

# CURRICULUM VITAE ET STUDIORUM

FLAMINIA L. LUCCIO

## Personal Data:

**Name:** Flaminia L. Luccio

**Date and place of birth:** 28 Novembre 1969, Roma (RM)

**Work address:** Department of Environmental Sciences Informatics and Statistics, Università Ca' Foscari Venezia, via Torino 155, 30172 Venezia Mestre, Italy

**Office phone:** 041-2348448

**Office fax:** 041-2348419

**E-mail:** luccio@unive.it

**Home address:** via Perlan 53/A, 30174 Venezia Mestre (Ve), Italy

## Work experience:

**since Nov. 2009 Associate Professor** of Computer Science, at the University Ca' Foscari, Venezia, Italy.

**November 2006-October 2009 Assistant Professor** at Dipartimento di Informatica, University Ca' Foscari, Venezia, Italy.

**March 2006 "Idoneità"** for an Italian Associate Professor position (Professore di II fascia).

**September 1998- October 2006 Assistant Professor** at the Faculty of Science, University of Trieste, Italy.

**February 9-nth 1996** Title of System Manager of UNIX systems.

## Education:

**February 1995- October 1998 PhD in Computer Science** (official qualification in March 1999), University of Milan, Italy. Thesis title: "Communication in Distributed Systems", thesis internal supervisor Prof. Giancarlo Mauri, external supervisor, Prof. Danny Krizanc. During here studies she has spent some time abroad for research collaborations: In April-May 1996 at the École Normale Supérieure (ENS) de Lyon, France to work with Prof. Cyril Gavaille; in October-November 1997, at the Carleton University di Ottawa, Canada, to work with Prof. Danny Krizanc and at the University of Montreal, Canada to work with Prof. Paola Flocchini; in May 1998 at the Laboratoire Bordelais de Recherche en Informatique (LABRI), Université de Bordeaux, France, to work with Prof. Cyril Gavaille.

**September 1993-April 1995 Master in Computer Science** (official qualification in June 1995), Carleton University di Ottawa, Canada. Thesis title: "Distributed Algorithms for Routing and String Recognition", thesis supervisor Prof. Danny Krizanc.

**Sept. 1988-June 1993 Laurea in Scienze dell'Informazione** (official qualification July 16th, 1993) University of Pisa, Italy. Thesis title: "Approssimazione numerica di zeri di polinomi: analisi e sviluppo di alcuni metodi basati sull'algoritmo euclideo", thesis supervisor Prof. Dario Bini. Graduated with 110 cum laude. Between September 1991 and April 1992, she has studied at the University of Frankfurt am Main, Germany.

### Scholarships:

**February 1995- October 1998** PhD Scholarship at the University of Milan, Italy.

**March 95** Wins an "Ontario Graduate Scholarship" to extend the Master studies to PhD studies at Carleton. She refuses the scholarship in order to follow the PhD program at the University of Milan.

**September 1993- April 1995** Teaching assistant scholarship at the Carleton University of Ottawa, Canada.

**May 1994-April 1995** Research assistant scholarship at the Carleton University of Ottawa, Canada.

**September 1991-April 1992** Special Scholarship between the University of Pisa and the University of Frankfurt am Main, Germany.

## 1 Main Research Interests

**Routing in distributed systems** Study of different Compact Routing techniques, i.e., routing techniques whose aim is to minimize the execution time and the memory space required for communication in distributed systems. We consider existing techniques and analyse them in new different network topologies (rings, planar graphs, etc.), we also study new static and dynamic (i.e., for dynamically changing networks) techniques and compute their complexities [?, ?, ?, ?, ?, ?, ?, ?, ?, ?].

**Fault-tolerant protocols for multicast in wireless networks** Study and analysis of new protocols for multicast in wireless networks. In these networks, users communicate by exchanging messages that travel from a cell of a wireless network to the hosts of a wired network and back to a new cell of the wireless network. The protocols have to be devised so to guarantee reliable communication even in a scenario where messages may get lost, hosts may crash, communication channels may temporally be disconnected, users may travel in zones where there is no roaming, etc. Interesting applications of these techniques are, e.g., in mobile phone communication, in traffic monitoring management, etc., [?, ?, ?, ?, ?].

**Computation of boolean functions in distributed systems** Study of efficient and correct techniques for the computation of boolean functions in ring networks. Every node of the network has a single bit as an input and the aim is to distributively compute functions that depend on this input [?, ?, ?, ?, ?, ?, ?, ?].

**Structural properties of graphs** Consider different structural properties of the graphs:

\* Given a graph  $G = (V, E)$ , the "Minimum Feedback Vertex Set"  $MFVS \bar{V}$  of  $G$  is a subset of the vertices of minimal cardinality, whose removal induces an acyclic subgraph  $G' = (V \setminus \bar{V}, E')$ . The problem of the computation of a  $MFVS$  is NP-hard for arbitrary graphs; it is thus interesting to study specific topologies (e.g., hypercubes, meshes, butterflies, etc.) for which the problem has polynomial solutions and also analyse upper and lower bounds of the dimension of  $FVS$  [?, ?, ?, ?, ?, ?, ?, ?, ?].

\* Analysis of other different structural properties of graphs, such e.g., the stable sets, planarity, etc. [?, ?, ?, ?, ?].

**Analysis of mobile ambients** Formal study of time and space efficient algorithms for the Control Flow Analysis of mobile ambients. Production of a tool that executes these algorithms [?, ?, ?, ?].

**Mobile Agents** Consider networks where mobile agents collaborate in order to solve different problems.

\* Study and analysis of different algorithms for the solution of the agent “rendezvous” problem, of security related problems such as the capture of an intruder, i.e., a malicious entity that misbehaves [?, ?, ?, ?, ?, ?, ?, ?, ?].

\* Study of a new actor based model, based also on some formal hypermedial structures called “zigzag-structures” [?, ?]. This model has interesting applications in the field of grid computing, e-learning, virtual museum tours, etc. [?, ?, ?, ?, ?].

**Security** Study of the languages containing cryptographic primitives that model the Security APIs for the handling of bank PINs. Analysis of new models that prevent real attacks to bank systems [?, ?, ?, ?, ?, ?, ?, ?, ?]. Security of RFID devices [?, ?, ?].

## 2 Research activities

### Bibliography

#### International Journals

- [1] “Guessing Bank PINs by Winning a Mastermind Game”, R. Focardi, F.L. Luccio, Theory of Computing Systems (TOCS), ISSN 1432-4350, DOI 10.1007/s00224-011-9340-9, 50(1): 52-71 (2012).
- [2] “Contiguous search problem in Sierpinski graphs”, F.L.Luccio, Theory of Computing Systems (TOCS), ISSN 1432-4350, vol. 44, p. 186 - 204, 2009.
- [3] “Decontamination of Hypercubes by Mobile Agents”, P. Flocchini, M.J. Huang, F.L. Luccio, Networks vol. 52 (3), p. 167 - 178, 2008, John Wiley & Sons, Inc.
- [4] “Feedback Vertex Sets in Mesh-based Networks”, F.L. Luccio, Jop F. Sibeyn, Theoretical Computer Science (TCS), vol. 383(1), p. 86-101, 2007, ISSN 0304-3975, Elsevier.
- [5] “Decontaminating chordal rings and tori using mobile agents”, P. Flocchini, M.J. Huang, F.L. Luccio, International Journal of Foundations of Computer Science (IJFCS), vol. 18(3), p. 547-563, 2007, World Scientific Publishing Company.
- [6] “Nesting Analysis of Mobile Ambients”, C. Braghin, A. Cortesi, R. Focardi, F.L. Luccio, C. Piazza, Computer Languages, Systems and Structures, vol. 30 (3-4), Oct.-Dec. 2004, p. 207-230, Elsevier Science.
- [7] “A modular approach to Sprouts” di R. Focardi, F.L. Luccio, Discrete Applied Mathematics (DAM), ISSN 0166-218X, vol. 144 (3) pp. 303-319, 2004, Elsevier Science.
- [8] “Compact Routing Schemes fo Dynamic Ring Networks” di D. Krizanc, F.L. Luccio, R. Raman, Theory of Computing Systems (TOCS), ISSN 1432-4350, vol. 37 (5), pp. 585 - 607, 2004.
- [9] “Fault-tolerant Support for Reliable Multicast in Mobile Wireless Systems: Design and Evaluation” di G. Anastasi, A. Bartoli, F.L. Luccio, Kluwer Wireless Networks Journal (WINET), p. 259-269, ISSN 1022-0038, 10 (3), 2004.

- [10] “Sorting and Election in Anonymous Asynchronous Rings”, P. Flocchini, E. Kranakis, D. Krizanc, F.L. Luccio, N. Santoro, *Journal of Parallel and Distributed Computing (JPDC)*, p. 254-265, ISSN 0743-7315, 64 (2), 2004.
- [11] “Routing in Series Parallel Networks”, P. Flocchini, F.L. Luccio, *Theory of Computing Systems (TOCS)*, p. 137-157, ISSN 1432-4350, 36(2), 2003.
- [12] “On recognizing a string on an anonymous ring”, E. Kranakis, D. Krizanc, F.L. Luccio, *Theory of Computing Systems (TOCS)*, p. 3-12, ISSN 1432-4350, 34(1), 2001.
- [13] “Feedback Vertex Set in Hypercubes” R. Focardi, F.L. Luccio, D. Peleg, *Information Processing Letters (IPL)* p. 1-5, ISSN 0020-0190, 76 (1-2), November 13, 2000.
- [14] “Almost Exact Minimum Feedback Vertex Set in Meshes and Butterflies” F.L. Luccio, *Information Processing Letters (IPL)*, p. 59-64, ISSN 0020-0190, 66 (2), May 20, 1998.

### **International Electronic Journals**

- [15] “Behind BANANA: Design and Implementation of a Tool for Nesting Analysis of Mobile Ambients”, C. Braghin, A. Cortesi, R. Focardi, F.L. Luccio, C. Piazza, *Electronic Notes in Theoretical Computer Science*, volume dedicated to the Mefisto Project 2003, “Formal Methods for Security and Time”, 99, p. 319-337, 6 agosto 2004.

### **Publications in books**

- [16] “An Introduction to Security API Analysis”, R. Focardi, F.L. Luccio, and G. Steel ” in A. Aldini and R. Gorrieri (Eds.): VI - FOSAD Tutorial Lectures, LNCS 6858, pp. 35–65. Springer, Heidelberg, ISBN 978-3-642-23081-3, 2011.
- [17] “A Formal Model for Supporting the Adaptive Access to Virtual Museums”, A. Dattolo, F.L. Luccio, In *Advances in Soft Computing*, ISSN 1615-3871, ASC 60, p. 481-492, Springer, 2009.
- [18] “A New Concept Map Model for E-learning Environments”, A. Dattolo, F.L. Luccio, *Lecture Notes in Business Information Processing, LNBIP 18*, ISSN 1865-1348, p. 404-417, Springer, 2009.

### **Books edited**

- [19] A. Cortesi, F.L. Luccio (Eds.), *Informatics Education Europe III. 3rd ACM-IFIP International Conference, IEEEIII08*, Venice, Italy, December 4-5, 2008, ISBN 978-88-903433-0-8.

### **International Conferences and Workshops**

- [20] “Type-based Analysis of PKCS#11 Key Management” Matteo Centenaro, Riccardo Focardi, Flaminia Luccio, to appear in the proceedings of the *1st conference on Principles of Security and Trust (POST)*, 26-27 March 2012, Tallinn, Estonia.
- [21] “Secure recharge of disposable RFID tickets”, R. Focardi, F.L. Luccio. In the proceedings of the *8th International Workshop on Formal Aspects of Security & Trust (FAST2011)* Leuven, Belgium, September 15-16, 2011.
- [22] “Analysis and development of Security APIs for disposable RFID tickets”, R. Focardi, F.L. Luccio, sugli atti del *5th International Workshop on Analysis of Security APIs*, Paris, France, June 30 2011.

- [23] “Cracking bank PINs by playing Mastermind”, Riccardo Focardi, Flaminia Luccio, in the proceedings of *Fifth International Conference on Fun with algorithms (FUN’10)*, June 2-4, 2010 Ischia Island, Italy.
- [24] “Secure upgrade of hardware security modules in bank networks”, R. Focardi, F.L. Luccio, in the proceedings of *Joint Workshop on Automated Reasoning for Security Protocol Analysis and Issues in the Theory of Security (ARSPA-WITS’10)*, Paphos, Cyprus, March 27-28, 2010.
- [25] “Blunting Differential Attacks on PIN Processing APIs”, R. Focardi, F.L. Luccio, G. Steel, in the proceedings of the *14th Nordic Conference on Secure IT Systems (Nordsec)*, 14-16 October 2009 Oslo, Norway, ISSN 0302-9743, Lecture Notes in Computer Science 5838 Springer, p. 88-103, 2009.
- [26] “Type-based Analysis of PIN Processing APIs”, M. Centenaro, R. Focardi, F.L. Luccio, G. Steel, in the proceedings of the *14th European Symposium on Research in Computer Security (Esorics)*, Saint Malo, France, September 21-25, p. 53-68, ISSN 0302-9743, Lecture Notes in Computer Science 5789 Springer, 2009. .
- [27] “A State of Art Survey on ZigZag Structures”, A. Dattolo, F.L. Luccio, in the proceedings of the *Workshop on New Forms of Xanalogical Storage and Function*, June 29th, Torino, Italy, p. 1-6, F. Vitali, A. Di Iorio, J. Blustein eds., CEUR, vol 508, ISSN 1613-0073, 2009.
- [28] “Improving PIN Processing API Security”, R. Focardi, F.L. Luccio, G. Steel, in the proceedings of the *3rd International Workshop on Analysis of Security APIs*, July 10-11 2009, Port Jefferson, New York, USA, 2009.
- [29] “A formal description of ZigZag-structures”, A. Dattolo, F.L. Luccio, in the proceedings of the *Workshop on New Forms of Xanalogical Storage and Function*, June 29th, Torino, It ly, p. 7-11, F. Vitali, A. Di Iorio, J. Blustein eds., CEUR, vol 508, ISSN 1613-0073, 2009.
- [30] “A New Concept Map Model for E-learning Environments”, A. Dattolo, F.L. Luccio, in *Web Information Systems and Technologies 4th International Conference (WEBIST 2008), Revised Selected Papers*, Lecture Notes in Business Information Processing, LNBIP 18, ISSN 1865-1348, p. 404-417, 2009.
- [31] “Type-based Analysis of Financial APIs”, M. Centenaro, R. Focardi, F.L. Luccio, G. Steel, presented at the *Joint Workshop on Automated Reasoning for Security Protocol Analysis and Issues in the Theory of Security (ARSPA-WITS’09)*, York, UK, March 28-29, 2009.
- [32] “Visualizing Personalized Views in Virtual Museum Tours”, A. Dattolo, F.L. Luccio, in the proceedings of the *International Conference on Human System Interaction (HIS’08)*, Krakow Poland, May 25 27, ISBN 978-1-4244-1542-7, p.109-114, 2008.
- [33] “Formalizing a model to represent and visualize concept spaces in e-learning environments”, A. Dattolo, F.L. Luccio, in the proceedings of the *4th International Conference on Web Information Systems and Technologies (WEBIST)*, ISBN - 978-989-8111-26-5, May 4-7, 2008, Funchal-Madeira, Portogallo, p.339-346, 2008.
- [34] “Intruder Capture in Sierpinski Graphs”, F.L. Luccio, in the proceedings of the *Fourth International Conference on Fun with algorithms (FUN07)*, June 3-5, 2007, Castiglioncello (LI), Tuscany, Italy, p. 249-261, Lecture Notes in Computer Science 4475 Springer.
- [35] “A New Actor-Based Structure for Distributed Systems”, A. Dattolo, F.L. Luccio, in the proceedings of the *MIPRO conference on Hypermedia and grid systems (HGS)*, May 21-25, 2007, Opatija, Croatia, p. 195-201.
- [36] “Decontamination of Chordal Rings and Tori”, P. Flocchini, M. Jun Huang, F.L. Luccio, in the proceedings of the *8th Workshop on Advances in Parallel and Distributed Computational Models* April 25, 2006, Rhodes Island, Greece.

- [37] “Size Optimal Strategies for Capturing an Intruder in Mesh Networks”, P. Flocchini, F.L. Luccio, L.X. Song, in the proceedings of the *2005 International Conference on Communications in Computing* (CIC 2005), June 27-30, 2005, Las Vegas, Nevada, U.S.A., p. 200-206.
- [38] “Continuous Search in the Hypercube for Capturing an Intruder”, P. Flocchini, M. Jun Huang, F.L. Luccio, in the proceedings of the *IEEE 19th International Parallel and Distributed Processing Symposium* (IPDPS05), April 4-8, 2005 Denver, Colorado, U.S.A., p. 62-.
- [39] “Mobile Agent Rendezvous When Tokens Fail”, P. Flocchini, E. Kranakis, D. Krizanc, F.L. Luccio, N. Santoro, C. Sawchuk, in the proceedings of the *11th Colloquium on Structural Information and Communication Complexity* (SIROCCO’04), Smolenice Castle, Slovakia, 21-23 giugno 2004, p. 161-172, Lecture Notes in Computer Science (LNCS), Springer, number 3104, ISBN 3-540-22230-8. Volume editors R. Kralovic and O. Sykora.
- [40] “Tighter Bounds on Feedback Vertex Sets in Mesh-based Networks”, F.L. Luccio, Jop F. Sibeyn, in the proceedings of the *11th Colloquium on Structural Information and Communication Complexity* (SIROCCO’04), Smolenice Castle, Slovakia, 21-23 giugno 2004, p. 209-220, Lecture Notes in Computer Science (LNCS), Springer, number 3104, ISBN 3-540-22230-8. Volume editors R. Kralovic and O. Sykora.
- [41] “How tasty is a cannibal? A strategy for the mesh cannibal game”, in the proceedings of the *3rd International Conference on Fun with Algorithms* (FUN 2004), Isola d’Elba, Italy, May 26-28, 2004, p. 171-183.
- [42] “Minimum Feedback Vertex Set in Pyramid and Mesh of Trees Networks”, F.L. Luccio, in the proceedings of the *10th Colloquium on Structural Information and Communication Complexity* (Sirocco’03), Proceedings in Informatics 17 Carleton Scientific, ISBN 1-894145-16-X, Umea, Sveden, 18-20 giugno 2003, p. 235-247.
- [43] “BANANA: A tool for Boundary Ambients Nesting ANALysis”, C. Braghin, A. Cortesi, S. Filippone, R. Focardi, F.L. Luccio, C. Piazza, in the proceedings of the Ninth International Conference on Tools and Algorithms for the Construction and analysis of Systems (TACAS’03), Warsaw, Poland 7-11 April 2003, p. 437-441. Lecture Notes in Computer Science 2619 Springer, ISBN 3-540-00898-5. Volume editors Hubert Garavel and John Hatcliff.
- [44] “Complexity of Nesting Analysis in Mobile Ambients”, C. Braghin, A. Cortesi, R. Focardi, F.L. Luccio, C. Piazza, in the proceedings of the “The 4-th International Conference on Verification, Model Checking and Abstract Interpretation” (VMCAI’03), New York University, New York, U.S.A., 9-11 January 2003, p. 86-101. Lecture Notes in Computer Science (LNCS), Springer, number 2575, ISBN 3-540-00348-7. Volume editors Lenore D. Zuck, Paul C. Attie, Agostino Cortesi and Supratik Mukhopadhyay.
- [45] “Fuzzy Graphs and Error-proof Keyboards”, F.L. Luccio, A. Sgarro, in the proceedings of the “The 9th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems” (IPMU’02), Annecy, Francia, 1-5 luglio 2002, pp. 1503-1508.
- [46] “Fault-Tolerant Support for Reliable Multicast in Mobile Wireless Systems: Design and Evaluation”, G. Anastasi, A. Bartoli, F.L. Luccio, in the proceedings of the Networking 2002, Pisa, May 19-24, 2002, pp. 1069-1080. Lecture Notes in Computer Science (LNCS) number 2345, ISBN 3-540-43709-6. Volume editors Enrico Gregori, Marco Conti, Andrew T. Campbell, Guy Omidyar, Moshe Zukerman.
- [47] “A new analysis technique for the Sprouts Game”, R. Focardi, F.L. Luccio, in the proceedings of the Fun with Algorithms 2 (FUN’01) Isola d’Elba, May 29-31, 2001, pp. 117-132.
- [48] “Sorting Multisets in Anonymous Rings” P.Flocchini, E. Kranakis, D. Krizanc, F.L. Luccio, N. Santoro, in the proceedings of the *IEEE International Parallel and Distributed Processing Symposium* (IPDPS’00), Cancun, Messico, May 1-5, 2000, p. 275-280.

- [49] “Dynamic Interval Routing on Asynchronous Rings” di D. Krizanc, F.L. Luccio, R. Raman, in the proceedings of the *IEEE 13-th International Parallel and Processing Symposium & 10-th Symposium on Parallel and Distributed Processing (IPPS/SPDP’99)*, April 12-16, San Juan, Puerto Rico, pages 225-232, 1999.
- [50] “Distance Routing on Series Parallel Networks” di P. Flocchini e F.L. Luccio, in the proceedings of the *IEEE International Conference on Distributed Computing Systems (ICDCS’96)* Hong-Kong, March 27-30, 1996, p. 352-359.
- [51] “String Recognition on Anonymous Rings” di E. Kranakis, D. Krizanc e F.L. Luccio, in the proceedings of the *20-th International Symposium Mathematical Foundation of Computer Science (MFCS’95)*, Praga, Repubblica Ceca, August 28 - September 1, 1995, p. 392-401.
- [52] “Boolean Routing on Chordal Rings” di D. Krizanc e F.L. Luccio, in the proceedings of the *2nd Colloquium on Structural Information and Communication Complexity (Sirocco’95)*, Olympia, Greece, June 12-14, 1995, p. 89-100.
- [53] “On the convergence of a parallel algorithm for finding polynomial zeros”, di F.L. Luccio, in the proceedings of the *6-th IEEE Symposium on Parallel and Distributed Processing (SPDP’94)*, Dallas, U.S.A., October 26-29, 1994.

### National Workshops

- [54] “A Fault-Tolerant Support for Mobile Wireless Systems”, F.L. Luccio, A. Bartoli, G. Anastasi, in the proceedings of the *Workshop di Sistemi Distribuiti: Algoritmi, Architetture e Linguaggi (WDSAAL’00)*, Ischia (Na), Italy, September 18-20, 2000.
- [55] “Interval Routing in Series Parallel Graphs”, di C. Gavoille, F.L. Luccio, in the proceedings of the *Workshop di Sistemi Distribuiti: Algoritmi, Architetture e Linguaggi (WDSAAL’97)*, Bertinoro (FO), September 23-25, 1997.

### Technical Reports

- [56] “Type-based Analysis of Financial APIs”, M. Centenaro, R. Focardi, F.L. Luccio, G. Steel, Technical Report CS-2009-2, Università Ca’ Foscari Venezia, Dipartimento di Informatica, Italy, January 2009.
- [57] “Capturing an Intruder in the Hypercube by Mobile Agents”, P. Flocchini, M. Jun Huang, F.L. Luccio, Technical Report TR-2005-2, School of Information Technology & Engineering University of Ottawa, Ottawa, Ontario, CANADA, 2005.
- [58] “Minimum Feedback Vertex Set in Mesh-based Networks”, di F.L. Luccio, J.F. Sibeyn, Reports on Computer Science 04.11 Fachbereich Mathematik und Informatik, Martin-Luther-Universität, Halle, Germany, 2004.
- [59] “Fault-Tolerant Support for Reliable Multicast in Mobile Wireless Systems: Design and Evaluation”, di F.L. Luccio, A. Bartoli, G. Anastasi, Quaderni Matematici (Technical Report) 526, Università degli Studi di Trieste, Dipartimento di Scienze Matematiche, Italy, July 2002.
- [60] “Compact Routing Schemes for Dynamic Ring Networks” di D. Krizanc, F.L. Luccio, R. Raman, Technical Report 2002/26 Department of Mathematics & Computer Science, University of Leicestershire, 2002.
- [61] “Analysing Sprouts”, di R. Focardi, F.L. Luccio, Technical Report # CS-2002-9, Università Ca’ Foscari di Venezia, Dipartimento di Informatica, Italy June 2002.

- [62] “Fault-Tolerant Support for Totally Ordered Multicast in Mobile Wireless Systems”, di F.L. Luccio, A. Bartoli, G. Anastasi, Quaderni Matematici (Technical Report) 469, Università degli Studi di Trieste, Dipartimento di Scienze Matematiche, Italy, June 2000.
- [63] “Sorting Multisets and Electing a Leader in Anonymous Rings”, di P. Flocchini, E. Kranakis, D. Krizanc, F.L. Luccio, N. Santoro, Quaderni Matematici (Technical Report) 463, Università degli Studi di Trieste, Dipartimento di Scienze Matematiche, Italy, January 2000.
- [64] “Minimum Feedback Vertex Set in k-Dimensional Hypercubes ”, di R. Focardi, F.L. Luccio, Technical Report # CS-99-21, Università Ca’ Foscari di Venezia, Dipartimento di Informatica, Italy, October 1999.
- [65] “Almost Exact Minimum Feedback Vertex Set in Meshes and Butterflies” di F.L. Luccio, Technical Report 207-97, Dipartimento di Scienze dell’Informazione, Università degli Studi di Milano, Italy, October 1997.
- [66] “Distance Routing on Series Parallel Networks” di P. Flocchini e F.L. Luccio, Technical Report TR-96-15, Carleton University, Ottawa, Canada, aprile 1996.
- [67] “String Recognition on Anonymous Rings” di E. Kranakis, D. Krizanc e F.L. Luccio, Technical Report TR-256, Carleton University, Ottawa, Canada, November 1994.

### **Thesis**

- [68] “Communication in Distributed Systems”, di F.L. Luccio, PhD thesis in Computer Science, University of Milano, December 1998.
- [69] “Distributed Algorithms for Routing and String Recognition”, di F. L. Luccio, Master thesis in Computer Science, Carleton University, Ottawa, Canada, April 1995.
- [70] “Approssimazione numerica di zeri di polinomi: analisi e sviluppo di alcuni metodi basati sull’algoritmo euclideo” di F. Luccio, laurea thesis, University of Pisa, July 1993.

### **Citations in Books**

- [71] “Feedback set problems”, P. Festa and P.M. Pardalos and M.G.C. Resende. *Handbook of Combinatorial Optimization*, Supplement Vol. A (Eds: Ding Zhu Du and Panos M. Pardalos), Kluwer Academic Publishers (1999), pp. 209-258, and *Feedback Set Problem* in the Encyclopedia of Optimization, Kluwer Academic Publishers, 2000.

## **3 List of research collaborators**

Danny Krizanc, Cindy Sawchuck (Wesleyan University, U.S.A.), Nicola Santoro ed Evangelos Kranakis (Carleton University, Ottawa, Canada), Paola Flocchini (University of Ottawa, Ottawa, Canada), David Peleg (Weizmann Institute, Israele), Jop Sibeyn (University of Halle, Germania), Cyril Gavoille (Labri di Bordeaux, Francia), Rajeev Raman (University of Leichester, England), Chiara Braghin (University of Milan), Agostino Cortesi, Riccardo Focardi, (University of Venice), Giuseppe Anastasi (University of Pisa), Alberto Bartoli, Andrea Sgarro (University of Trieste), Carla Piazza, Antonina Dattolo (University of Udine), Graham Steel (ENS-Cachan), Matteo Centenaro (Venice).

## 4 Visit to foreign research institutions

**April 2003** Research collaborations with Prof. Paola Flocchini at the University of Ottawa, Canada.

**April 1999** Research collaborations with Prof. Danny Krizanc and Prof. Nicola Santoro at the Carleton University di Ottawa, Canada.

**May 1998** Research collaborations with Prof. Cyril Gavoille at the Laboratoire Bordelais de Recherche en Informatique (LABRI), Université de Bordeaux, France.

**October-November 1997** Research collaborations with Prof. Danny Krizanc at the Carleton University di Ottawa, Canada, and with Prof. Paola Flocchini at the University of Montreal, Canada.

**April-May 1996** Research collaborations with Prof. Pierre Fraigniaud and Prof. Cyril Gavoille at the École Normale Supérieure (ENS) de Lyon, France.

## 5 Invitation to international research meetings

**June 2010** Invited by Prof. Chiara Bodei to participate at the Workshop *WSOFT\_galileo*, June 25-26, 2010, Pisa, Italy

**May 2005** Invited by Prof. E. Kranakis to participate at the "1st workshop on open problems in algorithmics" *Anogia Algorithmica*, Anogia Academic Village, Creta, May 30-June 2, 2005.

**January 2005** Invited to participate at the "1st Cristal Ball Workshop on Security and Privacy", IBM Zurich Research Lab, Zurigo, January 20, 2005.

**May 2004** Invited by Prof. E. Kranakis to participate at the "research meeting" International workshop on Mobile Agent Computing (MAC'04), Isola d'Elba, Italy, May 24-25, 2004.

**June 1997** Invited to participate at the *Advanced Research School on Structural Information and Communication*, Pontignano (SI), Italy, June 16-20, 1997.

## 6 Participation to research projects

- Finanziamento regione sardegna, progetto TESLA - Tecniche di Enforcement per la Sicurezza dei Linguaggi e delle Applicazioni - 2010.
- Italian M.U.R.S.T Project *SOFT - Tecniche formali orientate alla sicurezza*, national coordinator Prof. Riccardo Focardi (years 2007-2008).
- Research fundings "Fondo di ricerca di ateneo" of the University Ca' Foscari Venice, year 2008.
- Research fundings "Fondo di ricerca di ateneo" of the University Ca' Foscari Venice, year 2007.
- Italian M.U.R.S.T Project *AIDA - Interpretazione Astratta: Progettazione e Applicazioni*, national coordinator Prof. Roberto Giacobazzi (years 2004-2005).
- Research project "Matematica per le scienze e la tecnologia" of the University of Trieste, years 1999-2001.
- Italian M.U.R.S.T Project "Metodi e Problemi in Analisi Reale", national coordinator Prof. Paolo De Lucia (years 1999-2000).
- Research project "Sistemi Complessi" of the University of Trieste, year 1998.

- Research project “Analisi Reale”, national coordinator Prof. Paolo De Lucia (years 1997-1998).

## 7 Activities related to conferences

### Conferences organizations

- Organizing Committee Chair of the *Sixth International Conference on Fun with algorithms* (FUN’10), 4-6 giugno, 2012 San Servolo Island, Venice, Italy
- “Local Arrangements Co-Chair” of *The Second International Conference on Security and Privacy in Mobile Information and Communication Systems* (MobiSec’10), Catania, Italy, May 26-28, 2010.
- “Local Arrangements Co-Chair” of *The First International Conference on Security and Privacy in Mobile Information and Communication Systems* (MobiSec’09), Turin, Italy, June 3-5, 2009.
- In the organizing committee of *Informatics Education Europe III* (IEEIII’08), Venice, Italy, December 4-5, 2008.
- In the organizing committee of *20th IEEE Computer Security Foundations Symposium* (CSF’07) isola di S. Servolo, Venezia, Italy, July 6-8, 2007.
- In the organizing committee of *19th IEEE Computer Security Foundations Workshop* (CSFW’06) isola di S. Servolo, Venezia, Italy, July 5-7, 2006.
- In the organizing committee of *1st Colloquium on Structural Information and Communication Complexity* (SIROCCO’94), Ottawa, Ontario, Canada, May 18-20, 1994.

### Program committees Chair

- Technical Program Co-Chair of the *Sixth International Conference on Fun with algorithms* (FUN’10), 4-6 giugno, 2012 San Servolo Island, Venice, Italy.
- Special Sessions Chair of *The forth International Conference on Security and Privacy in Mobile Information and Communication Systems* (MobiSec’12), Frankfurt, Germany, June 25-27, 2012.
- Technical Program Co-Chair of *The Third International Conference on Security and Privacy in Mobile Information and Communication Systems* (MobiSec’11), Aalborg, Denmark, May 17-19, 2011.

### Participation to program committees

In the program committee of:

- *FTRA International Conference on Advanced IT, engineering and Management* (AIM 2012), Seoul, Korea, February 6-8, 2012.
- *1st International Workshop on Cybersecurity of Online Social Networks* (CSOSN 2012), 26-29 August 2012, Istanbul, Turkey.
- *Sixth International Conference on Fun with algorithms* (FUN’10), 4-6 giugno, 2012 San Servolo Island, Venice, Italy.
- *The forth International Conference on Security and Privacy in Mobile Information and Communication Systems* (MobiSec’12), Frankfurt, Germany, June 25-27, 2012.

- *The 7th International Symposium on Wireless sensor network Technologies and Applications for Smart Space (WTA 2011)*, Jeju, Korea, December 12-15 2011.
- *The Third International Conference on Security and Privacy in Mobile Information and Communication Systems (MobiSec'11)*, Aalborg, Denmark, May 17-19, 2011.
- *The Second International Conference on Security and Privacy in Mobile Information and Communication Systems (MobiSec'10)*, Catania, Italy, May 26-28, 2010.
- *Informatics Education Europe IV (IEEIV'09)*, Freiburg, Germany, November 5-6, 2009.
- *The First International Conference on Security and Privacy in Mobile Information and Communication Systems (MobiSec'09)*, Turin, Italy, June 3-5, 2009.
- *Fifth International Workshop on Algorithmic Aspects of Wireless Sensor Networks (Algosenor'09)*, Rhodes, Greece, July 11th, 2009.
- *Informatics Education Europe III (IEEIII'08)*, Venice, Italy, December 4-5, 2008.
- *13-th International Colloquium on Structural Information and Communication Complexity (SIROCCO'06)*, Chester, United Kingdom, June 3-5, 2006.
- *The Ninth Italian Conference on Theoretical Computer Science (ICTCS 2005)*, Certosa di Pontignano, Siena, Italy, October 12-14, 2005.

## Participation to meetings and workshops

- *Fifth International Conference on Fun with algorithms (FUN'10)*, June 2-4, 2010 Ischia Island, Italy
- *Meeting PRIN Project SOFT - Tecniche formali orientate alla sicurezza*, Bologna, Italy, December 3rd 2009.
- *4th International Conference on Web Information Systems and Technologies (WEBIST)*, May 4-7, 2008, Funchal-Madeira, Portugal.
- *International Miniworkshop, Computations by Mobile Entities (Agents, Robots, Sensors)*, June 11-15, 2007, Pisa, Italy.
- *14th Colloquium on Structural Information and Communication Complexity (SIROCCO'07)*, June 5-8 2007, Castiglioncello (LI), Tuscany, Italy.
- *Fourth International Conference on Fun with algorithms (FUN07)*, June 3-5, 2007, Castiglioncello (LI), Tuscany, Italy.
- *2nd Meeting del Progetto AIDA* Pisa, February 16-17, 2006.
- *The Ninth Italian Conference on Theoretical Computer Science (ICTCS 2005)*, Certosa di Pontignano, Siena, October 12-14, 2005.
- *1st workshop on open problems in algorithmics Anogia Algorithmica*, Anogia Academic Village, Creta, May 30 - June 2, 2005.
- *1st Meeting del Progetto AIDA* Verona, February 7, 2005.
- *1st Cristal Ball Workshop on Security and Privacy* IBM Zurich Research Lab, Zurigo, January 20, 2005.
- *Workshop on Genomes: Information, Structure, and Complexity (GISC'04)*, Dobbiaco (BZ), September 25, 2004.

- *11th Colloquium on Structural Information and Communication Complexity (SIROCCO'04)*, Smolenice Castle, Slovakia, June 21-23, 2004.
- *International Workshop on Mobile Agent Computing (MAC'04)*, Isola d'Elba, May 24-25, 2004.
- *Third International Conference on Fun with Algorithms (FUN'04)*, Isola d'Elba, May 26-28, 2004.
- *10-nth Colloquium on Structural Information and Communication Complexity (SIROCCO'03)*, Umea, Svezia, June 2003.
- *4-th International Conference on Verification, Model Checking and Abstract Interpretation (VMCAI'03)*, New York University, New York, U.S.A., January 9-11, 2003.
- *International Processing and Management of Uncertainty (IPMU'02)*, Annecy, France, July 1-5 2002.
- *Networking'02*, Pisa, Italy, May 19-24, 2002.
- *International Conference Fun with Algorithms 2 (FUN'01)*, Isola d'Elba, May 29- June 3, 2001.
- *Workshop su Sistemi Distribuiti: Algoritmi, Architetture, e Linguaggi (WSDAAL'00)*, Ischia (Na), September 18-20, 2000.
- *IEEE International Parallel and Distributed Processing Symposium (IPDPS'00)*, Cancun, Mexico, May 1-5, 2000.
- *IEEE 13-th International Parallel Processing Symposium and 10-th Symposium on Parallel and Distributed Processing (IPPS/SPDP'99)*, San Juan, Puerto Rico, April 1999.
- *International conference on Fun with Algorithms (FUN'98)*, Isola d'Elba, June 18-20, 1998.
- *2nd Workshop su Sistemi Distribuiti: Algoritmi, Architetture, e Linguaggi (WSDAAL'97)*, Bertinoro (Forli), September 23-25, 1997.
- *4-th Colloquium on Structural Information and Communication Complexity (SIROCCO'97)*, Ascona, Switzerland, July 1997.
- *3rd Colloquium on Structural Information and Communication Complexity (SIROCCO'96)*, Pontignano (SI), June 4-6, 1996.
- *MAP project meeting*, Roma, April 1996.
- *20-th International Symposium Mathematical Foundation of Computer Science, (MFCS'95)*, Prague, Czech Republic, August 28 - September 1, 1995.
- *2nd Colloquium on Structural Information and Communication Complexity (SIROCCO'95)*, Olympia, Greece, June 12-14, 1995.
- *Sixth IEEE Symposium on Parallel and Distributed Processing (SPDP'95)*, Dallas, Texas, October 26-29, 1994.
- *1st Colloquium on Structural Information and Communication Complexity (SIROCCO'94)*, Ottawa, Ontario, Canada, May 18-20, 1994.

## Participation to schools

- *First International School on Biology, Computation and Information (BCI'04)*, Dobbiaco (BZ), September 19-24, 2004.
- *Unesco Escuela Internacional de Bioinformatica*, La Habana, Cuba, January 7-16, 2002.
- *International School for Computer Science Researchers in E-commerce and On-Line Algorithms*, Lipari, Italy, July 2000.
- *International School for Computer Science Researchers in Distributed Systems and Security*, Lipari, Italy, July 1998.
- *Advanced Research School on Structural Information and Communication*, Pontignano (SI), Italy, June 16-20, 1997.
- *International School for Computer Science Researchers in Computer Graphics*, Lipari, Italy, July 1996.
- *Prima Scuola Nazionale dei Dottorati di Informatica delle Facoltà di Scienze*, Pontignano (SI), Italy, October 2-6, 1995.
- *International School on Distributed Algorithms*, Pontignano (SI), Italy, June 5-17, 1994.

## Referee activities

**International conferences** : European Symposium on Algorithms (ESA), ACM Symposium on Parallelism in Algorithms and Architectures (SPAA), International Parallel and Distributed Processing Symposium (IPDPS), International Symposium on Theoretical Aspects of Computer Science (STACS), Computer Security Foundations Workshop (CSFW), International Colloquium on Structural Information and Communication Complexity (SIROCCO), Networking, Italian Conference on Theoretical Computer Science (ICTCS), International Static Analysis Symposium (SAS), International Workshop on Development of Computational Models (DCM), IEEE Symposium on Security and Privacy (SSP), Informatics Education Europe, International Conference on Security and Privacy in Mobile Information and Communication Systems, International Workshop on Algorithmic Aspects of Wireless Sensor Networks (Algo-sensor), International ICST Conference on Security and Privacy in Mobile Information and Communication Systems (Mobisec), International Symposium on Wireless sensor network Technologies and Applications for Smart Space.

**International Journals** : Information Processing Letters (IPL), Graphs and Combinatorics (GC), Networks, Discrete Mathematics, Distributed Computing, Performance Evaluation, Theoretical Computer Science.

## Organizing activities

**Since November 2008** Manager with Prof. Pizzi of the computer laboratories of the University Ca' Foscari, Venice, headquarter of Treviso.

**Since June 2007** Member of the didactical board for the “Corso di laurea triennale in Statistica e Informatica per la gestione delle imprese” and for the “Corso di laurea specialistico in Statistica e sistemi informativi aziendali”, Faculty of Economics, University Ca' Foscari, headquarter of Treviso.

**From March 2005 to November 2006** Representative for the Computer Science curricula of the Orientation committee of the Faculty of Science, University of Trieste.

**From 2000 to 2006** Collaborates to the institution of the new Computer Science curriculum “Sistemi audiovisivi e reti - Informatica Musicale”, at the University of Trieste.

**In 2000** Collaborates to the creation of the new computer laboratory of the Faculty of Science of the University of Trieste.

## Work commissions

**June 2011** Examiner for a state exam for the profession of Information Engineer, University Ca' Foscari, Venice, Italy.

**Nov. 2011** Examiner for a state exam for the profession of Information Engineer, University Ca' Foscari, Venice, Italy.

## Funding commissions

**Jan. 2012** Reviewer for the Czech Fulbright commission.

## Competition committees

**December 2006-March 2007** Examiner for one assistant professor position in Computer Science at the Faculty of Science, University of Siena, Italy.

**December 17-18 2002** Examiner for two assistant professor positions in Computer Science at the Faculty of Science, University of Milano-Bicocca, Italy.

# 8 Teaching experiences

## 8.1 PhD courses

**October 2008** *Computer Science Laboratory* (Digital Signature) short course, for the “Scuola dottorale interateneo in Scienze Giuridiche”, Faculty of Economics, University Ca' Foscari, Venice.

**October 2008** *Computer Science Laboratory* (Introduction to Computer Science) short course, for the PhD in “Diritto europeo dei contratti civili, commerciali e del lavoro”, Faculty of Economics, University Ca' Foscari, Venice.

**April 2008** PhD 20 hours course *Distributed Algorithms* at the Computer Science Department, University Ca' Foscari, Venice.

**June 2007** Seminar on *Mobile Agents* inside the Mini-workshop “Computations by Mobile Entities (Agents, Robots, Sensors)” at the Galileo Galilei PhD school, Computer Science Department, University of Pisa, Italy.

**October 2007** *Computer Science Laboratory* (Digital Signature) short course, for the “Scuola dottorale interateneo in Scienze Giuridiche”, Faculty of Economics, University Ca' Foscari, Venice.

**March-April 2005** PhD 20 hours course *Distributed Algorithms* at the Computer Science Department, University Ca' Foscari, Venice.

## 8.2 Undergraduate courses

### A.Y. 2011-2012

- *Databases and Web Modulus II* course, Faculty of Economics, University Ca' Foscari, Venice, headquarter of Treviso.
- *Decision-Support Systems for Management-II* course, Faculty of Economics, University Ca' Foscari, Venice.

- *Computing skills for Economics* course, letters A-La Faculty of Economics, University Ca' Foscari, Venice.
- *Computing skills for Economics* course, letters Lb-Z Faculty of Economics, University Ca' Foscari, Venice.

#### **A.Y. 2010-2011**

- *Databases and Web Modulus II* course, Faculty of Economics, University Ca' Foscari, Venice, headquarter of Treviso.
- *Basic Computer Science and Programming, Modulus I and II* course, Faculty of Economics, University Ca' Foscari, Venice, headquarter of Treviso.
- *Computing skills for Economics* course, Faculty of Economics, University Ca' Foscari, Venice.

#### **A.Y. 2009-2010**

- *Business information systems A* course, Faculty of Economics, University Ca' Foscari, Venice, headquarter of Treviso.
- *Basic Computer Science and Programming, Modulus I* course, Faculty of Economics, University Ca' Foscari, Venice, headquarter of Treviso.
- *Computing skills for Economics* course, Faculty of Economics, University Ca' Foscari, Venice.

#### **A.Y. 2008-2009**

- *Business information systems A* course, Faculty of Economics, University Ca' Foscari, Venice, headquarter of Treviso.
- *Distributed Systems, mod.2* course, Faculty of Science, University Ca' Foscari, Venice.
- *Computing skills for Economics* course, Faculty of Economics, University Ca' Foscari, Venice.

#### **A.Y. 2007-2008**

- *Computer Science Laboratory A* course, Faculty of Economics, University Ca' Foscari, Venice, headquarter of Treviso.

#### **A.Y. 2006-2007**

- Exercises for *Data transmission network rights I* course, Faculty of Economics, University Ca' Foscari, Venice.

#### **A.Y. 2005-2006**

- *Algorithms and Data Structure* course, Faculty of Science, University of Trieste.
- *Parallel and Distributed computation mod. A* course, Faculty of Science, University of Trieste.

#### **A.Y. 2004-2005**

- *Algorithms and Data Structure* course, Faculty of Science, University of Trieste.
- *Parallel and Distributed computation mod. A* course, Faculty of Science, University of Trieste.

#### **A.Y. 2003-2004**

- *Algorithms and Data Structure* course, Faculty of Science, University of Trieste.

- *Network theory and Cryptography* course, Faculty of Science, University of Trieste.

#### **A.Y. 2002-2003**

- *Computer Science* course for Geology, Faculty of Science, University of Trieste.
- Part of the *Algorithms and Data Structure* course, Faculty of Science, University of Trieste.

#### **A.Y. 2001-2002**

- *Data elaboration systems* course, for Environmental Science, Faculty of Science, University of Trieste.
- Part of the *Algorithms and Data Structure* course, Faculty of Science, University of Trieste.
- Exercises for the *Computer Science Laboratory* course, for Biology, Faculty of Science, University of Trieste.

#### **A.Y. 2000-2001**

- *Data elaboration systems* course, for Environmental Science, Faculty of Science, University of Trieste.
- Exercises for *Mathematical and Statistical Methods* course, for Biology, Faculty of Science, University of Trieste.

#### **A.Y. 1999-2000**

- Exercises for the *Mathematical and Statistical Methods* course, for Biology, Faculty of Science, University of Trieste.
- Exercises for the *Data elaboration systems* course, for Environmental Science, Faculty of Science, University of Trieste.

#### **A.Y. 1998-1999**

- Exercises for the *Mathematical and Statistical Methods* course, for Biology, Faculty of Science, University of Trieste.
- Exercises for the *Programming techniques* course, for Natural Sciences, Faculty of Science, University of Trieste.

**September 1993-April 1995** Teaching Assistant at the Carleton University di Ottawa, Canada, for the following courses:

- *Introduction to Computers for Students in the Social Sciences* (undergraduate),
- *Concurrent Programming* (undergraduate),
- *Data Structures and Algorithm Analysis* (undergraduate and graduate).

### **8.3 Thesis supervisor**

**Since September 1996** Thesis supervisor at the University of Milan, Trieste, Venice.

### **8.4 University tutor**

Tutor at the “Statistica e informatica per la gestione delle imprese” curriculum, Faculty of Economics, University Ca’ Foscari Venezia, headquarter of Treviso.

## 8.5 Didactic Material

- Flaminia Luccio “Appunti del corso di Algoritmi e Strutture Dati” (schema parziale delle lezioni).
- Flaminia Luccio “Dispense (parziali) per il corso di Informatica di base e programmazione”.

## Foreign Languages

- Advanced English and German;
- Elementary Spanish and spoken French.