

Curriculum Vitae

Cecilia Mary Fischer Rubira, Ph.D.

Institute of Computing – University of Campinas (UNICAMP)
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1 Education (Academic Degrees)

- Habilitation in Computing Science, 2001:
University of Campinas (UNICAMP), Campinas, SP, Brazil
Degree of “livre docência” (similar to the French or German
“habilitation”).
- Ph.D in Computing Science, 1994:
University of Newcastle upon Tyne - England,UK
Thesis Title: Structuring Fault-Tolerant Object Oriented Systems Using
Inheritance and Delegation
Supervisor: Professor Brian Randell
- Master of Computer Science, 1989:
University of Campinas (UNICAMP), Campinas, SP, Brazil
Dissertation Title: Code Generation Study for a Dataflow Machine
Supervisor: Dr. Arhtur João Catto
- Bachelor of Computer Science, 1986:
University of Campinas (UNICAMP), Campinas, SP, Brazil

2 Career Related Experience (Academic Appointments)

Associate Professor, August 2001 – Current
Institute of Computing, UNICAMP, Campinas, SP, Brazil

Assistant Professor, March 2000 – July 2001
Institute of Computing, UNICAMP, Campinas, SP, Brazil

Collaborator Assistant Professor, March 1997 – February 2000
Institute of Computing, UNICAMP, Campinas, SP, Brazil

Invited Assistant Professor, March 1995 – February 1997
Institute of Computing, UNICAMP, Campinas, SP, Brazil, CNPq
scholarship for recently graduated doctors.

3 Publications

Journal Articles

1. L.P.Tizzei, M.O.Dias, C.M.F.Rubira, A.F.Garcia, J.Lee. Components meet Aspects: Assessing Design Stability of a Software Product Line. *Information and Software Technology*, Volume, Issue, Pages, Elsevier, ISSN:0950-5849, to appear.
2. F.CastorFilho, N.Cacho, E.Figueiredo, A.F.Garcia, C.M.F.Rubira, J.S.Amorim, H.O.Silva. On the Modularization and Reuse of Exception Handling with Aspects. *Software: Practice&Experience (SPE)*, Volume39, Issue17, Pages:1377-1417, October,2009, John Wiley&Sons Ltd., Print ISSN 0038-0644, Online ISSN:1097-024X.
3. P.H.S.Brito, R.deLemos, C.M.F.Rubira, E.Martins. Architecting Fault Tolerance with Exception Handling: Verification and Validation, *Journal of Computer Science and Technology (JCST)*, Special Issue on Software Engineering for High-Confidence Systems, Editor: S.C.Cheung, SpringerVerlag, ISSN1000-9000, Vol.24, No.4, pp. 212-237, March2009.
4. F.Castor-Filho, A.Romanosky, C.M.F.Rubira. Improving the Reliability of Cooperative Concurrent Systems with Exception Flow Analysis. *Journal of Systems and Software (JSS)*, Elsevier, North-Holland, ISSN0164-1212, Vol.82, No.5, May 2009, pp.874-890.
5. F.CastorFilho, P.H.S.Brito, C.M.F.Rubira. Specification of Exception Flow in Software Architectures. *Journal of Systems and Software*, Elsevier, North-Holland,ISSN0164-1212,Vol.79,No.10, October 2006, pp.1359-1482.
6. R.deLemos, P.A.C.Guerra, C.M.F.Rubira. A Fault-tolerant Architectural Approach for Dependable Systems. *IEEE Software*, March/April2006, pp.80-87,IEEE Computer Society Press, ISSN0740-7459.
7. F.CastorFilho, P.A.C.Guerra, V.A.Pagano, C.M.F.Rubira. A Systematic Approach for Structuring Exception Handling in Robust Component-based Software. *Journal of the Brazilian Computer Society*, Vol.10, No. 3, April 2005, pp.5-19,SBC (Brazilian Computer Society), ISSN0104-6500.
8. C.M.F.Rubira, R.deLemos, G.R.M.Ferreira, F.CastorFilho. Exception Handling in the Development of Dependable Component-based Systems. *Software: Practice&Experience*, Volume35, No.3, March 2005, pp.195-236, John Wiley&Sons, Ltd.,ISSN0038-0644.
9. F.CastorFilho, C.M.F.Rubira. Implementing Coordinated Error Recovery for Distributed Object-Oriented Systems with AspectJ. *Journal of Universal Computer Science (J.UCS)*, Vol.10, No.7, July 2004, pp.843-858, ISSN 0948-6968.

10. A.F.Garcia, D.M.Beder, C.M.F.Rubira. A Unified Meta-Level Software Architecture for Sequential and Concurrent Exception Handling. *Computer Journal*, Vol.44, No.6,2001,pp.569-587,Oxford University Press, ISSN 0010-4620.

11. A.F.Garcia, C.M.F.Rubira, A.Romanovsky, J.Xu. A Comparative Study of Exception Handling Mechanisms for Building Dependable Object-Oriented Software. *Journal of Systems and Software*, Vol.59, No.2, November2001, pp.197-222, Elsevier, North-Holland, ISSN 0164-1212.

12. L.E.Buzato, C.M.F.Rubira, M.L.B.Lisbôa. A Reflective Object-Oriented Architecture for Developing Fault-Tolerant Software. *Journal of the Brazilian Computer Society*, vol.4, No.2,November 1997, pp. 39-48, SBC (Computer Brazilian Society), ISSN 0104-6500.

Book Chapters

13. F.CastorFilho, P.H.S.Brito,C.M.F.Rubira.Reasoning about Exception Flow at the Architectural Level. In the book *Rigorous Development of Complex Fault-Tolerant Systems*. Editors: Butler,M.; Jones,C.; Romanovsky,A.; Troubitsyna,E.;Romanovsky A. Springer-Verlag, Series: *Lecture Notes in Computer Science (LNCS)*, no.4157, pp.80-99, 2006.(<http://www.springeronline.com/3-540-48265-2>)

14. F.CastorFilho, A.F.Garcia, C.M.F.Rubira, R.A.M.Ferreira. Aspectizing Exception Handling: A Quantitative Study. In the book *Advanced Topics in Exception Handling Techniques*. Editors: C.Dony, J.L.Knudsen, A.Romanovsky, A.Tripathi, Springer-Verlag, *LectureNotesinComputerScience (LNCS)*, no.4119, pp.255-274, Springer-Verlag, Berlin Heidelberg, 2006.

15. P.A.C.Guerra, R.deLemos, A.Romanovsky, C.M.F.Rubira. A Dependable Architecture for COTS-Based Software Systems using Protective Wrappers. In the book *Architecting Dependable Systems II*. Editors: A.Romanovsky, C.Gacek, R.deLemos. *Lecture Notes in Computer Science (LNCS)*,no.3069, pp.144-166,Springer-Verlag Berlin Heidelberg, 2004,ISSN0302-9743.

16 .P.A.C.Guerra, C.M.F.Rubira, R.deLemos. Na Idealised Fault-Tolerant Architectural Component. In the book *Architecting Dependable Systems*. Editors: A.Romanovsky, C.Gacek, R.deLemos. *Lecture Notes in Computer Science (LNCS)* no.2677, pp.129-149, Springer-Verlag Berlin Heidelberg, 2003, ISBN 3-540-40727-8.

17. A.F.Garcia,C.M.F.Rubira. An Architectural-based Reflective Approach to Incorporating Exception Handling into Dependable Software. Chapter 4, In the book *Advances in Exception Handling Techniques*. Editors: A.Romanovsky, C.Dony, J.L.Knudsen, A.Tripathi.

Springer Verlag, Lecture Notes In Computer Science (LNCS) no.2022, pp.189-206, April 2001. 18pp. (ISSN 0302-9743. ISBN 3-540-41952-7).

18. A.M.Braga, C.M.F.Rubira, R.Dahab. Tropyc: A Pattern Language for Cryptographic Object-Oriented Software. In the book Pattern Languages of Program Design 4, Neil Harrison, Brian Foote, Hans Rohnert (Eds.), Software Patterns Series, chapter 16, pp.337-371, Addison-Wesley Longman, 2000, ISBN 0-201-43304-4.

19. B.Randell, A.Romanovsky, C.Rubira, R.Stroud, Z.Wu, J.Xu. From Recovery Blocks to Coordinated Atomic Actions. In the book Predictably Dependable Computer Systems. Randell, Laprie, Kopetz & Littlewood (Eds.), chapter 3, Springer-Verlag, pp.87-101, 1995, ISBN 3-540-59334-9

Conference and Symposium Paper

20. F.CastorFilho, N.Cacho, E.Figueiredo, R.A.M.Ferreira, A.F.Garcia, C.M.F.Rubira. Exceptions and Aspects: The Devil is in the Details. In the Proceedings of the 14th ACM SIGSOFT Symposium on Foundations of Software Engineering (FSE'2006), Portland, Oregon, USA, November 5-11, pp.152-162, 2006.

4 Current Research Projects

Project's Title: Software Variability Evolution in Component-based Software Product Lines, Research productivity scholarship from CNPq, level 1 D, proc.no.305331/2009-4, March 2010 – February 2014.

Project's Title: Exception Handling Variability for Component-based Software Product Lines, FAPESP agency, proc.no.2010/00628-1, May 2010 – April 2012, coordinator: C.M.F.Rubira, R\$ 42.750,00.

Project's Title: Brazilian Research Institute for Web Science (INCT in Web Science), CNPq agency, proc.no. 557.128/2009-9, coordinator: Professor Carlos Jose Pereira de Lucena.

Project's Title: RobustWeb: Development and Validation of Dependable Web services-based Software Applications, CAPES-COFECUB Brazil/France, proc.no. 623/2009, January 2009 - December 2010, coordinators: Dr.Eliane Martins (UNICAMP-Brazil) and Dr. Ana Rosa Cavalli (Institut Nat. des T´el´ecomunications - France), R\$ 50.000,00.

Project's Title: BIO-CORE: Tools, Models, Techniques for support Biodiversity Research, CNPq agency, proc.no. 550890/2007-6, December 2007 – October 2010, coordinator: Professor Claudia Bauzer Medeiros (Institute of Computing-UNICAMP), R\$ 506.302,56.

5 Current Supervisions of PhD and Master Students

Jane Dirce Alves Sandim Eleuterio (PhD), August 2010,
Institute of Computing – UNICAMP, scholarship: CAPES agency
Project's Title: Software Product Lines based on Components and Aspects for Electronic Govern Domain

Amanda Savio Nascimento e Silva (PhD), March 2008,
Institute of Computing – UNICAMP, scholarship: CAPES agency
Project's Title: Dynamic and Fault-tolerant Software Product Lines based on Service-Oriented Architecture

Leonardo Pondian Tizzei (PhD), August 2006,
Institute of Computing – UNICAMP, scholarship: CAPES agency
Project's Title: Software Variability Management and Evolution for Component-based Software Product Lines

Nelson Luiz Geromel (MSc), March 2010,
Institute of Computing – UNICAMP,
Project's Title: Software Prodcut Lines based on Service-oriented architecture for for Electronic Govern Domain

Moacy Barros Correia da Silva (MSc), March 2010 ,
Institute of Computing – UNICAMP,
Project's Title: Software Variability Support in a Development Environment based on Components

Alan Braz (MSc), August 2009 ,
Institute of Computing – UNICAMP,
Project's Title: Agile Method Applied to the Development of Fault-tolerant Software based on Components

Bruno Iizuka (MSc), March 2009 ,
Institute of Computing – UNICAMP, scholarship: CNPq agency
Project's Title: Exception Handling Variability in Software Product Lines

Renato de Jesus Manzoni (MSc), March 2009 ,
Institute of Computing – UNICAMP, scholarship: CAPES agency
Project's Title: Exception Handling in Web Services-based Software Architecture

Ivo Augusto Bertencello (MSc), March 2008 ,
Institute of Computing – UNICAMP, scholarship: FAPESP agency
Project's Title: Explicit Representation of Exceptional Flows in Component-based Software Architectures

Ivan Brunetto (MSc), March 2008 ,
Institute of Computing – UNICAMP,

Project's Title: Software Variability Management in Software Product Lines

Leonel Aguilar Gayard (MSc), March 2005 ,
Institute of Computing – UNICAMP, scholarship: CAPES agency
Project's Title: A Framework for Deployment and Dynamic Linking of Software Components

6 Quantitative Indicators

Books: 1
Journal articles: 13
Conference papers: 70
Book chapters: 9
Awarded PhD degrees: 4
Awarded MSc degrees: 27 (3 as co-supervisor)

7 Other Relevant Information

She has been holding Research Productivity Scholarship from CNPq since 1998.

Today she holds Research Productivity Scholarship from CNPq, level 1 D, proc.no.305331/2009-4, March 2010 – February 2014.

Academic Award 2001: the best dissertation award, nominated by the committee of the Brazilian Computer Society (SBC), July 2001, dissertation's title: "Exception Handling in Concurrent Object-Oriented Software Systems", MSc student: Alessandro Fabricio Garcia.

Adviser of UNICAMP's Vice-rector: Professor Edgar Salvadori de Decca, May 2009 – April 2012.

Adviser of UNICAMP Undergraduation pro-rector: Professor Edgar Salvadori de Decca, May 2005 – April 2009.

Vice-head of Information Systems Department, Institute of Computing, UNICAMP, August 2004 – August 2006.

Adviser of UNICAMP Undergraduation pro-rector: Professor José Luiz Boldrini, May 2002 – April 2005.

General chair of the Brazilian Symposium on Software Engineering (SBES), Campinas, SP, Brazil, 2008.

Program chair of the Brazilian Symposium on Components, Software Architecture and Reuse (SBCARS), Campinas, SP, Brazil, 2007.

Recent Publications:

L.P.Tizzei, J.Lee and C.M.F.Rubira. An Aspect-oriented View to Support Feature-oriented Reengineering. In Proceedings of the 15th Workshop on Aspect-Oriented Modeling, co-located with MoDELS 2010, Oslo, Norway, October 4th, 2010.

M.O.Dias, L.P.Tizzei, C.M.F.Rubira, A.F.Garcia and J.Lee. Leveraging Aspect-Connectors to Improve Stability of Product-Line Variabilities. In Proceedings of the Fourth International Workshop on Variability Modelling of Software-intensive Systems, January 27-29, 2010 at the Johannes Kepler University, Linz, Austria, ICB-Research Report, Volume 37, pp. 21-28, Institute of Computer Science and Business Information Systems (ICB), University of Duisburg-Essen, Essen, Germany.

E.M.Gonçalves and C.M.F.Rubira. Archmeds: An Infrastructure for Dependable Service-Oriented Architectures. In Proceedings of the 1st IEEE Latin American Regional Conference on the Engineering of Computer Based Systems (ECBS-LARC), December 14th, 2009, PUC-Rio, Rio de Janeiro, Brazil pp. 1-8, Proceedings of the 2010 17th IEEE International Conference and Workshops on Engineering of Computer-Based Systems (ECBS 2010) to be held 22-26 March 2010 in Oxford, England.

P.H.S.Brito, R.deLemos, and C.M.F.Rubira. Verifying Architectural Variabilities in Software Fault Tolerance Techniques. In Proceedings of the IEEE/IFIP Conference on Software Architecture and European Conference on Software Architecture 2009 (WICSA/ECSA 2009), pp. 231-240, September 14-17, Cambridge, UK, 2009.

P.H.S.Brito, R.deLemos, E.Martins, R.Moraes and C.M.F.Rubira. Architectural-Based Validation of Fault-Tolerant Software. In Proceedings of the Fourth Latin-American Symposium on Dependable Computing (LADC 2009), September 1-4, João Pessoa, PB, Brazil, 2009.

P.H.S.Brito, R.deLemos and C.M.F.Rubira. Verification of Exception Control Flows and Handlers based on Architectural Scenarios. In Proceedings of the 11th IEEE High Assurance Systems Engineering Symposium (HASE 2008), Nanjing, China, December 3-5, 2008.

I.A.Bertoncello, M.O.Dias, P.H.S.Brito and C.M.F.Rubira. Explicit Exception Handling Variability in Component-based Product Line Architectures. In Proceedings of the 4th International Workshop on Exception Handling (WEH 2008), co-located with 16th International Symposium on the Foundations of Software Engineering (FSE 16), Atlanta, GA, USA, 14 November 2008, ACM Press.

P.H.S.Brito, R.deLemos and C.M.F.Rubira. Development of Fault-Tolerant Software Systems Based on Architectural Abstractions. In Proceedings of the 2nd European Conference on Software Architecture (ECSA 2008), Paphos, Cyprus, September 29 - October 01, 2008, R. Morrison, D. Balasubramaniam, and K. E. Falkner (editors), Lecture Notes in Computer Science (LNCS), vol.5292 , pages 131-147, Springer-Verlag, Berlin Heidelberg, 2008.

Campinas, October 18th, 2010.

Cecilia Mary Fischer Rubira