

Curriculum Vitae

Agostino Cortesi

Dipartimento di Informatica
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1 Personal

Name: Cortesi Agostino
Birth Date: 11 gennaio 1963
Citizenship: italian
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Languages: italian, english, french
Civil Status: married, two children
Academic Degrees: “laurea” in mathematics,
PhD in applied mathematics and computer science.
Professional Status: full professor, Dep. of Computer Science, Ca' Foscari University, Venezia, Italy.

2 Education

june'92: Diploma di Dottorato di Ricerca in Matematica Applicata e Informatica (PhD in applied mathematics and computer science). Università degli Studi di Padova. Title of the thesis: “Abstract Domains for Static Analysis of Logic Programs”. Advisor: prof. Gilberto Filé.
nov.'86: “Laurea” in Mathematics, Università degli Studi di Padova. Title of the thesis: “Extension and Selection Problems for Multivalued Functions”. Advisors: prof. R. Bressan Villella and prof. A. Bressan.

3 Professional Experience

nov.'02/today: Full Professor in Computer Science, and Head of the Computer Science Department, Univ. Ca' Foscari di Venezia.
nov.'98/oct'02: Associate Professor in Computer Science, Computer Science Department, Univ. Ca' Foscari di Venezia.

feb.'94/oct.'98: Assistant Professor in Computer Science, Computer Science Department, Università Ca' Foscari di Venezia.

sept.'92/sept.'93: Post-doc Associate, Computer Science Department, Brown University (USA). CNR grant - Progetto Finalizzato "Sistemi Informatici e Calcolo Parallelo". Supervisor: prof. Pascal van Hentenryck.

nov.'91/sept.'92: Senior Fellowship by Istituto Nazionale d'Alta Matematica "Francesco Severi". Università degli Studi di Padova. Supervisor: prof. Gilberto Filé.

4 Research and Teaching Activities

Research Interests

- Programming Languages
- Static Analysis Techniques
- Software Engineering

Research Projects

- FIRB RBAU018RCZ "Interpretazione astratta e model checking per la verifica di sistemi embedded", 2002-2004.
- MURST 01248949 Interpretazione astratta, sistemi di tipo e analisi Control-Flow
- MURST 9901403824 Certificazione automatica di programmi mediante interpretazione astratta, 1999-'00.
- MURST 9701248444 Tecniche Formali per la specifica, l'analisi, la verifica, la sintesi e la trasformazione di sistemi software. 1997-'98.
- MPI-40% Project , "Modelli e Metodi della Computazione e dei Linguaggi di Programmazione".
- Progetto Finalizzato "Sistemi Informatici e Calcolo Parallelo", CNR, grant n. 89.00026.69.

Grants

- Research Fellowship, Istituto Nazionale di Alta Matematica "F. Severi" per l'a.a. 1991/92, Dip. di Matematica Pura e Applicata dell'Università di Padova, supervisor: prof. Gilberto Filé.
- Research Fellowship Fondazione "Aldo Gini" (2.1.1992).
- CNR Research Fellowship, n. 203.12.191, from 15.9.92 through 15.9.93, Dept. of Computer Science, Brown University, supervisor: prof. Pascal van Hentenryck.
- CNR Research Fellowship, n. 203.15.3.
- Research Fellowship, Università di Padova, a.a. 1992/93.
- CNR Prize, regarding CNR Research Fellowship n. 203.12.191.

Organizing Activities

- Program Committee member of the *Static Analysis Symposium 2007 (SAS'07)*, Copenhagen, Denmark, 2007.
- Program Co-Chair of the First Int. Workshop on Abstract Interpretation for Object Oriented Languages (AIOOL'05), Paris, 2005.

- Program Committee member of Fourth Int. Symposium on Verification, Model Checking, and Abstract Interpretation (VMCAI'05), Paris, 2005
- Program Committee member of IEEE Computer Security Foundations Workshop (CSFW17), Asilomar, USA, 2004
- Local Arrangement Chair of the 31 ACM Symposium on Programming languages (POPL'04) and affiliated events (SPACE'04, CW'04, FOOL 11, VMCAI'04), Venice, 2004.
- Program Committee member of Fourth Int. Symposium on Verification, Model Checking, and Abstract Interpretation (VMCAI'04), Venice, 2004
- Program Committee member of Fourth Int. Symposium on Verification, Model Checking, and Abstract Interpretation (VMCAI'03), New York, 2003
- Program Chair of the Third Int. Workshop on Verification, Model Checking, and Abstract Interpretation (VMCAI'02), Venice, 2002
- Conference Chair and Program Committee Member of the *Static Analysis Symposium 1999* (SAS'99), Venice, 1999.
- Program Committee member of the *Static Analysis Symposium 1998* (SAS'98), Pisa, 1998.
- Program Co-Chair of the Second Int. Workshop on Verification, Model Checking, and Abstract Interpretation (VMCAI'98), Pisa, 1998.
- Program Committee member of the *Static Analysis Symposium 1997* (SAS'97), Paris, 1997.
- Program Committee member of the *International Workshop of the HCM project CONSOLE (Constraint SOLving in Europe)*, Ca' Dolfin, Venezia, 18-19 dicembre 1995.
- Conference Chair of the *First International Workshop on Concurrent Constraint Programming*, Ca' Dolfin, Venezia, 29-31 maggio 1995.

Journal and Conference Refereeing

ACM Transactions on Programming Languages and Systems, Software Engineering and Knowledge Engineering, Journal of Logic Programming, Science of Computer Programming, Computer Languages, Theoretical Computer Science, Information and Computation, Theory and Practice of Logic Programming, ICALP, SAS, ESOP, ICLP, ILPS, LOPSTR, ESOP, FOSSACS.

Teaching Activities

- "Programming", 1st year course in the Computer Science Curriculum, 150 students. Laurea in Informatica, Univ. Ca' Foscari.
- "Software Engineering": 3th year course in the Computer Science Curriculum, 70 students. Laurea in Informatica, Univ. Ca' Foscari.
- "Program Analysis and Verification": 5th year course in the Computer Science Curriculum, 20 students. Laurea in Informatica, Univ. Ca' Foscari.
- "Information Systems for Tourism", Master in Economics for Tourism, 20 students. Univ. Ca' Foscari.

5 Publications

Monographs

- [1] L. Zuck, P. Attie, A. Cortesi, and S. Mukhopadhyay (Eds). Verification, Model Checking, and Abstract Interpretation. Proceedings of VMCAI'03, New York, USA, January 2003. LNCS 2575 Springer-Verlag, 2003.
- [2] A. Cortesi (Ed). Verification, Model Checking, and Abstract Interpretation. Proceedings of VMCAI'02, Venice, Italy, January 2002. LNCS 2294 Springer-Verlag, 2002.
- [3] A. Cortesi, and G. Filé (Eds). Static Analysis. Proceedings of the 6th International Symposium SAS'99, Venice, Italy, September 1999. LNCS 1694 Springer-Verlag, 1999.
- [4] R. Orsini, and A. Cortesi. Programmare in Modula-3. Introduzione alla programmazione imperativa e orientata agli oggetti. CEDAM, Padova, ISBN 88-13-21282-8, 1998.
- [5] A. Cortesi. Domini Astratti per l'Analisi Statica di Programmi Logici. Tesi per il conseguimento del Dottorato di Ricerca in Matematica Computazionalee Informatica Matematica, Università degli Studi di Padova, 1992.

Journal Papers

- [6] C. Braghin, A. Cortesi, and R. Focardi. F.L.Luccio, and C. Piazza. Nesting analysis of mobile ambients. *Computer Languages, Systems and Structures* 30(3-4): 207-230, 2004.
- [7] C. Braghin, A. Cortesi, and R. Focardi. F.L.Luccio, and C. Piazza. Behind BANANA: Design and Implementation of a Tool for Nesting Analysis of Mobile Ambients. *Electr. Notes Theor. Comput. Science* 99: 319-337, 2004.
- [8] C. Braghin, A. Cortesi, and R. Focardi. Security Boundaries in Mobile Ambients. *Computer Languages* 28(1): 101-127, 2002.
- [9] A. Cortesi, A. Dovier, E. Quintarelli, and L. Tanca. Operational and Abstract Semantics of the Query Language G-log. *Theoretical Computer Science* Vol. 275/1-2, pp 521-560, 2002.
- [10] A. Cortesi, B. Le Charlier, and P. van Hentenryck. Combinations of Abstract Domains for Logic Programming: Open Product and Generic Pattern Construction *Science of Computer Programming*, Vol 38(1-3), pp. 27-71, 2000.
- [11] P. Van Hentenryck, and V. Ramachandran, and A. Cortesi. Abstract Domains for Reordering $CLP(R_{Lin})$ Programs. *The Journal of Logic Programming*, Vol 42, pp. 217-256, 2000.
- [12] A. Cortesi, and G. File'. Sharing is Optimal *The Journal of Logic Programming*, Vol 38(3), pp. 371-386, 1999.
- [13] B. Le Charlier, C. Leclere, S. Rossi, and A. Cortesi. Automated Verification of Prolog Programs *The Journal of Logic Programming*, Vol.39(1-3), pp. 3-42, 1999.
- [14] A. Cortesi, G. Filé, W. Winsborough. The quotient of an abstract interpretation. *Theoretical Computer Science*, 202(1-2), pp.163-192, 1998.
- [15] A. Cortesi, G. Filé, R. Giacobazzi, C. Palamidessi, and F. Ranzato. Complementation in abstract interpretation. *ACM Transactions on Programming Languages and Systems*, 19(1):7-47, 1997.
- [16] A. Cortesi, G. Filé, and W. Winsborough. Optimal groundness analysis using propositional logic. *The Journal of Logic Programming*, 27(2):137-167, 1996.
- [17] P. Van Hentenryck, A. Cortesi, and B. Le Charlier. Evaluation of the Domain PROP. *The Journal of Logic Programming*, 23(3):237-278, 1995.

- [18] P. Van Hentenryck, A. Cortesi, and B. Le Charlier. Type Analysis of Prolog using Type Graphs. *The Journal of Logic Programming*, 22(3):179–208, 1995.
- [19] A. Cortesi and G. Filé. Graph properties for normal logic programs. *Theoretical Computer Science*, 107:277–303, 1993.
- [20] A. Bressan and A. Cortesi. Directionally continuous selections in Banach Spaces. *Nonlinear Analysis, Theory, Methods and Applications*, 13(8):987–992, 1989.
- [21] A. Bressan and A. Cortesi. Lipschitz extensions of convex-valued maps. *Atti Accademia dei Lincei Rend. fis.* 8(80): 530–532, 1986.

International Journals Served as Editor

- [22] A.Cortesi and F.Logozzo (Guest editors) *Electronic Notes in Theoretical Computer Science*, Elsevier, AIOOL: Abstract Interpretation for Object Oriented Languages, vol 131, 2005.
- [23] L. Zuck, P. Attie, and A. Cortesi (Guest Editors) *International Journal on Software Tools for Technology Transfer (STTT)* , Springer, Special section on verification, model checking, and abstract interpretation, vol. 6(1), 2004
- [24] A.Cortesi, and G. File’ (Guest Editors) *Science of Computer Programming*, Elsevier, Special Issue on Static Analysis, vol. 47(2-3), 2003.
- [25] A.Cortesi, and R.Focardi (Guest Editors) *Computer Languages*, Elsevier, Special Issue on Programming Languages and Security, vol. 28(1), 2002.

Papers in Collections

- [26] A. Cortesi, B. Le Charlier, S. Rossi. Specification-based Automatic Verification of Prolog Programs, in J. Gallagher (ed.), *Logic Programming Synthesis and Transformation*. LNCS 1207, Springer-Verlag, 1997.
- [27] A. Cortesi, B. Le Charlier, S. Rossi. Operational Semantics for Reexecution-based Analysis of Logic Programs with Delay Declarations. *Electronic Notes on Theoretical Computer Science* EN TCS 48, Elsevier, 2001

International Conference Papers

- [28] F. Logozzo and A. Cortesi, Semantic Hierarchy Refactoring by Abstract Interpretation. In E.Allen Emerson (Ed.), Proc. 7th Int. Conf. on Verification, Model Checking and Abstract Interpretation (VMCAI 06) Charleston, South Carolina, USA, January 8-10, 2006 Lecture Notes in Computer Science, 3855, pp. 313-331. Springer. 2006. ISSN: 0302-9743
- [29] A.Cortesi and F.Logozzo, Abstraction Interpretation-based Verification of Non-functional Requirements. In J.-M. Jaquet, G.P. Picco (Eds.): Proc. Seventh International Conference on Coordination Models and Languages COORDINATION 2005, Namur, Belgium April 20-23, 2005, Lecture Notes in Computer Science 3454, pp.49-62 Springer 2005.
- [30] A.Cortesi and E.Nardelli, The Quality Certification Mark for Italian University Degree Programs in Computer Science. Proc. 8th IFIP World Conference on Computers in Education, Cape Town, South Africa, July 2005, ISBN 1-920-01711-9.
- [31] F.Logozzo and A.Cortesi, Abstraction Interpretation for Object Oriented Languages: Quo Vadis?. Proc. First International Workshop on Abstraction Interpretation for Object Oriented Languages AIOOL’05, Paris, France January 21, 2005, Electronic Notes in Theoretical Computer Science 131, pp.75-84, Elsevier 2005.

- [32] C.Braghin, A.Cortesi, Flow-sensitive Leakage Analysis in Mobile Ambients. In Proc. 2nd Int. Workshop on Security Issues in Coordination Models, Languages, and Systems (SecCo'04), London (UK), august 2004. Electronic Notes in Theoretical Computer Science 128(5), pp.17-25, Elsevier 2005.
- [33] C.Braghin, A.Cortesi, S. Filippone, R.Focardi, F.L.Luccio, and C.Piazza, BANANA - A Tool for Boundary Ambients Nesting ANalysis. In Hubert Garavel, John Hatcliff (Eds.): Tools and Algorithms for the Construction and Analysis of Systems, 9th International Conference, TACAS 2003, Warsaw, Poland, April 7-11, 2003, Lecture Notes in Computer Science 2619, pp.437-441 Springer 2003.
- [34] C.Braghin, A.Cortesi, S. Filippone, R.Focardi, F.L.Luccio, and C.Piazza, Complexity of Nesting Analysis in Mobile Ambients. In Lenore D. Zuck, Paul C. Attie, Agostino Cortesi, Supratik Mukhopadhyay (Eds.): Verification, Model Checking, and Abstract Interpretation, 4th International Conference, VMCAI 2003, New York, NY, USA, January 9-11, 2002. Lecture Notes in Computer Science 2575, pp.86-101 Springer 2003,
- [35] C.Braghin, A.Cortesi, and R.Focardi, Information Leakage Detection in Boundary Ambients In Proc. CATS'03 - Computing: The Australasian Theory Symposium February 2003, Electr. Notes Theor. Comput. Sci. 78: (2003)
- [36] C.Braghin, A.Cortesi, R.Focardi, and S. van Bakel, Boundary Inference for Enforcing Security Policies in Mobile Ambients. In U. Montanari (ed.), *Proc. 17th IFIP World Computer Congress - Track 1 TCS 2002*, Montreal, Canada, 25-30 august 2002.
- [37] C.Braghin, A.Cortesi, and R.Focardi, Control Flow Analysis of mobile ambients with Security Boundaries, in B. Jacobs, and A. Renkins (eds), *Proc. IFIP Fifth Int. Conference on Formal Methods for Open Object-Based Distributed Systems FMOODS'02*, Twente, The Netherlands, Kluwer Acad. Publishers, pp. 197–212, 2002.
- [38] I. Pollet, B. Le Charlier, and A. Cortesi, Distinctness and Sharing Domains for Static Analysis of Java Programs, *Proc. European Conference on Object Oriented Programming ECOOP'01*, Budapest, 18-22 June 2001. Springer Verlag LNCS 2072, pp. 77-98, 2001.
- [39] B. Le Charlier, S.Rossi, and A. Cortesi, A Domain for the Abstract Interpretation of Logic Programs with Dynamic Scheduling, *Proc. ACM International Workshop on Verification and Computational Logic VCL'2001*, Florence, Italy, September 4, 2001.
- [40] A.Cortesi, and R.Focardi, Information Flow Security in Mobile Ambients *Proc. International Workshop on Concurrency and Coordination ConCoord'01*, Lipari Island, Italy, 6-8 July 2001, Electronic Notes on Theoretical Computer Science vol. 54, Elsevier, 2001.
- [41] A.Cortesi, B. Le Charlier, and S.Rossi, Reexecution-based Analysis of Logic Programs with Delay Declarations, *Fourth International Conference on Perspectives of System Informatics*, Akademgorodok, 3 - 6 July 2001, Springer Verlag LNCS 2244, pp. 395–405, 2001.
- [42] G.Callegarin, and A. Cortesi, Towards the Design of an Italian National Curriculum on ICT, *Proc. IFIP World Conference on Computers in Education WCCE2001*, Copenhagen 29 July - 3 August 2001, Kluwer Academic Publishers, ISBN 1-4020-7133-7, pp.767-776, 2001.
- [43] A.Cortesi, A.Dovier, E.Quintarelli, and L.Tanca. Operational and Abstract Semantics of a Query Language for Semi-Structured Information. *Proc. 6th International Workshop on Deductive Databases and Logic Programming DDLP'98*, Manchester, pp. 127–139, UK, June 20, 1998 .
- [44] B. Le Charlier, C. Leclere, S. Rossi, and A. Cortesi. Automated Verification of Behavioural Properties of Prolog Programs. In R.K. Shyamasundar and K. Ueda (ed.), *Proc. Asian Computing Science Conference ASIAN'97*. Springer Verlag LNCS 1345, pp. 225 – 238, Kathmandu, Nepal, December 1997.
- [45] A. Cortesi, B. Le Charlier, C. Leclere, and S. Rossi. On the Design of an Automatic Tool for Prolog Program Verification. In A. German Puebla Sanchez ed., *Proc. ILPS Post-Conference Workshop*

on Tools and Environments for (Constraint) Logic Programming. Port Jefferson, USA, October 1997.

- [46] F. Giubilato, and A. Cortesi. EXOL: A java System for Adaptive Testing. In G. Cancellieri, editor, *Proc. European Conference on Networking Entities NETIES'97*, , Ancona, Italy, october 1997.
- [47] A. Cortesi, G. Filé, R. Giacobazzi, C. Palamidessi, and F. Ranzato. Complementation in abstract interpretation. In A. Mycroft, editor, *Proc. Static Analysis Symposium SAS'95*, volume 983 of *LNCS*, pages 100–117, Glasgow, Scotland, 1995. Springer Verlag.
- [48] P. Van Hentenryck, A. Cortesi, and B. Le Charlier. Type analysis of prolog using type graphs. In *Proceedings of the ACM SIGPLAN'94 Conference on Programming Language Design and Implementation*, volume 29:6 of *SIGPLAN Notices*, pages 337–348. Association for Computing Machinery, June 1994.
- [49] A. Cortesi, B. Le Charlier, and P. Van Hentenryck. Combinations of abstract domains for logic programming. In *Conference Record of POPL'94: 21st ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages*, pages 227–239, Portland, Oregon, 1994. ACM Press.
- [50] A. Cortesi, G. Filé, and W. Winsborough. Comparison of Abstract Interpretations. In M. Kuich, editor, *Proceedings of the 19th International Colloquium on Automata, Languages and Programming, ICALP'92*, volume 623 of *LNCS*, pages 521–532, Wien, Austria, 1992.
- [51] A. Cortesi, G. Filé, and W. Winsborough. Prop revisited: Propositional formulas as abstract domain for groundness analysis. In *IEEE Symposium on Logic in Computer Science*, pages 322–327, Amsterdam, The Netherlands, 1991.
- [52] A. Cortesi and G. Filé. Abstract Interpretation of Logic Programs: an Abstract Domain for Groundness, Sharing, Freeness and Compoundness Analysis. In P. Hudak and N. D. Jones, editors, *Proceedings of the ACM SIGPLAN Symposium on Partial Evaluation and Semantics Based Program Manipulation, PEPM'91*, number 26 in *SIGPLAN Notices*, pages 52–61, Association for Computing Machinery, 1991.