

Pascal Costanza: Curriculum Vitae

Address: Leerlooierijstraat 8, B-3000 Leuven, Belgium
Phone: +32/484/657270
Email: pc@p-cos.net
Web: http://p-cos.net

Born: July 6, 1970 in Siegburg, Germany

Educational Background

University of Bonn 1/1998 - 12/2004 PhD in Computer Science

University of Bonn 10/1990 - 1/1998 Master's degree in Computer Science

Languages: German (native), English (fluent), Dutch (beginner)

Work Experience

1989 - 1992 infill Computer GmbH, Troisdorf, Germany: programmer
1992 - 1993 Heynmöller Informatik GmbH, Bonn, Germany: programmer
7/1993 - 3/1995 comet GbR, Troisdorf, Germany: founder and co-owner
4/1995 - 12/1997 comet GbR / M & T Online Service GbR, Troisdorf, Germany: programmer
1/1998 - 12/2004 University of Bonn, Germany: research, teaching, project acquisition
1/2005 - 9/2009 Vrije Universiteit Brussel, Belgium: research, teaching, project acquisition
10/2009 - 11/2009 Université Bordeaux 1, France: invited researcher
12/2009 - 2/2011 Vrije Universiteit Brussel, Belgium: research, teaching, project acquisition
3/2011 - 5/2017 Intel Corporation, Kontich, Belgium: software engineering researcher
6/2017 - now imec, Leuven, Belgium: senior researcher

Skills

Programming languages: Go, C++17, Common Lisp, Java, Scheme, C

Programming concepts: multi-paradigm programming, design patterns, metaprogramming, reflection

Parallel programming: MPI, TBB, Cilk, OpenMP, pthreads

Hardware: Xeon, Xeon Phi, TSX, TXT, SGX, AVX, ECC memory, 3D XPoint

Domains: programming language design & implementation, bioinformatics, DNA/RNA sequencing, high-performance computing, resilience

Other skills: scientific writing, proposal writing, presenting, teaching, open source

Major Accomplishments

Co-designed and implemented the first compiler for Lava, an **integration of delegation into a strongly-typed class-based programming language**, as part of his master thesis. The major results were a seamless integration into Java, and the detection and fix of a hole in the static type system of the original design.

Originated the ClassFilters package, a **framework for load-time transformation of Java classes**. This has been rewritten as JMangler under his co-supervision. The major results of that work were two-fold. On the technical level, JMangler was the first load-time transformation framework that was neither implemented as a custom Java Virtual Machine implementation nor as a custom Java class loader. This ensured applicability in a much wider range of scenarios than previous approaches. On the conceptual level, JMangler was the first framework that allowed transformations of class files to be expressed as independently extensible transformer components. Later versions of the standard Java platform included a variation of load-time class transformation.

Conceived the Gilgul model, an **alternative conceptualization of object identity**, and implemented the first compiler for a language based on that model. The major results of that work reside on two different levels. On the conceptual level, Gilgul is the first model to strictly separate the notions of reference and comparison that are usually subsumed in the concept of object identity, and introduces means to manipulate them independently. On the pragmatic level, Gilgul allows for dynamic object replacement without the need to know all the references to an object and without consistency problems. The language extension based on that model considers a variety of important engineering issues: It defines control facilities to express restrictions on replaceability of objects; it introduces a static type system that balances the needs of checkability and flexibility; and it allows for proper replacement of active objects, including objects that execute non-terminating loops.

Developed the notion of **Context-oriented Programming** as joint work with Robert Hirschfeld. Context-oriented Programming is a set of programming language extensions that treat context explicitly, and provide mechanisms to dynamically adapt behavior in reaction to changes in context, even after system deployment at runtime. Essential concepts are: layers that group behavioral variations, scoped activation and deactivation of layers at runtime, and context which is any information that is computationally accessible. I have implemented ContextL, the first and currently most mature implementation of these concepts. Distinguishing characteristics are: an efficient implementation of layer activation and deactivation, a reflective architecture for controlling layer activation and deactivation without compromising efficiency, and a comprehensive set of features to make ContextL convenient to use.

Co-designed and implemented Cobra, a **resilient work stealing scheduler** for C++11. It allows expressing parallel algorithms in a fork/join style (similar to Cilk or TBB), but automatically recovers from failures by restarting failed subtrees of tasks. To ensure this works correctly, such algorithms need to be idempotent.

Designed and implemented Arrow Street, a C++11 library for creating containers of objects with a “structures of arrays” or “arrays of structures of arrays” memory layout that is beneficial for **generating optimized SIMD instructions** from loops over such containers. This library uses template metaprogramming techniques to ensure that user code does not need to be aware of this unintuitive memory layout, but looks mostly like regular object-oriented code. A more mature version of this approach has been made part of the Intel compiler tools.

BWA is a de-facto standard tool for DNA sequencing alignment, developed originally at Wellcome Trust Sanger Institute. The original BWA tool uses pthreads for multi-threading, which we replaced by a **parallelization based on Intel Cilk+**, resulting in a performance improvement of a factor two.

Co-designed and implemented elPrep, a tool for preparing Sequence Alignment/Map (SAM) files for further processing in a sequencing pipeline. elPrep takes advantage of **multi-threading, functional composition of preparation steps, and high-memory servers**, which results in a performance improvement of a factor ten compared to de-facto standard tools.

Contributed to Halvade, a **Hadoop-based framework for executing a sequencing analysis pipeline for variant calling**, as recommended by Broad Institute. It wraps unmodified de-facto standard sequencing tools, like BWA, Picard, and GATK, but enables executing them over a big-data cluster. On a cluster of 15 nodes, calling variants on a whole-genome sequence with Halvade can be performed 40 times faster than the regular single-node approach.

Other Noteworthy Accomplishments

Introduced Internet technologies (WWW, http, HTML) to his company in 1994, making it one of the first companies in Germany to develop commercial websites.

Introduced the Java programming language to his company in 1996, making it one of the first German companies to develop software in Java.

Was accepted for the OOPSLA Doctoral Symposium in 2001.

Helped forming the German AOSD community by co-organizing workshops. Adapted and introduced the Writers' Workshop format to that community. German and subsequently European AOSD workshops have stuck to that format since then.

Has written a guide to the Common Lisp programming language and published it at his website. This has been widely received as excellent introductory material and is linked prominently from many sites, including as recommended links by both commercial and open-source vendors of Common Lisp implementations. As of February 2004, a Korean translation, and as of August 2005 a Turkish translation of this guide have been published on the web.

Was the main organizer of the 1st European Lisp and Scheme Workshop that took place in conjunction with ECOOP 2004 in Oslo, Norway on June 13, 2004. With 40 participants, this was the most successful workshop at ECOOP 2004, although the workshop was originally rejected by the ECOOP organizers and the workshop was organized completely independently from ECOOP. (The second most successful workshop at ECOOP 2004 was the 2nd Workshop on Object-Oriented Programming Language Engineering for the Post-Java Era with 24 participants, also co-organized by Pascal Costanza.) Since then, the European Lisp Workshop has been established as an official annual workshop at ECOOP. Was the main organizer of the 1st European Lisp Symposium, organized independently in Bordeaux, France in 2008, which is now an ongoing yearly symposium series with around 100 participants.

Received the "Most Notable Paper Award" for the paper "Languages Constructs for Context-oriented Programming — An Overview of ContextL" (co-authored with Robert Hirschfeld). Paper originally presented at Dynamic Languages Symposium 2005, award received at Dynamic Languages Symposium 2015.

Publications

Journal Papers

- Pascal Costanza, Dynamically Scoped Functions as the Essence of AOP, ECOOP 2003 Workshop on Object-Oriented Language Engineering for the Post-Java Era, Darmstadt, Germany, July 22, 2003. Published in *ACM SIGPLAN Notices* Volume 38, Issue 8 (August 2003), ACM Press.
- Robert Hirschfeld, Pascal Costanza, Oscar Nierstrasz, Context-Oriented Programming, in *Journal of Object Technology*, Vol. 7, No. 3, March-April 2008, pp. 125-151.
- Charlotte Herzeel, Kris Gybels, Pascal Costanza, Coen De Roover, Theo D'Hondt, Forward Chaining in HALO: An Implementation Strategy for History-based Logic Pointcuts, in *Computer Languages, Systems & Structures*, Elsevier, Vol. 35, Issue 1, April 2009, pp. 31-47.
- Pascal Costanza, Charlotte Herzeel, Theo D'Hondt, Context-oriented Software Transactional Memory in Common Lisp, *Dynamic Languages Symposium 2009 (DLS'09)*, co-located with OOPSLA 2009, Orlando, Florida, October 26, 2009. Published in *ACM SIGPLAN Notices* Volume 44, Issue 12 (December 2009), ACM Press.
- Charlotte Herzeel, Pascal Costanza, Theo D'Hondt, An Extensible Interpreter Framework for Software Transactional Memory, *Journal of Universal Computer Science*, Vol. 16, Issue 2, 2010, pp. 221-245.
- Pascal Costanza and Theo D'Hondt, Embedding Hygiene-Compatible Macros in an Unhygienic Macro System, *Journal of Universal Computer Science*, Vol. 16, Issue 2, 2010, pp. 271-295.
- Engineer Bainomugisha, Jorge Vallejos, Elisa Gonzalez Boix, Pascal Costanza, Theo D'Hondt, Wolfgang De Meuter, Bringing Scheme Programming to the iPhone – Experience, in *Software – Practice and Experience*, Vol. 42, Issue 2, 2012, pp. 331-356.
- Charlotte Herzeel, Pascal Costanza, Dries Decap, Jan Fostier, Joke Reumers, elPrep: high-performance preparation of Sequence Alignment/Map files for variant calling, *PLOS ONE*, Vol. 10, Issue 7, 2015.
- Dries Decap, Joke Reumers, Charlotte Herzeel, Pascal Costanza, Jan Fostier, Halvade: scalable sequence analysis with MapReduce, *Bioinformatics*, Vol. 31, Issue 15, 2015, pp. 2482-2488.
- Dries Decap, Joke Reumers, Charlotte Herzeel, Pascal Costanza, Jan Fostier, Halvade-RNA: Parallel variant calling from transcriptomic data using MapReduce, *PLOS ONE*, Vol. 12, Issue 3, 2017.
- Imen Chakroun, Tom Vander Aa, Bruno De Fraine, Tom Haber, Pascal Costanza, Roel Wuyts, A high-level library for multidimensional arrays programming in computational science, *Concurrency and Computation - Practice and Experience*, Vol. 30, Issue 7, 2018.
- René Rahn, Stefan Budach, Pascal Costanza, Marcel Ehrhardt, Jonny Hancox, Knut Reinert, Generic accelerated sequence alignment in SeqAn using vectorization and multi-threading, *Bioinformatics*, Vol. 34, Issue 20, 2018.

Conference Papers

- Pascal Costanza, Günter Kniesel, Armin B. Cremers, Lava - Spracherweiterungen für Delegation in Java (in German), in: Clemens H. Cap (ed.), *Java-Informationen-Tage 1999*, Springer (Informatik Aktuell), 1999.
- Pascal Costanza, Oliver Stiernerling, Armin B. Cremers, Object Identity and Dynamic Recomposition of Components, in: Wolfgang Pree (ed.): *Technology of Object-Oriented Languages and Systems - TOOLS 38*, Proceedings, March 12-14, 2001, Zürich, Switzerland, IEEE Computer Society Press, 2001.
- Pascal Costanza and Arno Haase, The Comparand Pattern, *Sixth European Conference on Pattern Languages of Programs (EuroPLoP 2001)*, Kloster Irsee, Germany, July 2001.
- Pascal Costanza, Dynamic Replacement of Active Objects in the Gilgul Programming Language, *First International IFIP / ACM Working Conference on Component Deployment*, Berlin, Germany, June 20-21, 2002, Springer LNCS.

- Pascal Costanza, How to Make Lisp More Special, *International Lisp Conference 2005*, Stanford, California, USA, June 19-22, 2005, proceedings.
- Pascal Costanza and Robert Hirschfeld, Language Constructs for Context-oriented Programming – An Overview of ContextL, *Dynamic Languages Symposium 2005 (DLS'05)*, co-located with OOPSLA'05, October 18, 2005, San Diego, California, USA. Proceedings, ACM Digital Library.
- Alexandre Bergel, Robert Hirschfeld, Siobhan Clárke, Pascal Costanza, AspectBoxes – Controlling the Visibility of Aspects, *International Conference on Software and Data Technologies (ICSOFT 2006)*, Setúbal, Portugal, September 11-14, 2006, INSTICC Press, ISBN 972-8865-69-4, & Springer LNCS, 2008.
- Pascal Costanza, Robert Hirschfeld, Wolfgang De Meuter, Efficient Layer Activation for Switching Context-dependent Behavior, *Joint Modular Languages Conference 2006 (JMLC 2006)*, Oxford, England, September 13-15, 2006, Springer LNCS.
- Pascal Costanza and Robert Hirschfeld, Reflective Layer Activation in ContextL, *ACM Symposium on Applied Computing 2007 (SAC 2007)*, Technical Track on Programming for Separation of Concerns (PSC 2007), Proceedings, Seoul, Korea, March 11-15, 2007, ACM Press.
- Charlotte Herzeel, Kris Gybels, Pascal Costanza, Theo D'Hondt, Modularizing Crosscuts in an E-commerce Application in Lisp using HALO, *International Lisp Conference 2007 (ILC 2007)*, Cambridge, UK, April 1-4, 2007, ACM Digital Library.
- Jorge Vallejos, Peter Ebraert, Brecht Desmet, Tom van Cutsem, Stijn Mostinckx, Pascal Costanza, The Context-Dependent Role Model, *Proceedings of the 7th IFIP International Conference on Distributed Applications and Interoperable Systems (DAIS 2007)*, Paphos, Cyprus, June 5-8, 2007. Springer LNCS.
- Robert Hirschfeld, Pascal Costanza, Michael Haupt, An Introduction to Context-oriented Programming with ContextS, *Generative and Transformational Techniques in Software Engineering*, International Summer School, GTTSE 2007, Braga, Portugal, July 2-7, 2007. Springer LNCS, 2008.
- Brecht Desmet, Jorge Vallejos, Pascal Costanza, Wolfgang De Meuter, Theo D'Hondt, Context-Oriented Domain Analysis, *Modeling and Using Context*, Sixth International and Interdisciplinary Conference on Modeling and Using Context, Roskilde University, Denmark, August 20-24, 2007. Springer LNCS.
- Charlotte Herzeel, Kris Gybels, Pascal Costanza, Coen De Roover, Theo D'Hondt, Forward Chaining in HALO: An Implementation Strategy for History-based Logic Pointcuts, *International Conference on Dynamic Languages (ICDL 2007)*, Lugano, Switzerland, August 25-31, 2007. ACM Digital Library, 2008.
- Peter Ebraert, Jorge Vallejos, Pascal Costanza, Ellen Van Paesschen, Theo D'Hondt. Change-Oriented Software Engineering, *International Conference on Dynamic Languages (ICDL 2007)*, Lugano, Switzerland, August 25-31, 2007. Proceedings. ACM Digital Library, 2008.
- Brecht Desmet, Kristof Vanhaesebrouck, Jorge Vallejos, Pascal Costanza, Wolfgang De Meuter. The Puzzle Approach for Designing Context-Enabled Applications, *XXVI International Conference of the Chilean Computer Science Society (SCCC 2007)*, Iquique, Chile, November 8-9, 2007. Proceedings. IEEE Computer Science Press, 2007.
- Pascal Costanza, Charlotte Herzeel, Jorge Vallejos, Theo D'Hondt. Filtered Dispatch, *Dynamic Languages Symposium 2008 (DLS'08)*, co-located with ECOOP 2008, Paphos, Cyprus, July 8, 2008. Proceedings, ACM Digital Library.
- Jorge Vallejos, Pascal Costanza, Tom Van Cutsem, Wolfgang De Meuter, Theo D'Hondt. Reconciling Generic Functions with Actors. *International Lisp Conference 2009*, MIT, Cambridge, Massachusetts, USA, March 22-25, 2009, Proceedings.
- Pascal Costanza, Theo D'Hondt. Hygiene for the Unhygienic: Hygiene-Compatible Macros in an Unhygienic Macro System. *2nd European Lisp Symposium 2009*, Milan, Italy, May 27-29, 2009, Proceedings.
- Charlotte Herzeel, Pascal Costanza, Theo D'Hondt. Reusable Building Blocks for Software Transactional Memory. *2nd European Lisp Symposium 2009*, Milan, Italy, May 27-29, 2009, Proceedings.
- Engineer Bainomugisha, Jorge Vallejos, Éric Tanter, Elisa Gonzalez Boix, Pascal Costanza, Wolfgang De Meuter, Theo D'Hondt, Resilient Actors: A Runtime Partitioning Model for Pervasive Computing Services. *International Conference on Pervasive Services*, London, UK, July 13-16, 2009, Proceedings, ACM Digital Library.

- Jorge Vallejos, Sebastián González, Pascal Costanza, Wolfgang De Meuter, Theo D'Hondt, Kim Mens, Predicated Generic Functions – Enabling Context-Dependent Method Dispatch, *International Conference on Software Composition 2010*, Malaga, Spain, July 1-2, 2010. Proceedings, Springer LNCS 6144.
- Charlotte Herzeel, Pascal Costanza, Dynamic Parallelization of Recursive Code, Part I: Managing Control Flow Interactions with the Continuator. *SPLASH/OOPSLA 2010*, Reno, Nevada, October 17-21, 2010. Proceedings, ACM Press.
- Roel Wuyts, Karl Meerbergen, Pascal Costanza, Reactive Rebalancing for Scientific Simulations running on Exascale High Performance Computers, *International Conference on Parallel Computing (ParCo 2011)*, Ghent, Belgium, August 30 - September 2, 2011. Proceedings, IOS Press.
- Pascal Costanza, Charlotte Herzeel, Wolfgang De Meuter, Roel Wuyts, Resilient Work Stealing, arXiv: 1706.03539.
- Zubair Wadood Bhatti, Roel Wuyts, Pascal Costanza, Davy Preuveneers, Yolande Berbers, Efficient Synchronization for Stencil Computations Using Dynamic Task Graphs, *International Conference on Computational Science*, Barcelona, Spain, June 5-7, 2013. Elsevier 2013, Procedia Computer Science 18.
- Charlotte Herzeel, Thomas J. Ashby, Pascal Costanza, Wolfgang De Meuter, Resolving Load Balancing Issues in BWA on NUMA Multicore Architectures, *Parallel Processing and Applied Mathematics – 10th International Conference*, Warsaw, Poland, September 8-11, 2013. Proceedings, Springer LNCS 8385.
- Dries Decap, Joke Reumers, Charlotte Herzeel, Pascal Costanza, Jan Fostier, Performance Analysis of a Parallel, Multi-node Pipeline for DNA Sequencing, *Parallel Processing and Applied Mathematics – 11th International conference*, Krakow, Poland, September 6-9, 2015. Proceedings, Springer LNCS 9574.

PhD Thesis

- Pascal Costanza, *Transmigration of Object Identity*, Dissertation, Mathematisch-Naturwissenschaftliche Fakultät, Rheinische Friedrich-Wilhelms-Universität Bonn, 2004.

Schools

- Robert Hirschfeld, Pascal Costanza, Michael Haupt, An Introduction to Context-Oriented Programming with ContextS, 2nd Summer School on Generative and Transformational Techniques in Software Engineering, Braga, Portugal, July 2-7, 2008. Springer LNCS, 2008.
- Pascal Costanza, Context-oriented Programming with ContextL, 3rd European Summer School on Aspect-oriented Software Development, Darmstadt, Germany, July 21-25, 2008.
- Pascal Costanza, Current Developments in Context-oriented Programming, GRASCOMP seminar on Software Adaptability and Variability, GRASCOMP Graduate School in Computing Science, Université catholique de Louvain, Louvain-la-Neuve, Belgium, May 19, 2009.
- Pascal Costanza, Context-oriented Programming, International Summer School on Advances in Programming Languages, Heriot-Watt University, Edinburgh, Scotland, August 25-28, 2009.

Proceedings / Journal Special Issues

- Pascal Costanza and Robert Hirschfeld (eds.), *Proceedings of the 2007 Symposium on Dynamic Languages*, Montréal, Quebec, Canada, October 22, 2007. ACM Digital Library, 2007.
- Pascal Costanza (ed.), *Lisp: Research and Experience*, Journal of Universal Computer Science (special issue), vol. 14, no. 20 (2008).

Articles in Books

- Günter Kniesel, Pascal Costanza, Michael Austermann, JMangler - Load-time Transformation of Byte Code for Aspect-Oriented Programming, in: Robert E. Filman, Tzilla Elrad, Siobhán Clark and Mehmet Aksit, (Eds.). *Aspect-Oriented Software Development*, Addison-Wesley, 2004.

- Pascal Costanza and Arno Haase, The Comparand Pattern: Cheap Identity Testing Using Dedicated Values, in: Dragos Manolescu, James Noble and Markus Völter, (Eds.). *Pattern Languages of Program Design 5*, Addison-Wesley, 2006.

Workshop Papers

- Pascal Costanza, Separation of Object Identity Concerns, Workshop on Aspects and Dimensions of Concerns at ECOOP 2000, Cannes, France, June 2000.
- Oliver Stiemerling, Pascal Costanza, Armin B. Cremers, Object Identity and Dynamic Recomposition of Components, *Proceedings of the 5th International Workshop on Component-Oriented Programming (WCOP 2000)*, Research Report No 15/00, Blekinge Institute of Technology, Department of Software Engineering and Computer Science, Karlskrona, Sweden, 2000.
- Pascal Costanza, Vanishing Aspects, Workshop on Advanced Separation of Concerns at OOPSLA 2000.
- Michael Austermann, Pascal Costanza, Günter Kniessel, Unabhängige Erweiterbarkeit für Aspekt-Orientierte Systeme (in German), *Aspektorientierung - Workshop der GI-Fachgruppe 2.1.9 Objektorientierte Software-Entwicklung*, 3./4. Mai 2001, Paderborn, Bericht tr-ri-01-233 der Universität-Gesamthochschule Paderborn, Fachbereich Mathematik/Informatik.
- Pascal Costanza, Dynamic Object Replacement and Implementation-Only Classes, 6th International Workshop on Component-Oriented Programming (WCOP'01) at ECOOP'01, Budapest, Hungary, June 2001.
- Pascal Costanza, Günter Kniessel, Michael Austermann, Independent Extensibility for Aspect-Oriented Systems, Workshop on Advanced Separation of Concerns at ECOOP'01, Budapest, Hungary, June 2001.
- Pascal Costanza, The Programming Language Gilgul, in: *Net.ObjectDays Tagungsband*, Erfurt, 10.-13. 9. 2001 (Young Researchers Workshop on Generative and Component-Based Software Engineering).
- Pascal Costanza, The Programming Language Gilgul, Workshop on Engineering Complex Object-Oriented Systems for Evolution (ECOOSE) at OOPSLA 2001, Tampa, Florida, USA, October 2001.
- Günter Kniessel, Pascal Costanza, Michael Austermann, JMangler - A Framework for Load-Time Transformation of Java Class Files, *First IEEE International Workshop on Source Code Analysis and Manipulation (SCAM 2001)*, Proceedings, Florence, Italy, November 2001.
- Stefan Hanenberg and Pascal Costanza, Connecting Aspects in AspectJ - Strategies vs. Patterns, First AOSD Workshop on Aspects, Components, and Patterns for Infrastructure Software at AOSD 2002, Enschede, The Netherlands, April 23, 2002.
- Pascal Costanza, Dynamic vs Static Typing – A Pattern-Based Analysis, 2nd Workshop on Object-Oriented Language Engineering for the Post-Java Era, ECOOP 2004, Oslo, Norway, June 14, 2004.
- Pascal Costanza, A Short Overview of AspectL, European Interactive Workshop on Aspects in Software (EIWAS'04), Berlin, Germany, September 23-24, 2004.
- Holger Mügge, Tobias Rho, Marcel Winandy, Markus Won, Armin B. Cremers, Pascal Costanza, Roman Englert, Towards Context-Sensitive Intelligence, *Software Architecture: 2nd European Workshop, EWSA 2005*, Pisa, Italy, June 13-14, 2005, Springer LNCS.
- Robert Hirschfeld and Pascal Costanza, Extending Advice Activation in AspectS, European Interactive Workshop on Aspects in Software (EIWAS), Brussels, Belgium, 2005. Updated for Open and Dynamic Aspect Languages Workshop (ODAL), co-located with AOSD 2006, Bonn, Germany, March 20, 2006.
- Brecht Desmet, Ellie D'Hondt, Pascal Costanza and Theo D'Hondt, Simulation of Quantum Computations in Lisp, 3rd European Lisp Workshop, co-located with ECOOP 2006, Nantes, France, July 3, 2006.
- Charlotte Herzeel, Kris Gybels and Pascal Costanza, A Temporal Logic Language for Context Awareness in Pointcuts, ECOOP'06 Workshop on Revival of Dynamic Languages, Nantes, France, July 3, 2006.
- Brecht Desmet, Jorge Vallejos Vargas, Stijn Mostinckx and Pascal Costanza, Using Mixin Layers for Context-Aware and Self-Adaptable Systems, ECOOP 2006 Workshop on Object Technology for Ambient Intelligence and Pervasive Computing (OT4AmI), Nantes, France, July 4, 2006.

- Brecht Desmet, Jorge Vallejos, and Pascal Costanza, Introducing Mixin Layers to Support the Development of Context-Aware Systems, 3rd European Workshop on Aspects in Software (EWAS 2006), University of Twente, Enschede, The Netherlands, August 31, 2006.
- Brecht Desmet, Jorge Vallejos, Pascal Costanza, and Robert Hirschfeld, Layered Design Approach for context-aware systems, *First International Workshop on Variability Modelling of Software-Intensive Systems (VaMoS 2007)*, Limerick, Ireland, January 16-18, 2007, Lero Technical Report 2007-01.
- Charlotte Herzeel, Kris Gybels, Pascal Costanza, Escaping with future variables in HALO, Seventh Workshop on Runtime Verification (RV'07), Satellite workshop of AOSD'07, Vancouver, British Columbia, Canada, March 13, 2007, Springer LNCS.
- Jorge Vallejos, Brecht Desmet, Pascal Costanza, Wolfgang De Meuter, Pervasive Communication: The Need for Distributed Context Adaptations, ECOOP 2007 Workshop on Object Technology for Ambient Intelligence and Pervasive Systems (OT4Aml), Berlin, Germany, July 30, 2007.
- Charlotte Herzeel, Pascal Costanza, Theo D'Hondt, Reflection for the Masses, Workshop on Self-Sustaining Systems (S3) 2008, Potsdam, Germany, May 15-16, 2008, Springer LNCS.
- Jorge Vallejos, Elisa Gonzalez Boix, Engineer Bainomugisha, Pascal Costanza, Wolfgang De Meuter, Éric Tanter, Towards Resilient Partitioning of Pervasive Computing Services, Proceedings of the 3rd ACM Workshop on Software Engineering for Pervasive Services 2008, Sorrento, Italy, July 6, 2008, ACM Digital Library.
- Pascal Costanza, Charlotte Herzeel, make-method-lambda considered harmful, 5th European Lisp Workshop co-located with ECOOP 2008, Paphos, Cyprus, July 7, 2008.
- Leonardo Uribe, Pascal Costanza, Charlotte Herzeel, Theo D'Hondt, Using Data Parallelism for Implementing a Quantum Simulator, 5th European Lisp Workshop, co-located with ECOOP 2008, Paphos, Cyprus, July 7, 2008.
- Charlotte Herzeel, Pascal Costanza, Theo D'Hondt, Controlling Dynamic Parallelization Through Layered Reflection, 7th Workshop on Parallel/High-Performance Object-Oriented Scientific Computing (POOSC'08), co-located with ECOOP 2008, Paphos, Cyprus, July 8, 2008.
- Pascal Costanza and Theo D'Hondt, Feature Descriptions for Context-oriented Programming, 2nd International Workshop on Dynamic Software Product Lines (DSPL'08), co-located with Software Product Line Conference 2008 (SPLC2008), Limerick, Ireland, September 8, 2008. Proceedings.
- Pascal Costanza, Context-oriented Programming in ContextL: State of the Art, Lisp50@OOPSLA - celebrating the 50th birthday of Lisp at OOPSLA, Nashville, Tennessee, USA, October 20, 2008, Proceedings, ACM Digital Library.
- Andreas Classen, Arnaud Hubeaux, Frans Sanen, Eddy Truyen, Jorge Vallejos, Pascal Costanza, Wolfgang De Meuter, Patrick Heymans, Wouter Joosen, Modelling Variability in Self-Adaptive Systems: Towards a Research Agenda, Proceedings of the Workshop on Modularization, Composition and Generative Techniques for Product Line Engineering (McGPLE'08), held in conjunction with GPCE / OOPSLA 2008, Nashville, Tennessee, October 19-23, 2008. Technical Report MIP-0804, Department of Informatics and Mathematics, University of Passau, Germany, October 2008.
- Stefan Marr, Michael Haupt, Stijn Timmermont, Bram Adams, Theo D'Hondt, Pascal Costanza, Wolfgang De Meuter, Virtual Machine Support for Many-Core Architectures: Decoupling Abstract from Concrete Concurrency Models. Second International Workshop on Programming Language Approaches to Concurrency and Communication-centric Software, workshop affiliated with ETAPS 2009, March 22, 2009, York, UK. Electronic Proceedings in Theoretical Computer Science 17, February 2010.
- Dave Clarke, Pascal Costanza, Éric Tanter, How should context-escaping closures proceed?, International Workshop on Context-oriented Programming (COP'09), co-located with ECOOP 2009, Genova, Italy, July 7, 2009, Proceedings, ACM Digital Library.
- Jorge Vallejos, Jianyi Huang, Pascal Costanza, Wolfgang De Meuter, Theo D'Hondt, A Programming Language Approach for Context-Aware Mashups, 3rd International Workshop on Web APIs and Services Mashups (Mashups'09), co-located with OOPSLA 2009, Orlando, Florida, USA, October 25, 2009.

- Leonardo Uribe, Pascal Costanza, Theo D'Hondt, Adding Data-movement Constructs to the PGAS Parallel Computing Model, 7th European Lisp Workshop (ELW'10), co-located with ECOOP 2010, Maribor, Slovenia, June 22, 2010.
- Pascal Costanza, Bruno De Fraine, Tom Van Cutsem, Improving the Data Locality of Work Stealing – A Domain-specific Approach, SPLASH 2010 Workshop on Concurrency for the Application Programmer, SPLASH/OOSPLA 2010, Reno, Nevada, USA, October 18, 2010.

Tutorials / Presentations

- Pascal Costanza, Generic Functions and the CLOS Metaobject Protocol, OOPSLA'05, San Diego, California, USA, October 16, 2005.
- Pascal Costanza, Language Constructs for Context-Oriented Programming (presentation), Fourth Edition of the Belgian-Netherlands Software Evolution Workshop (BeNeVol 4), Université Libre de Bruxelles, Belgium, December 13-14, 2005.
- Pascal Costanza, Generic Functions and the CLOS Metaobject Protocol, Dynamic Languages Day, Brussels, Belgium, February 13, 2006.
- Pascal Costanza, Martin Gasbichler, Gilad Bracha, Metaprogramming & Reflection, *Latently-Typed Languages*, Dagstuhl Seminar 06181, Schloss Dagstuhl, Germany, May 1-6, 2006.
- Pascal Costanza, Robert Hirschfeld, Language Constructs for Context-oriented Programming – A Demonstration of ContextL, ECOOP 2006, Nantes, France, July 5, 2006.
- Pascal Costanza, Robert Hirschfeld, Context-oriented Programming in Common Lisp: A tutorial about ContextL, International Lisp Conference 2007, Cambridge, UK, April 1, 2007.
- Pascal Costanza, Metaprogramming & Reflection, invited talk, *BeNeLux Lisp Meeting*, Streamtech b.v., The Hague, The Netherlands, July 1, 2007.
- Pascal Costanza and Robert Hirschfeld, Recent Developments in Context-oriented Programming, ECOOP 2007, Berlin, Germany, August 2, 2007.
- Pascal Costanza and Robert Hirschfeld, Using Context-oriented Programming for Dynamic Software Evolution, BENEVOL 2007: The 6th BELgian-NEtherlands software eVOLution workshop, University of Namur, Belgium, December 13-14, 2007.
- Pascal Costanza, Using Context-oriented Programming for Dynamic Software Evolution, Université catholique de Louvain, IRM seminar, Louvain-la-Neuve, Belgium, January 23, 2008.
- Pascal Costanza, Context-oriented Programming, invited talk, EPITA Research and Development Laboratory, Paris, France, March 26, 2008.
- Pascal Costanza, Generic Functions and the CLOS Metaobject Protocol, AOSD 2008, Brussels, Belgium, March 31, 2008.
- Pascal Costanza and Robert Hirschfeld, Current Developments in Context-oriented Programming, AOSD 2008, Brussels, Belgium, April 2-3, 2008.
- Pascal Costanza, ContextL - Adding Support for Context-oriented Programming to Common Lisp, Lisp50@OOPSLA - celebrating the 50th birthday of Lisp at OOPSLA, Nashville, Tennessee, USA, October 20, 2008.
- Pascal Costanza, Context-oriented Programming, Ecole des Mines des Nantes, France, December 12, 2008.
- Pascal Costanza, CLOS: Generic Functions and the Metaobject Protocol, International Lisp Conference 2009, MIT, Cambridge, Massachusetts, USA, March 22-25, 2009.
- Pascal Costanza, Context-oriented Programming with ContextL, International Lisp Conference 2009, MIT, Cambridge, Massachusetts, USA, March 22-25, 2009.
- Pascal Costanza, Minimal Filtered Dispatch (work in progress), 6th European Lisp Workshop (ELW'09), co-located with ECOOP 2009, Genova, Italy, July 6, 2009.

- Pascal Costanza, Parallel Programming in Common Lisp, 3rd European Lisp Symposium (ELS'10), Fundação Calouste Gulbenkian, Lisbon, Portugal, May 6-7, 2010.
- Pascal Costanza, Extreme Coordination – Challenges and Opportunities from Exascale Computing (invited talk), 13th International Conference on Coordination Models and Languages, Reykjavik, Iceland, June 6-9, 2011.
- Pascal Costanza, Semi-automatic SIMD-efficient data layouts for object-oriented programs, 20th International Conference on Computing in High Energy and Nuclear Physics (CHEP 2013), Amsterdam, The Netherlands, October 14-18, 2013.
- Pascal Costanza, Parallel Programming with Lisp for Performance, 7th European Lisp Symposium (ELS'14), IRCAM, Paris, France, May 5-6, 2014.
- Pascal Costanza, HPC Programming Languages: Balancing performance and productivity, The Hamlyn Summer School, High Performance Computing for Medical Imaging, Sensing and Robotics, London, UK, July 17-19, 2014.
- Pascal Costanza, Halvade: Parallel Whole Genome Variant Detection with MapReduce, WTSI Bioinformatics Analysis Pipelines Day, Wellcome Trust Sanger Institute, Hinxton, Cambridge, UK, July 24, 2014.
- Pascal Costanza, Non-algorithmic aspects of sequencing software, *Next-Generation Sequencing – Algorithms, and Software For Biomedical Applications*, Dagstuhl Seminar 16351, Schloss Dagstuhl, Germany, August 28 - September 2, 2016.
- Pascal Costanza, Intel's activities in software for life sciences, German Conference on Bioinformatics, Berlin, Germany, September 12-15, 2016 (invited).
- Pascal Costanza, DNA sequencing performance in Go, C++, and Java, FOSDEM, Brussels, Belgium, February 3-4, 2018. https://archive.fosdem.org/2018/schedule/event/dna_sequencing/
- Pascal Costanza, Code optimization - an important software quality factor in bioinformatics, TMF Workshop - Omics in Medical Research 2nd edition, Berlin, Germany, December 10, 2018 (invited).

Reports

- Pascal Costanza, Günter Kniessel, Katharina Mehner, Elke Pulvermüller, *Tagungsbericht "Aspektorientierung"* (in German), Workshop der Fachgruppe 2.1.9 Objektorientierte Software-Entwicklung der Gesellschaft für Informatik e.V. (GI), Paderborn, 3.-4. Mai 2001, in: GI Softwaretechnik-Trends, Band 21, Heft 2, ISSN 0720-8928, August 2001.
- Pascal Costanza, Günter Kniessel, Katharina Mehner, Elke Pulvermüller, Andreas Speck (eds.), *Second Workshop on Aspect-Oriented Software Development* (GI SIG 2.1.9 – Object-Oriented Software Development), Bonn, February 21-22, 2002, Proceedings, Technical Report, Institute of Computer Science III, University of Bonn, 2002.
- Wolfgang De Meuter, Pasa Costanza, Martine Devos, Dave Thomas, Feyerabend: Redefining Computing (Workshop Report), in: Juan Hernández Núñez, Ana M. D. Moreira (eds.); *Object-Oriented Technology, ECOOP 2002 Workshops and Posters*, Málaga, Spain, June 10-14, 2002, Springer LNCS.
- Pascal Costanza, Günter Kniessel, Armin B. Cremers, *Arbeitsbericht des TAILOR Projekts (CR 65/13)*, Technical Report, Institute of Computer Science III, University of Bonn, 2004.
- Sebastián González, Wolfgang De Meuter, Pascal Costanza, Stéphane Ducasse, Richard Gabriel, and Theo D'Hondt, 2nd Workshop on Object-Oriented Language Engineering for the Post-Java Era: Back to Dynamicity, in: Jacques Malenfant, Bjarte M. Ostvald, *Object-Oriented Technology. ECOOP 2004 Workshop Reader*, Oslo, Norway, June 14-18, 2004, Proceedings, Springer LNCS.
- Christophe Rhodes, Pascal Costanza, Theo D'Hondt, Arthur Lemmens, Report on the "3rd European Lisp Workshop (ELW'06)" at ECOOP'06, in: Mario Südholt, Charles Consel, *Object-Oriented Technology. ECOOP 2006 Workshop Reader*, Nantes, France, July 2006, Proceedings, Springer LNCS.
- Christophe Rhodes, Pascal Costanza, Theo D'Hondt, Arthur Lemmens, Hans Hübner, Report on the "4th European Lisp Workshop (ELW'07)" at ECOOP'07, in: Michael Cebulla, *Object-Oriented Technology. ECOOP 2007 Workshop Reader*, Berlin, Germany, July 2007, Proceedings, Springer LNCS.

White Papers

- Charlotte Herzeel, Joke Reumers, Pascal Costanza, Removing Load Imbalance in Burrows-Wheeler Sequence Alignment, White Paper, Intel Health & Life Sciences, 2014.
- Pascal Costanza, elPrep Recipe for an Exome Sequencing Workload, White Paper, Intel Health & Life Sciences, 2016.

Web Articles

- Pascal Costanza, *Highly Opinionated Guide to Lisp*, <http://p-cos.net/lisp/guide.html>, 2002, 2004, 2005.
- Oscar González, Andrés Yie, *Separation of Concerns in Context-Oriented Programming* (interview with Pascal Costanza), Paradigma – Revista electrónica en construcción de software, Vol. 3, No. 1, March 2009, <http://paradigma.uniandes.edu.co/>.

Contributions to the scientific landscape

Journals

Reviewer

- Higher-Order and Symbolic Computation, Springer US.
- Journal of Systems and Software, Elsevier B.V.
- Journal of Universal Computer Science, Graz University of Technology.
- Journal on Software and Systems Modeling, Springer Berlin / Heidelberg.
- Science of Computer Programming, Elsevier B.V.

Conferences / Symposia

Organization

- International Lisp Conference (ILC 2007), Cambridge, UK, April 1-4, 2007 (Conference co-chair).
- Dynamic Languages Symposium 2007 (DLS 2007) at OOPSLA'07, Montréal, Canada, October 22, 2007 (Program co-chair).
- 1st European Lisp Symposium (ELS'08), Bordeaux, France, May 22-23, 2008 (Program chair).
- Onward! 2011, Portland, Oregon USA, October 22-27, 2011 (Workshop chair).

Program Committee

- International Lisp Conference (ILC 2003), New York City, NY, USA, October 12-15, 2003.
- Object-Oriented Programming Languages and Systems (OOPS'04), Special Track at the 19th ACM Symposium on Applied Computing (SAC 2004), Nicosia, Cyprus, March 14-17, 2004.
- Object-Oriented Programming Languages and Systems (OOPS'05), Special Track at the 20th ACM Symposium on Applied Computing (SAC 2005), Santa Fe, New Mexico, USA, March 13-17, 2005.
- Net.ObjectDays 2005, Erfurt, Germany, September 19-22, 2005.
- Object-Oriented Programming Languages and Systems (OOPS'06), Special Track at the 21st ACM Symposium on Applied Computing (SAC 2006), Dijon, France, April 23-27, 2006.
- Net.ObjectDays 2006, Erfurt, Germany, September 18-21, 2006.
- MoDELS 2006, ACM/IEEE 9th International Conference on Model Driven Engineering Languages and Systems, Genoa, Italy, October 1-6, 2006.
- Dynamic Languages Symposium 2006 at OOPSLA'06, Portland, Oregon, USA, October 22, 2006.
- Object-Oriented Programming Languages and Systems (OOPS'07), Special Track at the 22nd ACM Symposium on Applied Computing (SAC 2007), Seoul, Korea, March 11-15, 2007.
- International Conference on Dynamic Languages 2007, Lugano, Switzerland, August 25-31, 2007.
- Object-Oriented Programming Languages and Systems (OOPS'08), Special Track at the 23rd ACM Symposium on Applied Computing (SAC 2008), Fortaleza, Brazil, March 16-20, 2008.
- Programming for Separation of Concerns (PSC'08), Special Track at the 23rd ACM Symposium on Applied Computing (SAC 2008), Fortaleza, Brazil, March 16-20, 2008.
- Dynamic Languages Symposium 2008 at ECOOP 2008, Paphos, Cyprus, July 8, 2008.
- Software Variability: a Programmers' Perspective (SVPP'08), Brussels, Belgium, August 8-9, 2008.
- Object-Oriented Programming Languages and Systems (OOPS'09), Special Track at the 24th ACM Symposium on Applied Computing (SAC 2009), Honolulu, Hawaii, USA, March 8-12, 2009.

- Programming for Separation of Concerns (PSC'09), Special Track at the 24th ACM Symposium on Applied Computing (SAC 2009), Honolulu, Hawaii, USA, March 8-12, 2009.
- International Lisp Conference 2009, MIT, Cambridge, Massachusetts, USA, March 22-25, 2009.
- European Lisp Symposium 2009 (ELS'09), Milan, Italy, May 27-29, 2009.
- Object-Oriented Programming Languages and System (OOPS'10), Special Track at the 25th ACM Symposium on Applied Computing (SAC 2010), Sierre and Lausanne, Switzerland, March 22-26, 2010.
- Programming for Separation of Concerns (PSC'10), Special Track at the 25th ACM Symposium on Applied Computing (SAC 2010), Sierre and Lausanne, Switzerland, March 22-26, 2010.
- European Lisp Symposium 2010 (ELS'10), Lisbon, Portugal, May 6-7, 2010.
- International Conference on Aspect-oriented Software Development (AOSD'11), Porto de Galinhas, Pernambuco, Brazil, March 2-25, 2011.
- European Lisp Symposium 2011 (ELS'11), Hamburg, Germany, March 31 - April 1, 2011.
- Programming for Separation of Concerns (PSC'11), Special Track at the 25th ACM Symposium on Applied Computing (SAC 2011), Taichung, Taiwan, March 21-25, 2011.
- 10th International Conference on Software Composition (SC 2011), Zurich, Switzerland, June 30 - July 1, 2011.
- Object-Oriented Programming Systems, Languages, and Applications (OOPSLA 2011), Portland, Oregon, USA, October 22-27 (External Review Committee).
- European Lisp Symposium 2013 (ELS'13), Madrid, Spain, June 3-4, 2013.
- Onward! 2013, Indianapolis, Indiana, USA, October 26-31, 2013.
- JuliaCon 2016, Cambridge, Massachusetts, USA, June 21-25, 2016 (reviewer).
- European Lisp Symposium 2019 (ELS'19), Genova, Italy, April 1-2, 2019.

Participation

- *Latently-Typed Languages*, Dagstuhl Seminar 06181, Schloss Dagstuhl, Germany, May 1-6, 2006.
- *Feature-Oriented Software Development*, Dagstuhl Seminar 11021, Schloss Dagstuhl, Germany, January 9-14, 2011.
- *Next-Generation Sequencing – Algorithms, and Software For Biomedical Applications*, Dagstuhl Seminar 16351, Schloss Dagstuhl, Germany, August 28 - September 2, 2016.

Panels

- Invited panelist at the panel session *The Future of Lisp*, International Lisp Conference 2009, MIT, Cambridge, Massachusetts, USA, March 22-25, 2009.
- Invited panelist at the debate session *Are Macros a Menace?*, International Lisp Conference 2009, MIT, Cambridge, Massachusetts, USA, March 22-25, 2009.

Shepherding

- Seventh European Conference on Pattern Languages of Programs (EuroPLoP 2002), Irsee, Germany, July 3-7, 2002.
- Viking PLoP - The First Nordic Conference on Pattern Languages of Programs, Helsingor, Denmark, September 20-22, 2002.
- Eighth European Conference on Pattern Languages of Programs (EuroPLoP 2003), Irsee, Germany, June 25-29, 2003.

Workshops

Organization

- Second German Workshop on Aspect-Oriented Software Development, Bonn, Germany, February 21-22, 2002.
- The Feyerabend Workshop - Redefining Computing, held in conjunction with ECOOP 2002 in Málaga, Spain, June 10, 2002.
- First International Workshop on Unanticipated Software Evolution (USE 2002), held in conjunction with ECOOP 2002 in Málaga, Spain, June 11th, 2002.
- Second International Workshop on Unanticipated Software Evolution (USE 2003), held in conjunction with ETAPS 2003 in Warsaw, Poland, April 6, 2003.
- The Feyerabend Workshop - Redefining Computing, held in conjunction with ETAPS 2003 in Warsaw, Poland, April 12, 2003.
- REPLS Workshop - Reflectively Extensible Programming Languages and Systems (REPLS 2003) at The International Conference on Generative Programming and Component Engineering (GPCE'03), Erfurt, Germany, September 22, 2003.
- 1st European Lisp and Scheme Workshop, co-located with ECOOP 2004, Oslo, Norway, June 13, 2004.
- 2nd Workshop on Object-Oriented Language Engineering for the Post-Java Era (PostJava'04), held in conjunction with ECOOP 2004 in Oslo, Norway, June 14, 2004.
- Object Technology for Ambient Intelligence (OT4Aml), held in conjunction with ECOOP 2005, Glasgow, Scotland, July 25, 2005.
- 2nd European Lisp and Scheme Workshop, held in conjunction with ECOOP 2005, Glasgow, Scotland, July 26, 2005.
- Dynamic Languages Day, Brussels, Belgium, February 13, 2006.
- 3rd European Lisp Workshop, held in conjunction with ECOOP 2006, Nantes, France, July 3, 2006.
- 4th European Lisp Workshop, held in conjunction with ECOOP 2007, Berlin, Germany, July 30, 2007.
- International Workshop on Context-oriented Programming, held in conjunction with ECOOP 2009, Genova, Italy, July 7, 2009.
- International Workshop on Context-oriented Programming, held in conjunction with ECOOP 2010, Maribor, Slovenia, June 21/22, 2010.

Program Committee

- Second IEEE International Workshop on Source Code Analysis and Manipulation (SCAM 2002), Montréal, Canada, October 1, 2002.
- 3rd Workshop on Aspect-Oriented Software Development, Essen, Germany, March 4-5, 2003.
- Second AOSD Workshop on Aspects, Components, and Patterns for Infrastructure Software (ACP4IS), held in conjunction with AOSD 2003 in Boston, Massachusetts, USA, March 17, 2003.
- Third IEEE International Workshop on Source Code Analysis and Manipulation (SCAM 2003), Amsterdam, Netherlands, September 27, 2003.
- Adaptive and Evolvable Software Systems: Techniques, Tools, and Applications (AESS), mini-track at the Hawaii International Conference on System Sciences (HICSS), Big Island, Hawaii, USA, January 5-8, 2004.
- Third AOSD Workshop on Aspects, Components, and Patterns for Infrastructure Software (ACP4IS), held at AOSD'04, Lancaster, UK, March 22, 2004.
- European Interactive Workshop on Aspects in Software (EIWAS'04), Berlin, Germany, September 23-24, 2004.
- Dynamic Aspects Workshop, held in conjunction with AOSD'05 in Chicago, USA, March 15, 2005.

- Workshop on Generic Programming 2006 at 11th ACM SIGPLAN International Conference on Functional Programming (ICFP 2006), Portland, Oregon, September 18-20, 2006.
- Dyla 2007: 3rd Workshop on Dynamic Languages and Applications, July 31, 2007, Berlin, Germany, in conjunction with ECOOP 2007.
- VaMoS 2008: Second International Workshop on Variability Modelling of Software-Intensive Systems, Essen, Germany, January 16-18, 2008.
- Workshop on Self-sustaining Systems (S3) 2008, Potsdam, Germany, May 15-16, 2008.
- International Workshop on Advanced Software Development Tools and Techniques (WASDeTT 2008), co-located with ECOOP 2008, Paphos, Cyprus, July 8, 2008.
- VaMoS 2009: Third International Workshop on Variability Modelling of Software-Intensive Systems, Sevilla, Spain, January 28-30, 2009.
- Object Technology for Ambient Intelligence and Pervasive Systems (OT4Aml), held in conjunction with ECOOP 2009, Genova, Italy, July 6, 2009.
- Workshop on Context-Aware Software Technology and Applications (CASTA 2009), co-located with ESEC/FSE 2009, Amsterdam, The Netherlands, August 24, 2009.
- 7th ECOOP 2010 Workshop on Reflection, AOP and Meta-Data for Software Evolution (RAM-SE'10), Maribor, Slovenia, June 21/22, 2010.
- VaMoS 2011: Fifth International Workshop on Variability Modelling of Software-Intensive Systems, Namur, Belgium, January 27-29, 2011.
- 2nd International Workshop on Variability & Composition in Live Contexts (VariComp 2011), co-located with AOSD 2011, Porto de Galinhas, Pernambuco, Brazil, March 22, 2011.
- 5th International Workshop on Context-oriented Programming, co-located with ECMFA/ECOOP/ECSA 2013, Montpellier, France, July 2, 2013.
- Meta'18: Workshop on Meta-Programming Techniques and Reflection, co-located with SPLASH 2018, Boston, Massachusetts, November 5, 2018.

Ph.D. Theses

Co-promotion

- Thomas Cleenewerck, Modularizing Language Constructs: A Reflective Approach, Ph.D. thesis, Vrije Universiteit Brussel, Faculteit Wetenschappen, Vakgroep Informatica, Laboratorium voor Programmeerkunde, July 3, 2007. Promoters: Theo D'Hondt and Pascal Costanza.
- Peter Ebraert, A Bottom-up Approach to Program Variation, Ph.D. thesis, Vrije Universiteit Brussel, Faculteit Wetenschappen, Vakgroep Informatica, Laboratorium voor Programmeerkunde, June 4, 2009. Promoters: Theo D'Hondt, Patrick Heymans, Pascal Costanza.
- Jorge Vallejos, Modularising Context Dependency and Group Behaviour in Ambient-oriented Programming, Vakgroep Informatica, Laboratorium voor Programmeerkunde, July 7, 2011. Promoters: Theo D'Hondt, Wolfgang De Meuter, Pascal Costanza.

Jury Member

- Sebastián González Montesinos, Programming in Ambience: Gearing up for dynamic adaptation to context, Ph.D. thesis, Université Catholique de Louvain, Ecole Polytechnique de Louvain, Département d'Ingénierie Informatique, October 24, 2008. Promoter: Kim Mens.
- Jim Newton, Extending dynamic language expressivity to accommodate rationally typed sequences, Ph.D. thesis, L'École Doctorale Informatique, Télécommunications et Électronique, EDITE de Paris, November 20, 2018. Advisor: Didier Verna.

Ph.D. proposal evaluation

- Anonymous, Universidad de Chile, January 2009.