

Giancarlo F. Ruffo

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Personal Data

Date of birth	November 27th, 1971
Place of birth	Catania, Italy
Citizenship	Italy
Permanent residence	Italy

Academic History

Ph.D.	<i>Informatica (Computer Science)</i> University of Turin, Italy. Feb. 25th, 2000
Laurea (Doctor)	<i>Scienze dell'Informazione (Computer Science) cum laude</i> University of Catania, Italy, July 22nd, 1995

Professional History

2011-present	Adjunct Professor, School of Informatics and Computing Indiana University
2010/11	Visiting Professor, CNetS (Center for Complex Networks and Systems Research) Indiana University, (sabbatical semester)
2006-present	Associate Professor of Computer Science, University of Turin (italian discipline code: INF/01)
2004	Visiting Scholar, New York University
2000/06	Assistant Professor of Computer Science, University of Turin
1999/00	ICT consultant, freelancer
1995	Intern, Twente University, NL

Research Interests

Social Media, Web data mining, recommendation systems, network analysis, computational complex networks, techno-social systems.

Computer and network security, distributed applications, peer-to-peer systems, micro-payment systems, proactive password checking.

Grants and Financially Supported Projects

- 2011/12 “INCA” (Finpiemonte, “Progetto Polo della Creatività”)
(**Co-PI**), **45 K€**
Project cost: 1500 K€
- 2010/11 “IS4-MOBI” (Finpiemonte, “Progetto Polo ICT”)
(**PI**), **76 K€**
Project cost: 860 K€
- 2010/11 “SALC - Services à la Carte” (Finpiemonte, “Progetto Polo ICT”)
(**PI**), **58 K€**
Project cost: 259 K€
- 2010/11 “SIPLab - Social Information Processing”, (supporting organization: CSP)
(**Co-PI**), **45 K€** (*full cost model*)
- 2010 “ASVD - Ad-Supported Video Distribution” (Finpiemonte, subcontractor of SINAPSI)
(**PI**), **45 K€** (*full cost model*)
Project cost: 500 K€
- 2008/09 “Recommendation & Discovery for PVR” (Torino Wireless, “Bando Omega Box”)
(**PI**), **90 K€** (*full cost model*)
Project cost: 250 K€
- 2003/06 “DIADI2000 - PROGETTO 2003-2006” (Regione Piemonte, subcontractor of CSP)
(**member**)
- 2002/03 “WTLAB”, (CSP)
(**member**)
- 2002/05 “WebMinds”, (MIUR, FIRB)
(**member**)
- 2001/02 “Computer and Network Security” (CNR)
(**member**)
- 2000/01 “Computer Security” (CNR)
(**member**)
- 2000 University of Turin “Giovani Ricercatori” Grant
(**PI**)
- 1999 University of Turin “Giovani Ricercatori” Grant
(**PI**)
- 1996/98 “ILP2 (Inductive Logic Programming II)” (EU Esprit Project n. 20237)
(**member**)
- 1997 “Security and Network Management” (ASI, Italian Space Agency)
(**member**)

Awards and Honors

- 2011 Nomination as Adjunct Professor at Indiana University
- 2010 ACM Recognition of Service Award

Teaching

- G courses (U. of Turin)
 - Complex Networks (2011-present)
 - Advanced Computer and Network Security (2007-present)
- UG courses (U. of Turin)
 - Web Technologies (2011-present)
 - iPhone Application Development (2010/11), Indiana University
 - Networks and Distributed Systems (2006-2010)
 - Fundamentals of Cryptography and Network Security (2004-2010)
 - Fundamentals of Computer Science (2000-2007)
 - Fundamentals of Java Programming (2000-2005)

Advising and research supervision

- Visiting Scholars
 - André Panisson, Universidade Federal do Rio Grande do Sul (2007-08)
- Ph.D. chaired
 - Rossano Schifanella (*A Legal and Efficient Peer-to-Peer Market Place: Exploiting Fairness and Social Relationships*, 2003-07);
currently Assistant Professor at University of Turin
 - Marco Milanesio (*Layering Multi-Purpose Applications over Structured and Dependable P2P Systems*, 2006-10);
currently Research Assistant at University of Turin
 - Luca Aiello (2008-present)
 - André Panisson (2008-present)
 - Martina Deplano (2010-present)
- Research Assistants
 - Alessandro Basso (2008-2010)
currently Security Analyst at Wachovia, Charlotte, NC, USA.
 - Marco Milanesio (2010-2011)
currently Maître de Conférence, Eurecom, France.

Publications

A. Books

- [A.3] F. Menczer, C. Cattuto, and **G. Ruffo** (editors): *HT 2009, Proceedings of the 20th International Conference on Hypertext and Hypermedia*. ACM, 2009.
- [A.2] L. Benussi, C. Blengino, A. Glorioso, G. Ramello, **G. Ruffo** and M. Travostino: *Copyright digitale*, Giappichelli, Torino 2009.
- [A.1] F. Bergadano, A. Mantelero, **G. Ruffo**, and G. Sartor: *Digital Privacy. Giuristi e informatici a confronto*, Giappichelli, Torino 2006.

B. Tutorials and invited seminars

- [B.2] **G. Ruffo**: *Privacy on Demand: a Difficult Challenge in a Highly Connected World* in Bandwidth on Demand, Dagstuhl Seminar Proceedings 09072, ISSN 1862 - 4405. LZI, 2009.
- [B.1] **G. Ruffo**: *Peer-to-Peer Market Places: Technical Issues and Revenue Models*, in Inter-Domain Management, First International Conference on Autonomous Infrastructure, Management and Security, AIMS 2007. LNCS 4543. Springer, 2007.

C. Journals and book chapters

- [C.13] A. Barrat, C. Cattuto, A. Panisson, **G. Ruffo**, and R. Schifanella: *On Human Proximity Dynamics for Data Diffusion through Ad-Hoc Networks*, in AD HOC NETWORKS Journal, Elsevier (accepted for publication). Online version: <http://dx.doi.org/10.1016/j.adhoc.2011.06.003>
- [C.12] L. Aiello, and **G. Ruffo**: *LotusNet: tunable privacy for distributed online social network services*, in Peer-to-Peer Networking and Applications, Springer (accepted for publication). On line version: <http://dx.doi.org/10.1016/j.comcom.2010.12.006>
- [C.11] L. Aiello, M. Milanesio, **G. Ruffo**, and R. Schifanella: *An identity-based approach to secure P2P applications with Likir*, in Computer Communications, Elsevier (accepted for publication). On line version: <http://www.springerlink.com/content/23535n21w23hw666/>
- [C.10] S. Lian, D. Kanellopoulos and **G. Ruffo**: *Recent Advances in Multimedia Information System Security*, in Informatica Journal of Computing and Informatics (Special Issue in Multimedia Information System Security) 33(1): 3-24 (2009), ISSN 0350-5596
- [C.9] A. Glorioso, U. Pagallo and **G. Ruffo**: *The Social Impact of P2P Systems*, in Handbook of Peer-to-Peer Networking, Shen, X; Yu H.; Buford, J.; Akon, M. (Eds.) 2010 ISBN: 978-0-387-09750-3. Springer. 2009.
- [C.8] **G. Ruffo** e R. Schifanella: *A Peer-to-Peer Recommender System Based on Spontaneous Affinities*, in ACM Trans. Internet Technol. 9, 1 (Feb. 2009), 1-34.

- [C.7] **G. Ruffo** e R. Schifanella: *FairPeers: Efficient Profit Sharing in Fair Peer-to-Peer Market Places*, in Journal of Network and Systems Management (Special Issue on Peer-to-Peer Technologies in Network and Service Management), 15(3): 355-382 (2007), Springer.
- [C.6] **G. Ruffo**, R. Schifanella, G. Ballocca, R. Politi: *Integrated Techniques and Tools for Web Mining, User Profiling and Benchmarking analysis*, in “Web Mining: an Overview”, October, 2006. ICFAI University Press. ISBN: 81-314-0420-X.
- [C.5] F. Bergadano, A. Giallombardo, A. Puliafito, **G. Ruffo**, S. Riccobene, L. Vita: *Java-based and Secure Learning Agents for Information Retrieval in Distributed Systems*, “Information Sciences”, num. 113, 1999, North Holland. pp. 55-84.
- [C.4] F. Bergadano, B. Crispo. **G. Ruffo**: *High dictionary compression with proactive password checking*, in ACM Trans. on Information and System Security (TISSEC). 1, 1 (November 1998), 3-25, ACM.
- [C.3] F. Bergadano, A. Giallombardo, A. Puliafito, **G. Ruffo**, L. Vita: *Security Agents for Information Retrieval in Distributed Systems*, in “Parallel Computing”, num. 22(13) 1997, North Holland. pp. 1719-1731.
- [C.2] F. Bergadano, D.Gunetti, M. Nicosia e **G. Ruffo**: *Towards the Learnability of Prolog Programs*, in G.Tascini, F.Esposito, U.Roberto, P.Zingaretti editors, “Machine Learning and Perception”, Series in Machine Perception and Artificial Intelligence, vol. 23, World Scientific Publishing Co Pte Ltd, 1996. pp. 180-187.
- [C.1] F. Bergadano, D.Gunetti, M. Nicosia and **G. Ruffo**: *Learning Logic Programs with Negation as Failure*, in L. De Raedt, editor, “Advances in Inductive Logic Programming”, IOS Press, 1996. pp. 107-123.

D. Peer reviewed **conferences** and **workshops**

- [D.28] A. Basso, M. Milanese, A. Panisson, **G. Ruffo**: *On Collaborative Filtering Techniques for Live TV and Radio Discovery and Recommendation* In EC-Web 2011: Proc. of the 12th International Conference on Electronic Commerce and Web Technologies, Toulouse, France, August 29 - September 2, 2011. LNBIP Series, Springer, 2011 (accepted for publication)
- [D.27] L. M. Aiello, A. Barrat, C. Cattuto, **G. Ruffo**, R. Schifanella: *Link creation and profile alignment in the aNobii social network* In SocialCom'10: Proc. of the 2nd IEEE International Conference on Social Computing, Minneapolis, MN, USA, 2010 [**Acceptance Rate**: 13%]
- [D.26] L. M Aiello, and **G. Ruffo**: *Secure and Flexible Framework for Decentralized Social Network Services* In Proc. of the Security and Social Networking Workshop, (SESOC 2010), Mannheim, Germany, 29 Mar 2010, IEEE Computer Society. [**Acceptance Rate**: 33%]

- [D.25] L. M Aiello, M. Milanesio, **G. Ruffo**, and R. Schifanella: *Tagging with DHARMA* In Proc. of the Seventh International Workshop on Hot Topics in Peer-to-Peer Systems (HOT-P2P 2010), April, 2010, Atlanta (USA). IEEE Computer Society digital library [**Acceptance Rate:** 43%]
- [D.24] A. Basso, M. Milanesio and **G. Ruffo**: *Events discovery for personal video recorders*, in Proc. of the Seventh European Conference on European interactive Television Conference (Leuven, Belgium, June 03 - 05, 2009). EuroITV '09. ACM, New York, NY, 171-174
- [D.23] R. Schifanella, A. Panisson, C. Gena and **G. Ruffo**: *MobHinter: Epidemic Collaborative Filtering and Self-Organization in Mobile Ad-Hoc Networks*, in the 2nd ACM Intern. Conf. on Recommender Systems 2008 (RecSys 2008), October 23-25, 2008, Lausanne, Switzerland. ACM Press. pp. 27-34 [**Acceptance Rate (long paper):** 16.1%].
- [D.22] L. M. Aiello, M. Milanesio, **G. Ruffo** e R. Schifanella: *Tempering Kademia with a Robust Identity Based System*, In Proc. of the 8th International Conference on Peer-to-Peer Computing 2008 (P2P'08), September 8-11, 2008, RWTH Aachen University, Germany. IEEE Press. (pp. 30-39) [**Acceptance Rate:** 20.8%]
- [D.21] A. Panisson, **G. Ruffo** and R. Schifanella: *X-Hinter: a Framework for Implementing Social Oriented Recommender Systems*, In Proc. of the 21th ACM Conference on Hypertext and Hypermedia (Hypertext 2008), June 19-21, 2008, Pittsburgh, Pennsylvania, USA. ACM Press
- [D.20] M. Milanesio and **G. Ruffo**: *Iterative Key Based Routing for Web Services Addressing and Discovery*, in Inter-Domain Management, Proc. of First International Conference on Autonomous Infrastructure, Management and Security, AIMS 2007, Oslo, Norway, June 21-22, 2007, LNCS 4543 Springer.
- [D.19] U. Pagallo and **G. Ruffo**: *P2P Systems in Legal Networks: Another "Small World" Case*, In Proc. of 11th Intern. Conf. on Artificial Intelligence and Law, ICAIL 2007, Stanford, CA (USA). June 2007, ACM Press.
- [D.18] **G. Ruffo** and R. Schifanella: *Evaluating Peer-to-Peer Recommender Systems that Exploit Spontaneous Affinities.*, In Proc. of 22nd Annual ACM Symposium on Applied Computing, Seoul, South Korea. March, 2007, ACM. [**Acceptance Rate:** < 30%].
- [D.17] M. Milanesio, **G. Ruffo**, F. Ricchiuti, and D. Albertin: *Accessing and Distributing Streaming Events on DHT-based Systems*, in Proc. of 2nd Inter. Conf. on Automated Production of Cross Media Content for Multi-channel Distribution (AXMEDIS'06), Leeds (UK), December 12-15, IEEE Press, 2006.

- [D.16] **G. Ruffo**, R. Schifanella and E. Ghiringhella: *A Decentralized Recommendation System based on Self-Organizing Partnerships*, IFIP-Networking'06, May 2006, Coimbra (Portugal) LNCS 3976, pp. 618-629, Springer-Verlag, 2006. [**Acceptance Rate:** 20.0%]
- [D.15] M. Milanese and **G. Ruffo**: *Publishing, Retrieving and Streaming Lectures via Application Level Multicast*, in Intern. Conference on Internet and Web Applications and Services 2006, (ICIW'06), Guadaloupe (Fr), Febraury 2006. IEEE Press.
- [D.14] D. Catalano, **G. Ruffo** and R. Schifanella: *A P2P Market Place Based on Aggregate Signatures*, 3rd Int. Symposium on Parallel and Distributed Processing and Applications (ISPA 05), 2005 Int. Workshop on Applications and Economics of Peer to Peer Systems, November, Nanjing, P. R. China, in G. Chen et al. (Eds.): ISPA Workshops 2005, LNCS 3759, pp. 54-63, Springer-Verlag, 2005. [**Acceptance Rate:** 22.2%]
- [D.13] D. Gunetti, C. Picardi and **G. Ruffo**: *Dealing with Different Languages and Old Profiles in Keystroke Analysis of Free Text*, in S. Bandini, editor, Proc. of the Nineth Congress of the Italian Association for Artificial Intelligence (AI*IA-2005), Milan, Italy. LNCS 3673, pages 347-358. Springer-Verlag, 2005.
- [D.12] D. Gunetti, C. Picardi and **G. Ruffo**: *Keystroke Analysis of Different Languages: a Case Study*, in Proc. of the 2005 Intern. Conference on Intelligent Data Analysis (IDA 2005), September 8-10, 2005, Madrid, Spain. LNCS 3646, Springer Verlag, pp. 133-144. [**Acceptance Rate:** 25.0%].
- [D.11] **G. Ruffo** and R. Schifanella: *Scalability Evaluation of a Peer-to-Peer Market Place based on Micro-Payments*, in Proc. of the 2005 International Workshop on Hot Topics in Peer-to-Peer Systems (HOT-P2P 2005), July 21th, 2005, San Diego, CA, USA. IEEE Press.
- [D.10] F. Bergadano and **G. Ruffo**: *EnFilter: a Password Enforcement and Filter Tool based on Pattern Recognition Techniques*, in Proc. of the 2005 International Conference on Image Analysis and Processing (ICIAP 2005) - Special Session in "Pattern Recognition in Computer Security", September 6-8, 2005, Cagliari, Italy. LNCS 3617, Springer Verlag, pp.75-82.
- [D.9] D. Catalano and **G. Ruffo**: *A Fair Micro-Payment Scheme for Profit Sharing in a P2P Network*, in Proc. of the 2004 International Workshop on Hot Topics in Peer-to-Peer Systems (HOT-P2P 2004), October 8th, 2004. Volendam, The Netherlands. IEEE Press.
- [D.8] **G. Ruffo**, R. Schifanella, M. Sereno and R. Politi: *WALTy: A User Behavior Tailored Tool for Evaluating Web Application Performance*, in Proc. of the 3rd IEEE International Symposium on Network Computing and Applications (IEEE NCA04), August 30th - September 1st, 2004, Cambridge, MA, USA. IEEE Press.

- [D.7] **G. Ruffo**, R. Schifanella, M. Sereno and R. Politi: *WALTy: a Web User Tailored Tool for Evaluating Web Application Performance*, in Proc. of QEST'04, Enschede (NL), September 2004; IEEE Press.
- [D.6] **G. Ruffo**: *Legal File and Profit Sharing in a Peer to Peer Network*, in Security and Management Conference, Las Vegas, June 21-24 2004; CSREA Press. ISBN: 1-932415-37-8.
- [D.5] G. Ballocca, R. Politi, **G. Ruffo** and V. Russo: *Benchmarking a Site with Realistic Workload*, in 2002 IEEE Workshop on Workload Characterization (WWC), November 2002, Austin (Texas).
- [D.4] B. Crispo and **G. Ruffo**: *Reasoning about Accountability within Delegation*, in Proc. of the Third International Conference on Information and Communication Security, LNCS 2229, Springer Verlag. November 2001, Xi'an (China).
- [D.3] D. Gunetti and **G. Ruffo**: *Intrusion Detection through Behavioral Data*, in Proc. of the third symposium on Intelligent Data Analysis (IDA'99), LNCS 1642, pp. 383-394, Springer Verlag. August, 1999, Amsterdam (NL).
- [D.2] F. Bergadano, **G. Ruffo** and B. Crispo: *Proactive Password Checking with Decision Trees*, in Proc. of CCCS 1997, ACM Conference on Computer and Communication Security, April 1997, Zurich, Switzerland - ACM Press, pp. 67-76.
- [D.1] F. Bergadano, A. Puliafito, S. Riccobene, **G. Ruffo** and L. Vita: *Intelligent Agents: a Tool for Managing and Retrieving Information in Distributed Systems*, in Proc. of ICCCN'96 - Fifth International Conference on Computer Communications and Networks, Ottobre 1996, Rockville, Maryland, USA - IEEE Computer Society Press, pp. 271-272

E. Theses

- [E.2] **G. Ruffo**: *Learning Single and Multiple Instance Decision Trees for Computer Security Applications*, Ph.D. Dissertation, Computer Science Department, University of Turin, 2000
- [E.1] **G. Ruffo**: *Applicazione della Programmazione Logica Induttiva allo Sviluppo Semi-Automatico del Software*, Tesi di Laurea, Mathematics and Computer Science Department, University of Catania, 1995

F. Other papers, projects deliverables and publications

- [F.10] A. Basso, M. Milanesio, A. Panisson, **G. Ruffo**: *From Recordings to Recommendations: Suggesting Live Events in the DVR Context* In PRSAT 2010: Proc. of the Intern. Workshop on the Practical Use of Recommender Systems, Algorithms and Technologies, 30 Sept. 2010, Barcelona, Spain.

- [F.9] U. Pagallo and **G. Ruffo**: *On The Growth Of Collaborative And Competitive Networks: Opportunities and New Challenges*, in Proc. of ETHICOMP Working Conference 2007, Kunming, China. April 2007.
- [F.8] M. Milanesio and **G. Ruffo**: *Super Peer in a Chord ring to enforce security*, Tech. Report n.83/05, Università degli Studi di Torino
- [F.7] D. Catalano and **G. Ruffo**: *A peer-to-peer micropayment scheme protecting intellectual rights*, Tech. Report 80/04, Università degli Studi di Torino
- [F.6] G. Ballocca and **G. Ruffo**: *Web User Behavior Characterization: Techniques, Applications and Research Directions*, Intelligent Systems'02, 16 October 2002 Institut Jozef Stefan, Ljubljana, Slovenija. ISBN: 961-6303-41-4.
- [F.5] F. Bergadano and **G. Ruffo**: *Efficient Multiple Instance Learning*, Project No : 20.237 (ILP 2), anno III, Deliverable No.: TO1c
- [F.4] F. Bergadano, D. Gunetti and **G. Ruffo**: *Solving Complex Software Engineering problems with Tracy-not*, Project No : 20.237 (ILP 2), anno III, Deliverable No.: TO2
- [G.3] F. Bergadano and **G. Ruffo**: *Preliminary report on the ReliC learning system*, Project No : 20.237 (ILP 2), anno II, Unplanned
- [G.2] F. Bergadano, D. Gunetti, F. Neri and **G. Ruffo**: *ILP data analysis in adaptive system and network management*, Project No : 20.237 (ILP 2), anno II, Deliverable No.: TO1b
- [G.1] F. Bergadano, A. Giordana, D. Gunetti, F. Neri and **G. Ruffo**: *Information Retrieval in distributed open systems*, Project No : 20.237 (ILP 2), anno I, Deliverable No.: TO1a

Software and Multimedia products

- **DeHinter** (2007-2008): a Gnutella “Limewire” plug in embedding a decentralized recommendation engine. dehinter.di.unito.it
- **FairPeers** (2005-2006): a micropayment tool tailored for p2p file sharing systems.
- **EnFilter** (2003-2004): ProCheck porting for Windows operating systems
- **WALTy** (a.k.a. CBMGBuilder; 2002 - 2004): Web sites monitoring and testing tool.
- **Dip - digital penguin** (2003): 15 minutes video clip introducing computer science fundamentals for educational purposes. dipdigital.di.unito.it

- **Relic** (1999-2000): data mining systems based on decision trees learning tailored for multiple instance items descriptions.
- **ProCheck** (1998): Proactive password checking tool for Unix operating systems.