin Heidelberg, August 2014, pp. 374–389.

24. Andrei Chiş, Tudor Gîrba and Oscar Nierstrasz, "The Moldable Debugger: A Framework for Developing Domain-Specific Debuggers," *Software Language Engineering*, Benoît Combemale, David J. Pearce, Olivier Barais and Jurgen J. Vinju (Eds.), Lecture Notes in Computer Science, vol. 8706, Springer International Publishing, 2014, pp. 102-121.

25. Jan Kurš, Mircea Lungu and Oscar Nierstrasz, "Bounded Seas: Island Parsing Without Shipwrecks," *Software Language Engineering*, Benoît Combemale, David J. Pearce, Olivier Barais and Jurgen J. Vinju (Eds.), Lecture Notes in Computer Science, vol. 8706, Springer International Publishing, 2014, pp. 62-81.

26. Haidar Osman, Mircea Lungu and Oscar Nierstrasz, "Mining frequent bug-fix code changes," *Software Maintenance, Reengineering and Reverse Engineering (CSMR-WCRE), 2014 Software Evolution Week - IEEE Conference on*, February 2014, pp. 343-347.

27. Boris Spasojević, Mircea Lungu and Oscar Nierstrasz, "Overthrowing the Tyranny of Alphabetical Ordering in Documentation Systems," *2014 IEEE International Conference on Software Maintenance and Evolution (ERA Track)*, September 2014, pp. 511-515.

28. Boris Spasojević, Mircea Lungu and Oscar Nierstrasz, "Mining the Ecosystem to Improve Type Inference For Dynamically Typed Languages," *Proceedings of the 2014 ACM International Symposium on New Ideas, New Paradigms, and Reflections on Programming and Software*, Onward! '14, ACM, New York, NY, USA, 2014, pp. 133–142.

29. Erwann Wernli, Oscar Nierstrasz, Camille Teruel and Stephane Ducasse, "Delegation Proxies: The Power of Propagation," *Proceedings of the 13th International Conference on Modularity*, MODULARITY '14, ACM, New York, NY, USA, 2014, pp. 1–12.

30. Jorge Ressia, Alexandre Bergel and Oscar Nierstrasz, "Object-Centric Debugging," *Proceedings of the 34rd international conference on Software engineering*, ICSE '12, 2012.

31. Erwann Wernli, Mircea Lungu and Oscar Nierstrasz, "Incremental Dynamic Updates with First-class Contexts," *Objects, Components, Models and Patterns, Proceedings of TOOLS Europe 2012*, 2012, pp. 304-319.

32. Erwann Wernli, Pascal Maerki and Oscar Nierstrasz, "Ownership, filters and crossing handlers: flexible ownership in dynamic languages," *Proceedings of the 8th symposium on Dynamic languages*, DLS '12, ACM, New York, NY, USA, 2012, pp. 83–94.

33. Amir Aryani, Fabrizio Perin, Mircea Lungu, Abdun Naser Mahmood and Oscar Nierstrasz, "Can We Predict Dependencies Using Domain information?," *Proceedings of the 18th Working Conference on Reverse Engineering (WCRE 2011)*, October 2011, pp. 55-64.

34. Alexandre Bergel, Oscar Nierstrasz, Lukas Renggli and Jorge Ressia, "Domain-Specific Profiling," *Proceedings of the 49th International Conference on Objects, Models, Components and Patterns (TOOLS'11)*, LNCS, vol. 6705, Springer-Verlag, Berlin, Heidelberg, June 2011, pp. 68–82.

35. Daniel Langone, Jorge Ressia and Oscar Nierstrasz, "Unifying Subjectivity," *Proceedings of the 49th International Conference on Objects, Models, Components and Patterns (TOOLS'11)*, LNCS, vol. 6705, Springer-Verlag, June 2011, pp. 115–130.

36. David Röthlisberger, Oscar Nierstrasz and Stéphane Ducasse, "SmartGroups: Focusing on Task-Relevant Source Artifacts in IDEs," *Proceedings of the 19th International Conference on Program Comprehension (ICPC 2011)*, IEEE Computer Society, Los Alamitos, CA, USA, 2011, pp. 246–257.

37. Niko Schwarz, Mircea Lungu and Oscar Nierstrasz, "Seuss: Cleaning up Class Responsibilities with Language-based Dependency Injection," *Objects, Components, Models and Patterns, Proceedings of TOOLS Europe 2011*, LNCS, vol. 33, Springer-Verlag, 2011, pp. 276–289.

38. Toon Verwaest, Camillo Bruni, Mircea Lungu and Oscar Nierstrasz, "Flexible object layouts: enabling lightweight language extensions by intercepting slot access," *Proceedings of the 2011 ACM international conference on Object oriented programming systems languages and applications*, OOPSLA '11, ACM, New York, NY, USA, 2011, pp. 959–972.

39. Marcus Denker, Jorge Ressia, Orla Greevy and Oscar Nierstrasz, "Modeling Features at Runtime," *Proceedings of MODELS 2010 Part II*, LNCS, vol. 6395, Springer-Verlag, October 2010, pp. 138–152.

40. Adrian Kuhn, David Erni and Oscar Nierstrasz, "Embedding Spatial Software Visualization in the IDE: an Exploratory Study," *SOFTVIS 2010*, October 2010, pp. 113–122.

41. Fabrizio Perin, Tudor Gîrba and Oscar Nierstrasz, "Recovery and Analysis of Transaction Scope from Scattered Information in Java Enterprise Applications," *Proceedings of International Conference on Software Maintenance 2010*, September 2010, pp. 1-10.

42. Lukas Renggli, Tudor Gîrba and Oscar Nierstrasz, "Embedding Languages Without Breaking Tools," *ECOOP'10: Proceedings of the 24th European Conference on Object-Oriented Programming*, Theo D'Hondt (Ed.), LNCS, vol. 6183, Springer-Verlag, Maribor, Slovenia, 2010, pp. 380–404.

43. Lukas Renggli, Stéphane Ducasse, Tudor Gîrba and Oscar Nierstrasz, "Domain-Specific Program Checking," *Proceedings of the 48th International Conference on Objects, Models, Components and Patterns (TOOLS'10)*, Jan Vitek (Ed.), LNCS, vol. 6141, Springer-Verlag, 2010, pp. 213–232.

44. Toon Verwaest, Camillo Bruni, David Gurtner, Adrian Lienhard and Oscar Nierstrasz, "Pinocchio: Bringing Reflection to Life with First-Class Interpreters," *OOPSLA Onward! '10*, vol. 45, ACM, New York, NY, USA, 2010, pp. 774–789.

45. Adrian Lienhard, Julien Fierz and Oscar Nierstrasz, "Flow-Centric, Back-In-Time Debugging," *Objects, Components, Models and Patterns, Proceedings of TOOLS Europe 2009*, LNBIP, vol. 33, Springer-Verlag, 2009, pp. 272–288.

46. Dominique Matter, Adrian Kuhn and Oscar Nierstrasz, "Assigning Bug Reports using a Vocabulary-Based Expertise Model of Developers," *MSR '09: Proceedings of the 2009 6th IEEE International Working Conference on Mining Software Repositories*, IEEE, 2009, pp. 131–140.

47. Lukas Renggli, Marcus Denker and Oscar Nierstrasz, "Language Boxes: Bending the Host Language with Modular Language Changes," *Software Language Engineering: Second International Conference, SLE 2009, Denver, Colorado, October 5-6, 2009*, LNCS, vol. 5969, Springer, 2009, pp. 274–293.

48. David Röthlisberger, Oscar Nierstrasz, Stéphane Ducasse, Damien Pollet and Romain Robbes, "Supporting Task-oriented Navigation in IDEs with Configurable HeatMaps," *Proceedings of the 17th International Conference on Program Comprehension (ICPC 2009)*, IEEE Computer Society, Los Alamitos, CA, USA, 2009, pp. 253–257.

49. David Röthlisberger, Marcel Härry, Alex Villazón, Danilo Ansaloni, Walter Binder, Oscar Nierstrasz and Philippe Moret, "Augmenting Static Source Views in IDEs with Dynamic Metrics," *Proceedings of the 25th International Conference on Software Maintenance (ICSM 2009)*, IEEE Computer Society, Los Alamitos, CA, USA, 2009, pp. 253–262.

50. David Röthlisberger, Marcel Härry, Alex Villazón, Danilo Ansaloni, Walter Binder, Oscar Nierstrasz and Philippe Moret, "Senseo: Enriching Eclipse's Static Source Views with Dynamic Metrics," *Proceedings of the 25th International Conference on Software Maintenance (ICSM 2009)*, IEEE Computer Society, Los Alamitos, CA, USA, 2009, pp. 383–384, Tool demo.

51. David Röthlisberger, Oscar Nierstrasz and Stéphane Ducasse, "Autumn Leaves: Curing the Window Plague in IDEs," *Proceedings of the 16th Working Conference on Reverse Engineering (WCRE 2009)*, IEEE Computer Society, Los Alamitos, CA, USA, 2009, pp. 237–246.

52. Rajesh Vasa, Markus Lumpe, Philip Branch and Oscar Nierstrasz, "Comparative Analysis of Evolving Software Systems Using the Gini Coefficient," *Proceedings of the 25th International Conference on Software Maintenance (ICSM 2009)*, IEEE Computer Society, Los Alamitos, CA, USA, 2009, pp. 179–188.

53. Carl Friedrich Bolz, Adrian Kuhn, Adrian Lienhard, Nicholas D. Matsakis, Oscar Nierstrasz, Lukas Renggli, Armin Rigo and Toon Verwaest, "Back to the future in one week — implementing a Smalltalk VM in PyPy," *Self-Sustaining Systems*, LNCS, vol. 5142, Springer, 2008, pp. 123–139.

54. Andrea Brühlmann, Tudor Gîrba, Orla Greevy and Oscar Nierstrasz, "Enriching Reverse Engineering with Annotations," *International Conference on Model Driven Engineering Languages and Systems (Models 2008)*, Krzysztof Czarnecki et al. (Ed.), LNCS, vol. 5301, Springer-Verlag, 2008, pp. 660-674.

55. Stéphane Ducasse, Tudor Gîrba, Orla Greevy, Michele Lanza and Oscar Nierstrasz, "Workshop on FAMIX and Moose in Software Reengineering (FAMOOSr 2008)," *15th Working Conference on Software Maintenance and Reengineering (WCRE 2008)*, October 2008, pp. 343–344.

56. Adrian Kuhn, Bart Van Rompaey, Lea Hänsenberger, Oscar Nierstrasz, Serge Demeyer, Markus Gaelli and Koenraad Van Leemput, "JExample: Exploiting Dependencies Between Tests to Improve Defect Localization," *Extreme Programming and Agile Processes in Software Engineering, 9th International Conference, XP 2008*, P. Abrahamsson (Ed.), Lecture Notes in Computer Science, Springer, 2008, pp. 73–82.

57. Adrian Kuhn, Peter Loretan and Oscar Nierstrasz, "Consistent Layout for Thematic Software Maps," *Proceedings of 15th Working Conference on Reverse Engineering (WCRE'08)*, IEEE Computer Society Press, Los Alamitos CA, October 2008, pp. 209–218.

58. Adrian Lienhard, Tudor Gîrba, Orla Greevy and Oscar Nierstrasz, "Test Blueprints — Exposing Side Effects in Execution Traces to Support Writing Unit Tests," *Proceedings of the 12th European Conference on Software Maintenance and Reengineering (CSMR'08)*, IEEE Computer Society Press, 2008, pp. 83–92.

59. Adrian Lienhard, Tudor Gîrba and Oscar Nierstrasz, "Practical Object-Oriented Back-in-Time Debugging," *Proceedings of the 22nd European Conference on Object-Oriented Programming (ECOOP'08)*, LNCS, vol. 5142, Springer, 2008, pp. 592–615, ECOOP distinguished paper award.

60. David Röthlisberger, Orla Greevy and Oscar Nierstrasz, "Exploiting Runtime Information in the IDE," *Proceedings of the 16th International Conference on Program Comprehension (ICPC 2008)*, IEEE Computer Society, Los Alamitos, CA, USA, 2008, pp. 63–72.

61. Rajesh Vasa, Jean-Guy Schneider, Oscar Nierstrasz and Clint Woodward, "On the Resilience of Classes to Change," *Proceedings of 3d International ERCIM Symposium on Software Evolution (Software Evolution 2007)*, Tom Mens, Maja D'Hondt and Kim Mens (Eds.), vol. 8, Electronic Communications of the EASST, 2008.

62. Alexandre Bergel, Stéphane Ducasse, Oscar Nierstrasz and Roel Wuyts, "Stateful Traits," *Advances in Smalltalk — Proceedings of 14th International Smalltalk Conference (ISC 2006)*, LNCS, vol. 4406, Springer, Berlin Heidelberg, August 2007, pp. 66–90.

63. Marcus Denker, Tudor Gîrba, Adrian Lienhard, Oscar Nierstrasz, Lukas Renggli and Pascal Zumkehr, "Encapsulating and Exploiting Change with Changeboxes," *ICDL'07: Proceedings of the 15th International Conference on Dynamic Languages*, ACM Digital Library, Lugano, Switzerland, August 2007, pp. 25–49.

64. Stéphane Ducasse, Roel Wuyts, Alexandre Bergel and Oscar Nierstrasz, "User-Changeable Visibility: Resolving Unanticipated Name Clashes in Traits," *Proceedings of 22nd International Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA'07)*, ACM Press, New York, NY, USA, October 2007, pp. 171–190.

65. Markus Gaelli, Rafael Wampfler and Oscar Nierstrasz, "Composing Tests from Examples," *Journal of Object Technology, Special Issue. Proceedings of TOOLS Europe 2007*, vol. 6/9, October 2007, pp. 71–86.

66. Niklaus Haldimann, Marcus Denker and Oscar Nierstrasz, "Practical, Pluggable Types," *Proceedings of the 2007 International Conference on Dynamic Languages (ICDL 2007)*, ACM Digital Library, 2007, pp. 183–204.

67. Adrian Lienhard, Orla Greevy and Oscar Nierstrasz, "Tracking Objects to detect Feature Dependencies," *Proceedings of the International Conference on Program Comprehension (ICPC'07)*, IEEE Computer Society, Washington, DC, USA, June 2007, pp. 59–68.

68. Martin von Löwis, Marcus Denker and Oscar Nierstrasz, "Context-Oriented Programming: Beyond Layers," *Proceedings of the 2007 International Conference on Dynamic Languages (ICDL 2007)*, ACM Digital Library, 2007, pp. 143–156.

69. Oscar Nierstrasz, Markus Kobel, Tudor Gîrba, Michele Lanza and Horst Bunke, "Example-Driven Reconstruction of Software Models," *Proceedings of Conference on Software Maintenance and Reengineering (CSMR 2007)*, IEEE Computer Society Press, Los Alamitos CA, 2007, pp. 275–286.

70. Lukas Renggli and Oscar Nierstrasz, "Transactional Memory for Smalltalk," *Proceedings of the 2007 International Conference on Dynamic Languages (ICDL 2007)*, ACM Digital Library, 2007, pp. 207–221.

71. David Röthlisberger, Orla Greevy and Oscar Nierstrasz, "Feature Driven Browsing," *Proceedings of the 2007 International Conference on Dynamic Languages (ICDL 2007)*, ACM Digital Library, 2007, pp. 79–100.

72. Rajesh Vasa, Jean-Guy Schneider and Oscar Nierstrasz, "The Inevitable Stability of Software Change," *Proceedings of 23rd IEEE International Conference on Software Maintenance (ICSM '07)*, IEEE Computer Society, Los Alamitos CA, 2007, pp. 4–13.

73. Markus Gaelli, Oscar Nierstrasz and Serge Stinckwich, "Idioms for Composing Games with Etoys," *Proceedings of C5 2006 (The Fourth International Conference on Creating, Connecting and Collaborating through Computing)*, January 2006, pp. 222–321.

74. Laura Ponisio and Oscar Nierstrasz, "Using Context Information to Re-architect a System," *Proceedings of the 3rd Software Measurement European Forum 2006 (SMEF'06)*, 2006, pp. 91–103.

75. Gabriela Arévalo, Stéphane Ducasse and Oscar Nierstrasz, "Discovering Unanticipated Dependency Schemas in Class Hierarchies," *Proceedings of 9th European Conference on Software Maintenance and Reengineering (CSMR'05)*, IEEE Computer Society, March 2005, pp. 62–71.

76. Gabriela Arévalo, Stéphane Ducasse and Oscar Nierstrasz, "Lessons Learned in Applying Formal Concept Analysis," *Proceedings of 3rd International Conference on Formal Concept Analysis (ICFCA '05)*, LNAI (Lecture Notes in Artificial Intelligence), vol. 3403, Springer Verlag, February 2005, pp. 95–112.

77. Alexandre Bergel, Stéphane Ducasse and Oscar Nierstrasz, "Classbox/J: Controlling the Scope of Change in Java," *Proceedings of 20th International Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA'05)*, ACM Press, New York, NY, USA, 2005, pp. 177–189.

78. Markus Gaelli, Michele Lanza and Oscar Nierstrasz, "Towards a Taxonomy of SUnit Tests," *Proceedings of 13th International Smalltalk Conference (ISC'03)*, September 2005.

79. Gabriela Arévalo, Frank Buchli and Oscar Nierstrasz, "Detecting Implicit Collaboration Patterns," *Proceedings of WCRE '04 (11th Working Conference on Reverse Engineering)*, IEEE Computer Society Press, November 2004, pp. 122–131.

80. Markus Gaelli, Michele Lanza, Oscar Nierstrasz and Roel Wuyts, "Ordering Broken Unit Tests for Focused Debugging," *20th International Conference on Software Maintenance (ICSM 2004)*, 2004, pp. 114–123.

81. Nathanael Schärli, Stéphane Ducasse, Oscar Nierstrasz and Roel Wuyts, "Composable Encapsulation Policies," *Proceedings of European Conference on Object-Oriented Programming (ECOOP'04)*, LNCS, vol. 3086, Springer Verlag, June 2004, pp. 26–50.

82. Gabriela Arévalo, Stéphane Ducasse and Oscar Nierstrasz, "X-Ray Views: Understanding the Internals of Classes," *Proceedings of 18th Conference on Automated Software Engineering (ASE'03)*, IEEE Computer Society, October 2003, pp. 267–270, Short paper.

83. Nathanael Schärli, Stéphane Ducasse, Oscar Nierstrasz and Andrew P. Black, "Traits: Composable Units of Behavior," *Proceedings of European Conference on Object-Oriented Programming (ECOOP'03)*, LNCS, vol. 2743, Springer Verlag, Berlin Heidelberg, July 2003, pp. 248–274.

84. Thomas Genßler, Oscar Nierstrasz and Bastiaan Schönhage, "Components for Embedded Software — The PECOS Approach," *Proc. International Conference on Compilers, Architectures and Synthesis for Embedded Systems*, 2002.

85. Oscar Nierstrasz, Gabriela Arévalo, Stéphane Ducasse, Roel Wuyts, Andrew Black, Peter Müller, Christian Zeidler, Thomas Genssler and Reinier van den Born, "A Component Model for Field Devices," *Proceedings First International IFIP/ACM Working Conference on Component Deployment*, ACM, Berlin, Germany, June 2002, pp. 200–209.

86. Franz Achermann, Stefan Kneubühl and Oscar Nierstrasz, "Scripting Coordination Styles," *Coordination '2000*, António Porto and Gruia-Catalin Roman (Eds.), LNCS, vol. 1906, Springer-Verlag, Limassol, Cyprus, September 2000, pp. 19–35.

87. Franz Achermann and Oscar Nierstrasz, "Explicit Namespaces," *Modular Programming Languages, Proceedings of JMLC 2000 (Joint Modular Languages Conference)*, Jürg Gutknecht and Wolfgang Weck (Eds.), LNCS, vol. 1897, Springer-Verlag, Zürich, Switzerland, September 2000, pp. 77–89.

88. Serge Demeyer, Stéphane Ducasse and Oscar Nierstrasz, "Finding Refactorings via Change Metrics," *Proceedings of 15th International Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA '00)*, ACM Press, New York NY, 2000, pp. 166–178, Also in ACM SIGPLAN Notices 35 (10).

89. Stéphane Ducasse, Thomas Hofmann and Oscar Nierstrasz, "OpenSpaces: An Object-Oriented Framework For Reconfigurable Coordination Spaces," *Coordination Languages and Models*, António Porto and Gruia-Catalin Roman (Eds.), LNCS, vol. 1906, Limassol, Cyprus, September 2000, pp. 1–19.

90. Oscar Nierstrasz, "Identify the Champion," *Pattern Languages of Program Design*, N. Harrison, B. Foote and H. Rohnert (Eds.), vol. 4, Addison Wesley, 2000, pp. 539–556.

91. Oscar Nierstrasz and Franz Achermann, "Supporting Compositional Styles for Software Evolution," *Proceedings International Symposium on Principles of Software Evolution (ISPSE 2000)*, IEEE, Kanazawa, Japan, November 2000, pp. 11–19.

92. Sander Tichelaar, Stéphane Ducasse, Serge Demeyer and Oscar Nierstrasz, "A Meta-model for Language-Independent Refactoring," *Proceedings of International Symposium on Principles of Software Evolution (ISPSE '00)*, IEEE Computer Society Press, Los Alamitos, CA, November 2000, pp. 157–167.

93. Markus Lumpe, Jean-Guy Schneider and Oscar Nierstrasz, "Using Metaobjects to Model Concurrent Objects with PICT," *Proceedings of Languages et Modèles à Objets*, Leysin, October 1996, pp. 1–12.

94. Oscar Nierstrasz, "Research Topics in Software Composition," *Proceedings, Langages et Modèles à Objets*, Nancy, October 1995, pp. 193–204.

95. Oscar Nierstrasz, Dimitri Konstantas, Klaus Dittrich and Dirk Jonscher, "CHASSIS — Une Plateforme pour la Construction de Systèmes d'Information Ouverts," *Proceedings, AFCET '93 — Vers des Systèmes d'Information Flexibles*, Versailles, June 1993, pp. 153–161, In French.

96. Oscar Nierstrasz, "Regular Types for Active Objects," *Proceedings OOPSLA '93, ACM SIGPLAN Notices*, vol. 28, October 1993, pp. 1–15.

97. Oscar Nierstrasz, Dennis Tsichritzis, Vicki de Mey and Marc Stadelmann, "Objects + Scripts = Applications," *Proceedings, Esprit 1991 Conference*, Kluwer Academic Publishers, Dordrecht, NL, 1991, pp. 534–552.

98. Martin Ader, Oscar Nierstrasz, Stephen McMahon, Gerhard Müller and Anna-Kristin Pröfrock, "The ITHACA Technology: A Landscape for Object-Oriented Application Development," *Proceedings, Esprit 1990 Conference*, Kluwer Academic Publishers, Dordrecht, NL, 1990, pp. 31–51.

99. Oscar Nierstrasz and Michael Papathomas, "Viewing Objects as Patterns of Communicating Agents," *Proceedings OOPSLA/ECOOP '90, ACM SIGPLAN Notices*, vol. 25, October 1990, pp. 38–43.

100. Dennis Tsichritzis and Oscar Nierstrasz, "Application Development Using Objects," *Information Technology for Organisational Systems, Proceedings EURINFO '88*, H-J. Bullinger et al. (Ed.), Elsevier Science Publishers B.V. (North-Holland), 1988, pp. 15–23.

101. Oscar Nierstrasz, "Active Objects in Hybrid," *Proceedings OOPSLA '87, ACM SIGPLAN Notices*, vol. 22, December 1987, pp. 243–253.

102. Oscar Nierstrasz and Dennis Tsichritzis, "An Object-Oriented Environment for OIS Applications," *Proceedings, Conference on Very Large Data Bases*, Stockholm, August 1985, pp. 335–345.

103. Oscar Nierstrasz, John Mooney and Kenneth J. Twaites, "Using Objects to Implement Office Procedures," *Proceedings of the Canadian Information Processing Society Conference*, Ottawa, May 1983, pp. 65–73.

8.4   Other articles

1. Alice Allen, Cecilia Aragon, Christoph Becker, Jeffrey Carver, Andrei Chis, Benoit Combemale, Mike Croucher, Kevin Crowston, Daniel Garijo, Ashish Gehani, Carole Goble, Robert Haines, Robert Hirschfeld, James Howison, Kathryn Huff, Caroline Jay, Daniel S. Katz, Claude Kirchner, Katie Kuksenok, Ralf Lämmel, Oscar Nierstrasz, Matt Turk, Rob van Nieuwpoort, Matthew Vaughn and Jurgen J. Vinju, "Engineering Academic Software (Dagstuhl Perspectives Workshop 16252)," *Dagstuhl Manifestos*, vol. 6, no. 1, 2017, pp. 1–20.

2. Carole Goble, James Howison, Claude Kirchner, Oscar Nierstrasz and Jurgen J. Vinju, "Engineering Academic Software (Dagstuhl Perspectives Workshop 16252)," *Dagstuhl Reports*, vol. 6, no. 6, 2016, pp. 62–87.

3. Niko Schwarz, Aaron Karper and Oscar Nierstrasz, "Efficiently extracting full parse trees using regular expressions with capture groups," *PeerJ PrePrints*, 2015, Preprint submitted for publication to PeerJ CS.

4. Andrea Caracciolo, Mircea Lungu and Oscar Nierstrasz, "Dicto: Keeping Software Architecture Under Control," *ERCIM News*, vol. 99, October 2014.

5. Mircea Lungu and Oscar Nierstrasz, "Recovering Software Architecture with Softwarenaut," *ERCIM News*, vol. 88, January 2012.

6. Mircea Lungu, Oscar Nierstrasz and Niko Schwarz, "Big Software Data Analysis," *ERCIM News*, vol. 89, April 2012.

7. Oscar Nierstrasz, "Ten Things I Hate About Object-Oriented Programming," *Journal of Object Technology*, vol. 9, no. 5, September 2010, (editorial — transcript of ECOOP 2010 banquet speech).

8. Oscar Nierstrasz and Stéphane Ducasse, "Moose – a Language-Independent Reengineering Environment," *European Research Consortium for Informatics and Mathematics (ERCIM) News*, vol. 58, July 2004, pp. 24–25.

9. Stéphane Ducasse, Oscar Nierstrasz and Roel Wuyts, "Composing Embedded Real-Time Software Components: the PECOS Data-Centric Approach," *ERCIM News*, vol. 52, January 2003.

8.5   Books

1. Andrew Black, Stéphane Ducasse, Oscar Nierstrasz, Damien Pollet, Damien Cassou and Marcus Denker, *Pharo by Example*, Square Bracket Associates, 2009.

2. Serge Demeyer, Stéphane Ducasse and Oscar Nierstrasz, *Object-Oriented Reengineering Patterns*, Square Bracket Associates, 2008.

3. Andrew Black, Stéphane Ducasse, Oscar Nierstrasz, Damien Pollet, Damien Cassou and Marcus Denker, *Squeak by Example*, Square Bracket Associates, 2007, http://squeakbyexample.org.

4. Serge Demeyer, Stéphane Ducasse and Oscar Nierstrasz, *Object-Oriented Reengineering Patterns*, Morgan Kaufmann, 2002.

5. Thomas Genssler, Alexander Christoph, Benedikt Schulz, Michael Winter, Chris M. Stich, Christian Zeidler, Peter Müller, Andreas Stelter, Oscar Nierstrasz, Stéphane Ducasse, Gabriela Arévalo, Roel Wuyts, Peng Liang, Bastiaan Schönhage and Reinier van den Born, *PECOS in a Nutshell*, The Pecos Consortium, September 2002.

8.6 Book Chapters

1. Andrei Chiş, Tudor Gîrba, Juraj Kubelka, Oscar Nierstrasz, Stefan Reichhart and Aliaksei Syrel, "Moldable Tools for Object-oriented Development," *PAUSE: Present And Ulterior Software Engineering*, Bertrand Meyer Manuel Mazzara (Ed.), pp. 77–101, Springer, Cham, 2017.

2. Julien Deantoni, Cédric Brun, Benoit Caillaud, Robert B. France, Gabor Karsai, Oscar Nierstrasz and Eugene Syriani, "Domain Globalization: Using Languages to Support Technical and Social Coordination," *Globalizing Domain-Specific Languages*, Benoit Combemale, Betty H.C. Cheng, Robert B. France, Jean-Marc Jézéquel and Bernhard Rumpe (Eds.), pp. 70-87, Springer International Publishing, 2015.

3. Rogério Lemos, Holger Giese, Hausi Müller, Mary Shaw, Jesper Andersson, Marin Litoiu, Bradley Schmerl, Gabriel Tamura, Norha Villegas, Thomas Vogel, Danny Weyns, Luciano Baresi, Basil Becker, Nelly Bencomo, Yuriy Brun, Bojan Cukic, Ron Desmarais, Schahram Dustdar, Gregor Engels, Kurt Geihs, Karl Göschka, Alessandra Gorla, Vincenzo Grassi, Paola Inverardi, Gabor Karsai, Jeff Kramer, Antónia Lopes, Jeff Magee, Sam Malek, Serge Mankovskii, Raffaela Mirandola, John Mylopoulos, Oscar Nierstrasz, Mauro Pezzè, Christian Prehofer, Wilhelm Schäfer, Rick Schlichting, Dennis Smith, João Pedro Sousa, Ladan Tahvildari, Kenny Wong and Jochen Wuttke, "Software Engineering for Self-Adaptive Systems: A Second Research Roadmap," *Software Engineering for Self-Adaptive Systems II*, Rogério Lemos, Holger Giese, Hausi Müller and Mary Shaw (Eds.), pp. 1-32, Springer Berlin Heidelberg, 2013.

4. Oscar Nierstrasz, Alexandre Bergel, Damien Cassou, Stéphane Ducasse and Jannik Laval, "Regular Expressions in Pharo," *Deep Into Pharo*, pp. 21, Square Bracket Associates, September 2013.

5. Oscar Nierstrasz, Alexandre Bergel, Damien Cassou, Stéphane Ducasse and Jannik Laval, "Versioning Your Code with Monticello," *Deep Into Pharo*, pp. 27, Square Bracket Associates, September 2013.

6. Oscar Nierstrasz, Marcus Denker and Lukas Renggli, "Model-Centric, Context-Aware Software Adaptation," *Software Engineering for Self-Adaptive Systems*, Betty H.C. Cheng, Rogerio de Lemos, Holger Giese, Paola Inverardi and Jeff Magee (Eds.), pp. 128-145, Springer-Verlag, 2009.

7. Oscar Nierstrasz, Marcus Denker, Tudor Gîrba, Adrian Lienhard and David Röthlisberger, "Change-Enabled Software Systems," *Challenges for Software-Intensive Systems and New Computing Paradigms*, Martin Wirsing, Jean-Pierre Banâtre and Matthias Hölzl (Eds.), pp. 64-79, Springer-Verlag, 2008.

8. Oscar Nierstrasz and Franz Achermann, "Separating Concerns with First-Class Namespaces," *Aspect-Oriented Software Development*, Robert E. Filman, Tzilla Elrad, Siobhán Clarke and Mehmet Aksit (Eds.), pp. 243–259, Addison-Wesley, 2005.

9. Franz Achermann and Oscar Nierstrasz, "Applications = Components + Scripts — A Tour of Piccola," *Software Architectures and Component Technology*, Mehmet Aksit (Ed.), pp. 261–292, Kluwer, 2001.

10. Franz Achermann, Markus Lumpe, Jean-Guy Schneider and Oscar Nierstrasz, "Piccola — a Small Composition Language," *Formal Methods for Distributed Processing — A Survey of Object-Oriented Approaches*, Howard Bowman and John Derrick (Eds.), pp. 403–426, Cambridge University Press, 2001.

11. Jean-Guy Schneider, Markus Lumpe and Oscar Nierstrasz, "Agent Coordination via Scripting Languages," *Coordination of Internet Agents*, Andrea Omicini, Franco Zambonelli, Matthias Klusch and Robert Tolksdorf (Eds.), pp. 153–175, Springer-Verlag, 2001.

12. Markus Lumpe, Franz Achermann and Oscar Nierstrasz, "A Formal Language for Composition," *Foundations of Component Based Systems*, Gary Leavens and Murali Sitaraman (Eds.), pp. 69–90, Cambridge University Press, 2000.

13. Jean-Guy Schneider and Oscar Nierstrasz, "Components, Scripts and Glue," *Software Architectures — Advances and Applications*, Leonor Barroca, Jon Hall and Patrick Hall (Eds.), pp. 13–25, Springer-Verlag, 1999.

14. Theo Dirk Meijler and Oscar Nierstrasz, "Beyond Objects: Components," *Cooperative Information Systems: Current Trends and Directions*, M.P. Papazoglou and G. Schlageter (Eds.), pp. 49–78, Academic Press, November 1997.

15. Oscar Nierstrasz and Theo Dirk Meijler, "Requirements for a Composition Language," *Object-Based Models and Langages for Concurrent Systems*, Paolo Ciancarini, Oscar Nierstrasz and Akinori Yonezawa (Eds.), pp. 147–161, Springer-Verlag, 1995.

16. Oscar Nierstrasz and Laurent Dami, "Component-Oriented Software Technology," *Object-Oriented Software Composition*, Oscar Nierstrasz and Dennis Tsichritzis (Eds.), pp. 3–28, Prentice-Hall, 1995.

17. Oscar Nierstrasz, "Regular Types for Active Objects," *Object-Oriented Software Composition*, Oscar Nierstrasz and Dennis Tsichritzis (Eds.), pp. 99–121, Prentice-Hall, 1995.

18. Oscar Nierstrasz, "Composing Active Objects — The Next 700 Concurrent Object-Oriented Languages," *Research Directions in Concurrent Object-Oriented Programming*, G. Agha, P. Wegner and A. Yonezawa (Eds.), pp. 151–171, MIT Press, 1993.

19. Oscar Nierstrasz, "A Tour of Hybrid — A Language for Programming with Active Objects," *Advances in Object-Oriented Software Engineering*, D. Mandrioli and B. Meyer (Eds.), pp. 167–182, Prentice-Hall, 1992.

20. Oscar Nierstrasz, "A Survey of Object-Oriented Concepts," *Object-Oriented Concepts, Databases and Applications*, W. Kim and F. Lochovsky (Eds.), pp. 3–21, ACM Press and Addison Wesley, Reading, Mass., 1989.

21. Oscar Nierstrasz and Dennis Tsichritzis, "Integrated Office Systems," *Object-Oriented Concepts, Databases and Applications*, W. Kim and F. Lochovsky (Eds.), pp. 199–215, ACM Press and Addison Wesley, Reading, Mass., 1989.

22. Oscar Nierstrasz, "A Tour of Hybrid," *Les Mardis Objets du CRIN, CRIN 89-R-072*, G. Masini, A. Napoli, D. Colnet, D. Léonard and K. Tombre (Eds.), pp. 237–248, Centre de Recherche en Informatique de Nancy, Vandoeuvre-lès-Nancy, 1989.

23. Dennis Tsichritzis and Oscar Nierstrasz, "Directions in Object-Oriented Research," *Object-Oriented Concepts, Databases and Applications*, W. Kim and F. Lochovsky (Eds.), pp. 523–536, ACM Press and Addison Wesley, Reading, Mass., 1989.

24. John Hogg, Oscar Nierstrasz and Dennis Tsichritzis, "Office Procedures," *Office Automation: Concepts and Tools*, D. Tsichritzis (Ed.), pp. 137–166, Springer-Verlag, Heidelberg, 1985.

25. Oscar Nierstrasz, "Message Flow Analysis," *Office Automation: Concepts and Tools*, D. Tsichritzis (Ed.), pp. 283–314, Springer-Verlag, Heidelberg, 1985.

26. Oscar Nierstrasz, "An Object-Oriented System," *Office Automation: Concepts and Tools*, D. Tsichritzis (Ed.), pp. 167–190, Springer-Verlag, Heidelberg, 1985.

8.7   Workshop Papers

1. Haidar Osman, Mohammad Ghafari and Oscar Nierstrasz, "Hyperparameter Optimization to Improve Bug Prediction Accuracy," *1st International Workshop on Machine Learning Techniques for Software Quality Evaluation (MaLTeSQuE 2017)*, February 2017, pp. 33–38.

2. Haidar Osman, Mohammad Ghafari and Oscar Nierstrasz, "Automatic Feature Selection by Regularization to Improve Bug Prediction Accuracy," *1st International Workshop on Machine Learning Techniques for Software Quality Evaluation (MaLTeSQuE 2017)*, February 2017, pp. 27–32.

3. Yuriy Tymchuk, Mohammad Ghafari and Oscar Nierstrasz, "Renraku — the One Static Analysis Model to Rule Them All," *IWST'17: Proceedings of International Workshop on Smalltalk Technologies*, 2017.

4. Alice Allen, Cecilia Aragon, Christoph Becker, Jeffrey Carver, Andrei Chiş, Benoit Combemale, Mike Croucher, Kevin Crowston, Daniel Garijo, Ashish Gehani, Carole Goble, Robert Haines, Robert Hirschfeld, James Howison, Kathryn Huff, Caroline Jay, Daniel S. Katz, Claude Kirchner, Kateryna Kuksenok, Ralf Lämmel, Oscar Nierstrasz, Matt Turk, Rob van Nieuwpoort, Matthew Vaughn and Jurgen Vinju, "Lightning Talk: "I solemnly pledge" A Manifesto for Personal Responsibility in the Engineering of Academic Software," *Proceedings of Workshop on Sustainable Software for Science: Practice and Experiences (WSSSPE 2016)*, Gabrielle Allen, Jeffrey Carver, Sou-Cheng T. Choi, Tom Crick, Michael R. Crusoe, Sandra Gesing, Robert Haines, Michael Heroux, Lorraine J. Hwang, Daniel S. Katz, Kyle E. Niemeyer, Manish Parashar and Colin C. Venters (Eds.), Proceedings of the Fourth Workshop on Sustainable Software for Science: Practice and Experiences (WSSSPE4), vol. 1686, CEUR, 2016.

5. Andrea Caracciolo, Mircea Lungu, Oskar Truffer, Kirill Levitin and Oscar Nierstrasz, "Evaluating an Architecture Conformance Monitoring Solution," *Proceedings of the 7th IEEE International Workshop on Empirical Software Engineering in Practice (IWESEP)*, March 2016.

6. Andrei Chiş, Tudor Gîrba, Juraj Kubelka, Oscar Nierstrasz, Stefan Reichhart and Aliaksei Syrel, "Exemplifying Moldable Development," *Proceedings of the Programming Experience 2016 (PX/16) Workshop*, PX/16, ACM, New York, NY, USA, 2016, pp. 33–42.

7. Jan Kurš, Jan Vraný, Mohammad Ghafari, Mircea Lungu and Oscar Nierstrasz, "Optimizing Parser Combinators," *Proceedings of International Workshop on Smalltalk Technologies (IWST 2016)*, 2016, pp. 1:1–1:13.

8. Max Leske, Andrei Chiş and Oscar Nierstrasz, "A promising approach for debugging remote promises," *Proceedings of the International Workshop on Smalltalk Technologies*, IWST' 16, 2016, pp. 18:1–18:9.

9. Leonel Merino, Dominik Seliner, Mohammad Ghafari and Oscar Nierstrasz, "CommunityExplorer: A Framework for Visualizing Collaboration Networks," *Proceedings of International Workshop on Smalltalk Technologies (IWST 2016)*, 2016, pp. 2:1–2:9.

10. Nevena Milojković, Clément Béra, Mohammad Ghafari and Oscar Nierstrasz, "Inferring Types by Mining Class Usage Frequency from Inline Caches," *Proceedings of International Workshop on Smalltalk Technologies (IWST 2016)*, 2016, pp. 6:1–6:11.

11. Boris Spasojević, Mohammad Ghafari and Oscar Nierstrasz, "The Object Repository, Pulling Objects out of the Ecosystem," *Proceedings of the 11th Edition of the International Workshop on Smalltalk Technologies*, IWST'16, ACM, New York, NY, USA, 2016, pp. 7:1–7:10.

12. Yuriy Tymchuk, Mohammad Ghafari and Oscar Nierstrasz, "When QualityAssistant Meets Pharo: Enforced Code Critiques Motivate More Valuable Rules," *IWST '16: Proceedings of International Workshop on Smalltalk Technologies*, 2016, pp. 5:1–5:6.

13. Andrei Chiş, Tudor Gîrba, Oscar Nierstrasz and Aliaksei Syrel, "GTInspector: A Moldable Domain-Aware Object Inspector," *Proceedings of the Companion Publication of the 2015 ACM SIGPLAN Conference on Systems, Programming, and Applications: Software for Humanity*, SPLASH Companion 2015, ACM, New York, NY, USA, 2015, pp. 15–16.

14. Andrei Chiş, Tudor Gîrba and Oscar Nierstrasz, "Towards moldable development tools," *Proceedings of the 6th Workshop on Evaluation and Usability of Programming Languages and Tools*, PLATEAU '15, ACM, New York, NY, USA, 2015, pp. 25–26.

15. Leonel Merino, Mircea Lungu and Oscar Nierstrasz, "Explora: Infrastructure for Scaling Up Software Visualisation to Corpora," *SATToSE'14: Post-Proceedings of the 7th International Seminar Series on Advanced Techniques & Tools for Software Evolution*, vol. 1354, CEUR Workshop Proceedings (CEUR-WS.org), 2015, http://ceur-ws.org/Vol-1354/.

16. Nevena Milojković, Andrea Caracciolo, Mircea Lungu, Oscar Nierstrasz, David Röthlisberger and Romain Robbes, "Polymorphism in the Spotlight: Studying its Prevalence in Java and Smalltalk," *Proceedings of the 2015 IEEE 23rd International Conference on Program Comprehension*, IEEE Press, 2015, pp. 186–195, Published.

17. Aliaksei Syrel, Andrei Chiş, Tudor Gîrba, Juraj Kubelka, Oscar Nierstrasz and Stefan Reichhart, "Spotter: towards a unified search interface in IDEs," *Proceedings of the Companion Publication of the 2015 ACM SIGPLAN Conference on Systems, Programming, and Applications: Software for Humanity*, SPLASH Companion 2015, ACM, New York, NY, USA, 2015, pp. 54–55.

18. Andrea Caracciolo, Mircea Lungu and Oscar Nierstrasz, "Dicto: A Unified DSL for Testing Architectural Rules," *Proceedings of the 2014 European Conference on Software Architecture Workshops*, ECSAW '14, ACM, New York, NY, USA, 2014, pp. 21:1–21:4.

19. Andrei Chiş, Tudor Gîrba and Oscar Nierstrasz, "The Moldable Inspector: a framework for domain-specific object inspection," *Proceedings of International Workshop on Smalltalk Technologies (IWST 2014)*, 2014.

20. Nicole Haenni, Mircea Lungu, Niko Schwarz and Oscar Nierstrasz, "A Quantitative Analysis of Developer Information Needs in Software Ecosystems," *Proceedings of the 2nd Workshop on Ecosystem Architectures (WEA'14)*, 2014, pp. 1–6.

21. Jan Kurš, Mircea Lungu and Oscar Nierstrasz, "Top-Down Parsing with Parsing Contexts," *Proceedings of International Workshop on Smalltalk Technologies (IWST 2014)*, 2014.

22. Boris Spasojević, Mircea Lungu and Oscar Nierstrasz, "Towards Faster Method Search Through Static Ecosystem Analysis," *Proceedings of the 2014 European Conference on Software Architecture Workshops*, ECSAW '14, ACM, New York, NY, USA, August 2014, pp. 11:1–11:6.

23. Erik Aeschlimann, Mircea Lungu, Oscar Nierstrasz and Carl Worms, "Analyzing PL/1 Legacy Ecosystems: An Experience Report," *Proceedings of the 20th Working Conference on Reverse Engineering, WCRE 2013*, 2013, pp. 441 – 448.

24. Andrei Chiş, Oscar Nierstrasz and Tudor Gîrba, "Towards a Moldable Debugger," *Proceedings of the 7th Workshop on Dynamic Languages and Applications*, DYLA '13, ACM, New York, NY, USA, 2013, pp. 2:1–2:6.

25. Nicole Haenni, Mircea Lungu, Niko Schwarz and Oscar Nierstrasz, "Categorizing Developer Information Needs in Software Ecosystems," *Proceedings of the 1st Workshop on Ecosystem Architectures*, 2013, pp. 1–5.

26. Jorge Ressia, Tudor Gîrba, Oscar Nierstrasz, Fabrizio Perin and Lukas Renggli, "Talents: Dynamically Composable Units of Reuse," *Proceedings of International Workshop on Smalltalk Technologies (IWST 2011)*, 2011, pp. 109–118.

27. Erwann Wernli, David Gurtner and Oscar Nierstrasz, "Using First-class Contexts to realize Dynamic Software Updates," *Proceedings of International Workshop on Smalltalk Technologies (IWST 2011)*, 2011, pp. 21-31, http://esug.org/data/ESUG2011/IWST/Proceedings.pdf.

28. Lukas Renggli, Stéphane Ducasse, Tudor Gîrba and Oscar Nierstrasz, "Practical Dynamic Grammars for Dynamic Languages," *4th Workshop on Dynamic Languages and Applications (DYLA 2010)*, Malaga, Spain, June 2010, pp. 1–4.

29. Jorge Ressia, Lukas Renggli, Tudor Gîrba and Oscar Nierstrasz, "Run-Time Evolution through Explicit Meta-Objects," *Proceedings of the 5th Workshop on Models@run.time at the ACM/IEEE 13th International Conference on Model Driven Engineering Languages and Systems (MODELS 2010)*, October 2010, pp. 37–48, http://sunsite.informatik.rwth-aachen.de/Publications/CEUR-WS/Vol-641/.

30. Jorge Ressia and Oscar Nierstrasz, "Dynamic Synchronization — A Synchronization Model through Behavioral Reflection," *Proceedings of International Workshop on Smalltalk Technologies (IWST 2009)*, ACM, New York, NY, USA, 2009, pp. 101–106.

31. David Röthlisberger, Oscar Nierstrasz, Stéphane Ducasse and Alexandre Bergel, "Tackling Software Navigation Issues of the Smalltalk IDE," *Proceedings of International Workshop on Smalltalk Technologies (IWST 2009)*, ACM, New York, NY, USA, 2009, pp. 58–67.

32. Alexandre Bergel, Wolfgang De Meuter, Stéphane Ducasse, Oscar Nierstrasz and Roel Wuyts, "Dynamic Languages and Applications, Report on the Workshop Dyla'07 at ECOOP 2007," *Object-Oriented Technology. ECOOP 2007 Workshop Reader*, LNCS, vol. 4906, Springer-Verlag, 2008, pp. 7–12.

33. Mariangiola Dezani-Ciancaglini, Paola Giannini and Oscar Nierstrasz, "A Calculus of Evolving Objects," *Proceedings of the 6th International Workshop on Multiparadigm Programming with Object-Oriented Languages (MPOOL 2008)*, 2008, Extended version published in Scientific Annals of Computer Science.

34. Lea Hänsenberger, Adrian Kuhn and Oscar Nierstrasz, "Using Dynamic Analysis for API Migration," *Proceedings IEEE Workshop on Program Comprehension through Dynamic Analysis (PCODA 2008)*, October 2008, pp. 32–36.

35. Adrian Kuhn and Oscar Nierstrasz, "Composing New Abstractions From Object Fragments," *Proceedings of the 2nd Workshop on Virtual Machines and Intermediate Languages for Emerging Modularization Mechanisms (VMIL 2008), Nashville, Tennessee, Oct. 19, 2008*, Hridesh Rajan (Ed.), 2008, pp. 1–12.

36. Marcus Denker, Orla Greevy and Oscar Nierstrasz, "Supporting Feature Analysis with Runtime Annotations," *Proceedings of the 3rd International Workshop on Program Comprehension through Dynamic Analysis (PCODA 2007)*, Technische Universiteit Delft, 2007, pp. 29–33.

37. Adrian Lienhard, Tudor Gîrba, Orla Greevy and Oscar Nierstrasz, "Exposing Side Effects in Execution Traces," *Proceedings of the 3rd International Workshop on Program Comprehension through Dynamic Analysis (PCODA'07)*, Andy Zaidman, Abdelwahab Hamou-Lhadj and Orla Greevy (Eds.), Technische Universiteit Delft, 2007, pp. 11–17.

38. David Röthlisberger and Oscar Nierstrasz, "Combining Development Environments with Reverse Engineering," *Proceedings of FAMOOSr 2007 (Ist International Workshop on FAMIX and Moose in Reengineering)*, 2007.

39. Adrian Lienhard, Stéphane Ducasse, Tudor Gîrba and Oscar Nierstrasz, "Capturing How Objects Flow At Runtime," *Proceedings International Workshop on Program Comprehension through Dynamic Analysis (PCODA'06)*, 2006, pp. 39–43.

40. Oscar Nierstrasz, Marcus Denker, Tudor Gîrba and Adrian Lienhard, "Analyzing, Capturing and Taming Software Change," *Proceedings of the Workshop on Revival of Dynamic Languages (co-located with ECOOP'06)*, July 2006.

41. Markus Gaelli, Orla Greevy and Oscar Nierstrasz, "Composing Unit Tests," *Proceedings of SPLiT 2005 (2nd International Workshop on Software Product Line Testing)*, September 2005.

42. Markus Gaelli, Oscar Nierstrasz and Stéphane Ducasse, "One-Method Commands: Linking Methods and Their Tests," *OOPSLA Workshop on Revival of Dynamic Languages*, October 2004.

43. Oscar Nierstrasz and Marcus Denker, "Supporting Software Change in the Programming Language," *OOPSLA Workshop on Revival of Dynamic Languages*, October 2004.

44. Gabriela Arévalo, Stéphane Ducasse and Oscar Nierstrasz, "Understanding Classes using X-Ray Views," *Proceedings of 2nd International Workshop on MASPEGHI 2003 (ASE 2003)*, CRIM — University of Montreal (Canada), October 2003, pp. 9–18.

45. Peng Liang, Gabriela Arévalo, Stéphane Ducasse, Michele Lanza, Nathanael Schärli, Roel Wuyts and Oscar Nierstrasz, "Applying RMA for Scheduling Field Device Components," *ECOOP 2002 Workshop Reader*, 2002.

46. Nathanael Schärli, Stéphane Ducasse and Oscar Nierstrasz, "Classes = Traits + States + Glue (Beyond mixins and multiple inheritance)," *Proceedings of the International Workshop on Inheritance*, 2002.

47. Michael Winter, Thomas Genßler, Alexander Christoph, Oscar Nierstrasz, Stéphane Ducasse, Roel Wuyts, Gabriela Arévalo, Peter Müller, Christian Stich and Bastiaan Schönhage, "Components for Embedded Software — The PECOS Approach," *Proc. Second International Workshop on Composition Languages*, 2002, In conjunction with 16th European Conference on Object-Oriented Programming (ECOOP) Malaga, Spain, June 11, 2002.

48. Serge Demeyer, Stéphane Ducasse and Oscar Nierstrasz, "A Pattern Language for Reverse Engineering," *Proceedings of EuroPLoP '2000*, UVK GmbH, 2000, pp. 189–208.

49. Stéphane Ducasse, Serge Demeyer and Oscar Nierstrasz, "Tie Code And Questions: a Reengineering Pattern," *Proceedings of EuroPLoP '2000*, 2000, pp. 209–217.

50. Stéphane Ducasse, Serge Demeyer and Oscar Nierstrasz, "Transform Conditionals to Polymorphism," *Proceedings of EuroPLoP '2000*, 2000, pp. 219–252.

51. Oscar Nierstrasz, Jean-Guy Schneider and Franz Achermann, "Agents Everywhere, All the Time," *ECOOP 2000 Workshop on Component-Oriented Programming*, 2000.

52. Oscar Nierstrasz and Franz Achermann, "Separation of Concerns through Unification of Concepts," *ECOOP 2000 Workshop on Aspects & Dimensions of Concerns*, 2000.

53. Oscar Nierstrasz, Sander Tichelaar and Serge Demeyer, "CDIF as the Interchange Format between Reengineering Tools," *OOPSLA '98 Workshop on Model Engineering, Methods and Tools Integration with CDIF*, October 1998.

54. Markus Lumpe, Jean-Guy Schneider, Oscar Nierstrasz and Franz Achermann, "Towards a formal composition language," *Proceedings of ESEC '97 Workshop on Foundations of Component-Based Systems*, Gary T. Leavens and Murali Sitaraman (Eds.), Zurich, September 1997, pp. 178–187.

55. Oscar Nierstrasz, Jean-Guy Schneider and Markus Lumpe, "Formalizing Composable Software Systems — A Research Agenda," *Proceedings 1st IFIP Workshop on Formal Methods for Open Object-based Distributed Systems FMOODS '96*, Chapmann & Hall, 1996, pp. 271–282.

56. Oscar Nierstrasz, "Towards an Object Calculus," *Proceedings of the ECOOP '91 Workshop on Object-Based Concurrent Computing*, Mario Tokoro, Oscar Nierstrasz and Peter Wegner (Eds.), LNCS, vol. 612, Springer-Verlag, 1992, pp. 1–20.

57. Oscar Nierstrasz and Michael Papathomas, "Towards a Type Theory for Active Objects," *ACM OOPS Messenger, Proceedings OOPSLA/ECOOP 90 Workshop on Object-Based Concurrent Systems*, vol. 2, April 1991, pp. 89–93.

58. Oscar Nierstrasz, "Two Models of Concurrent Objects," *ACM SIGPLAN Notices, Proceedings Workshop on Object-Based Concurrent Programming (San Diego, Sept 26-27, 1988)*, vol. 24, April 1989, pp. 174–176.

8.8   Technical Reports

1. David Röthlisberger, Oscar Nierstrasz, Stéphane Ducasse, Damien Pollet and Romain Robbes, "Supporting Task-oriented Navigation in IDEs with Configurable HeatMaps," Technical Report, no. IAM-09-005, Institut für Informatik, July 2009, Technical Report, Universität Bern, Switzerland.

2. Oscar Nierstrasz, Marcus Denker, Tudor Gîrba, Adrian Kuhn, Adrian Lienhard and David Röthlisberger, "Self-aware, Evolving Eternal Systems," Technical Report, no. IAM-08-001, University of Bern, Institute of Applied Mathematics and Computer Sciences, 2008, Technical Report.

3. Laura Ponisio and Oscar Nierstrasz, "Using Contextual Information to Assess Package Cohesion," Technical Report, no. IAM-06-002, University of Bern, Institute of Applied Mathematics and Computer Sciences, 2006, Technical Report.

4. Oscar Nierstrasz, Stéphane Ducasse and Nathanael Schärli, "Flattening Traits," Technical Report, no. IAM-05-005, Institut für Informatik, April 2005, Technical Report, Universität Bern, Switzerland.

5. Oscar Nierstrasz, Stéphane Ducasse, Stefan Reichhart and Nathanael Schärli, "Adding Traits to (Statically Typed) Languages," Technical Report, no. IAM-05-006, Institut für Informatik, December 2005, Technical Report, Universität Bern, Switzerland.

6. Alexandre Bergel, Stéphane Ducasse, Oscar Nierstrasz and Roel Wuyts, "Classboxes: Controlling Visibility of Class Extensions," Technical Report, no. IAM-04-003, Institut für Informatik, June 2004, Technical Report, Universität Bern, Switzerland.

7. Markus Gaelli, Oscar Nierstrasz and Roel Wuyts, "Partial ordering tests by coverage sets," Technical Report, no. IAM-03-013, Institut für Informatik, September 2003, Universität Bern, Switzerland, Technical Report.

8. Oscar Nierstrasz, Franz Achermann and Stefan Kneubühl, "A Guide to JPiccola," Technical Report, no. IAM-03-003, Institut für Informatik, June 2003, Technical Report, Universität Bern, Switzerland.

9. Oscar Nierstrasz, "Contractual Types," Technical Report, no. IAM-03-004, Institute of Computer Science, 2003, Technical Report, University of Bern, Switzerland.

10. Nathanael Schärli, Stéphane Ducasse, Oscar Nierstrasz and Andrew P. Black, "Traits: Composable Units of Behavior," Technical Report, no. IAM-02-005, Institut für Informatik, November 2002, Technical Report, Universität Bern, Switzerland, Also available as Technical Report CSE-02-014, OGI School of Science & Engineering, Beaverton, Oregon, USA.

11. Nathanael Schärli, Oscar Nierstrasz, Stéphane Ducasse, Roel Wuyts and Andrew Black, "Traits: The Formal Model," Technical Report, no. IAM-02-006, Institut für Informatik, November 2002, Technical Report, Universität Bern, Switzerland, Also available as Technical Report CSE-02-013, OGI School of Science & Engineering, Beaverton, Oregon, USA.

12. Stéphane Ducasse, Michele Lanza, Oscar Nierstrasz, Matthias Rieger and Sander Tichelaar, "BEOC Analysis Report," Technical Report, University of Bern, 2000.

13. Oscar Nierstrasz, "Identify the Champion," Technical Report, no. #WUCS-98-25, Washington University, 1998, Proceedings of PLoP 98, TR.

14. Vicki de Mey and Oscar Nierstrasz, "The ITHACA Application Development Environment," Technical Report, Centre Universitaire d'Informatique, University of Geneva, July 1993, Visual Objects.

15. Oscar Nierstrasz, Dimitri Konstantas, Klaus Dittrich and Dirk Jonscher, "CHASSIS — A Platform for Constructing Open Information Systems," Technical Report, Centre Universitaire d'Informatique, University of Geneva, July 1993, Visual Objects, English version of "CHASSIS — Une Plate-forme pour la Construction de Systèmes d'Information Ouverts".

16. Vicki de Mey, Oscar Nierstrasz, Serge Renfer, Roberto Bellinzona, Mariagrazia Fugini, Panos Constantopoulos, Martin Dörr and Maria Theodoridou, "RECAST/Vista/SIB Integration," Technical Report, Centre Universitaire d'Informatique, University of Geneva, December 1992, ITHACA.CUI-POLIMI-FORTH.92.Vista.Recast.SIB#1.

17. Claudio Trotta and Oscar Nierstrasz, "Object-Oriented Support for Generic Application Frames," Technical Report, Centre Universitaire d'Informatique, University of Geneva, July 1992, Object Frameworks.

18. Oscar Nierstrasz, "The ADL Scripting Model and Component Set," Technical Report, Centre Universitaire d'Informatique, University of Geneva, December 1991, ITHACA.-CUI.-91.-Vista#6.1.

19. Oscar Nierstrasz, "The Next 700 Concurrent Object-Oriented Languages — Reflections on the Future of Object-Based Concurrency," Technical Report, Centre Universitaire d'Informatique, University of Geneva, June 1991, Object Composition.

20. Michael Papathomas and Oscar Nierstrasz, "Supporting Software Reuse in Concurrent Object-Oriented Languages: Exploring the Language Design Space," Technical Report, Centre Universitaire d'Informatique, University of Geneva, June 1991, Object Composition.

21. Oscar Nierstrasz, Laurent Dami, Vicki de Mey, Marc Stadelmann, Dennis Tsichritzis and Jan Vitek, "Visual Scripting — Towards Interactive Construction of Object-Oriented Applications," Technical Report, Centre Universitaire d'Informatique, University of Geneva, July 1990, Object Management.

22. Oscar Nierstrasz, "A Guide to Specifying Concurrent Behaviour with Abacus," Technical Report, Centre Universitaire d'Informatique, University of Geneva, July 1990, Object Management.

23. Jan Vitek, Betty Junod, Oscar Nierstrasz, Serge Renfer and Claudia Werner, "Events and Sensors: Enhancing the Reusability of Objects," Technical Report, Centre Universitaire d'Informatique, University of Geneva, July 1990, Object Management.

24. Gerti Kappel, Jan Vitek, Oscar Nierstrasz, Simon Gibbs, Betty Junod, Marc Stadelmann and Dennis Tsichritzis, "An Object-Based Visual Scripting Environment," Technical Report, Centre Universitaire d'Informatique, University of Geneva, July 1989, Object Oriented Development.

25. Oscar Nierstrasz, "Abacus: a Notation for Describing Concurrent Computations," Technical Report, Centre Universitaire d'Informatique, University of Geneva, July 1989, Object Oriented Development.

26. Laurent Dami, Eugene Fiume, Oscar Nierstrasz and Dennis Tsichritzis, "Temporal Scripts for Objects," Technical Report, Centre Universitaire d'Informatique, University of Geneva, June 1988, Active Object Environments.

27. Dimitri Konstantas, Oscar Nierstrasz and Michael Papathomas, "An Implementation of Hybrid, a Concurrent Object-Oriented Language," Technical Report, Centre Universitaire d'Informatique, University of Geneva, June 1988, Active Object Environments.

28. Oscar Nierstrasz, "Mapping Object Descriptions to Behaviours," Technical Report, Centre Universitaire d'Informatique, University of Geneva, June 1988, Active Object Environments.

29. Oscar Nierstrasz, "Object-oriented Issues: A Literature Review," Technical Report, Centre Universitaire d'Informatique, University of Geneva, March 1987, Objects and Things.

30. Oscar Nierstrasz, "Triggering Active Objects," Technical Report, Centre Universitaire d'Informatique, University of Geneva, March 1987, Objects and Things.

31. Oscar Nierstrasz, "Hybrid — A Language for Programming with Active Objects," Technical Report, Centre Universitaire d'Informatique, University of Geneva, March 1987, Objects and Things.

32. Oscar Nierstrasz and Dennis Tsichritzis, "Office Object Flow," Technical Report, no. 150, Computer Systems Research Group, University of Toronto, 1983, Beta Gamma, Technical Report.

33. Oscar Nierstrasz and Dennis Tsichritzis, "Message Flow Modeling," Technical Report, no. 143, Computer Systems Research Group, University of Toronto, 1982, Alpha Beta, Technical Report.

34. John Hogg, Oscar Nierstrasz and Dennis Tsichritzis, "Form Procedures," Technical Report, no. 127, Computer Systems Research Group, University of Toronto, March 1981, Omega Alpha, CSRG Technical Report.

8.9   Edited Volumes

1. *CASTA '09: Proceedings of the first international workshop on Context-Aware Software Technology and Applications*, Oscar Nierstrasz (Ed.), ACM, New York, NY, USA, 2009.

2. Oscar Nierstrasz, Jon Whittle, David Harel and Gianna Reggio (Eds.), *Proceedings MoDELS 2006*, Springer-Verlag, vol. 4199, LNCS, Genoa, Italy, October 2006.

3. Marianne Huchard, Stéphane Ducasse and Oscar Nierstrasz (Eds.), *Langages et Modèles à Objets LMO'05*, Lavoisier, vol. 11, L'objet, 2005.

4. Oscar Nierstrasz and Michel Lemoine (Eds.), *Proceedings ESEC/FSE'99*, Springer-Verlag, vol. 1687, LNCS, Toulouse, France, September 1999.

5. Oscar Nierstrasz and Dennis Tsichritzis (Eds.), *Object-Oriented Software Composition*, Prentice-Hall, 1995.

6. Paolo Ciancarini, Oscar Nierstrasz and Akiro Yonezawa (Eds.), *Object-Based Models and Languages for Concurrent Systems, Workshop ECOOP'94*, Springer-Verlag, vol. 924, LNCS, 1994.

7. Rachid Guerraoui, Oscar Nierstrasz and Michel Riveill (Eds.), *Proceedings of the ECOOP'93 Workshop on Object-Based Distributed Programming*, Springer-Verlag, vol. 791, LNCS, 1994.

8. Oscar Nierstrasz (Ed.), *Proceedings ECOOP'93*, Springer-Verlag, vol. 707, LNCS, Kaiserslautern, Germany, July 1993.

9. Mario Tokoro, Oscar Nierstrasz and Peter Wegner (Eds.), *Proceedings of the ECOOP'91 Workshop on Object-Based Concurrent Computing*, Springer-Verlag, vol. 612, LNCS, 1992.

8.10   Theses

1. Oscar Nierstrasz, "Message Flow Analysis," Ph.D. thesis, Department of Computer Science, University of Toronto, 1984.

2. Oscar Nierstrasz, "Automatic Coordination and Processing of Electronic Forms in TLA," Masters thesis, Department of Computer Science, University of Toronto, 1981.