

# Roberto Beraldi

## Curriculum Vitae ai fini della pubblicazione

Rome, April 2018

### Part I – General Information

Full Name	Roberto Beraldi
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### Part II – Education

Type	Year	Institution
University graduation	1991	Unical
Post-graduate studies	1992	“Cefriel” Politecnico di Milano
PhD	1996	Unical
Licensure 01	1991	Abilitazione alla professione di “Ingegnere”

### Part III – Appointments

#### IIIA – Academic Appointments

Start	End	Institution	Position
2002	-	“La Sapienza” - DIAG	Assistant professor

#### IIIB – Other Appointments

Start	End	Institution	Position
1996	2002	“ISTAT”, Rome - via Balbo 16	Researcher

## part IV – Teaching experience

Year	Institution	Lecture/Course
12-18	“La Sapienza”, L.Specialistica	Mobile Applications and Cloud Computing
17	“La Sapienza”, L. Triennale	Fondamenti di Informatica
10-12	“La Sapienza”, Master PS	Interoperabilità applicativa
06-12	“La Sapienza”, L.Specialistica	Piattaforme Software Distribuite
03-08	“La Sapienza” – polo Latina	Calcolatori Elettronici

## Part V - Society memberships, Awards and Honors

Year	Title
2017	“DEBS 10 years time Award”, 10 years time best research paper

## Part VI - Funding Information

### Year 2016-2019

Role: PI (starting from January 2018)

Title: "RANGER: Resilience against Attacks on Next Generation mEtering for the smart gRid"

Category: Progetto interdisciplinare “La Sapienza”

Grant: 40 K€

Program: The European energy sector is facing a shift from traditional energy distribution grids to smart grids, which use millions of deployed smart meters. This massive deployment of meters makes the grid at large vulnerable to a wide range of new potential threats, among which privacy threats (such as privacy violations due to unauthorized consumption monitoring), security threats (such as targeted cyber-attacks causing major blackouts), and threats related to grid stability and its correct functioning (such as incorrect data injections for energy fraud) are most alarming. The goal of RANGER is to design strong data protection tools that are compatible with the scalability, attack detection, and data validation requirements of future Smart Grids; Detect the attacks, Resilience to incorrect data.

### Year 2012

Role: PI

Title: "Exploiting the Storage as a Service (SaaS) paradigm for Mobile cloud computing applications"

Category: Ricerche di Ateneo Federato

Grant: 10 K€

Program: The goal of this research is to study a scenario where a set of mobile devices are intermittently connected to the cloud creates a cooperating group. During the disconnection time intervals, the devices of the group collaborate with each other following the Delay Tolerant Networking model. The group of mobile nodes considered in the study is thus willing to cooperate in order to get reciprocal benefit from the usage of the cloud interconnection times. The research analyzes the problem of to exploit the SaaS paradigm by making the content partially downloaded from participants of the group also available to other nodes of the same group

**Year 2010-2012**

Role: Co-PI Rome Local Unit

Title: "Blend (Blending Technologies for Ubiquitous Real-Time Data Access)"

Category: Eurostar European project

Grant value: 221 K€

Program: The project aims at developing a "Blend Box", used as a interoperability bridge among different technologies adopted to monitor international flights, managed by different companies. Today different control flight centers may use different technologies to monitor flight plans in real time. Often, information about a single flight is redundant due to lack of interoperability among control centers located in different nations. The blend-box should allow these different control centers to collaborate one with each other.

A core part of box is to design innovative algorithms for data dissemination using the pub/sub architecture targeting Ultra Large Scale Systems. The blend box should be used to connect 450 airports with 130 Companies, 60 Navigation Providers, 16000 ATC and more than 20 control centers. The system should support about 33.000 daily flights.

**Year 2006-2009.**

Role: Co-PI Rome Local Unit

Title of the project: European NoE "ResIST for Survivability in IST"

Grant value: 4.5 M€

Category: European Network of Excellence

Program: ReSIST is an NoE that addresses the strategic objective "Towards a global dependability and security framework" of the European Union Work Programme, and responds to the stated "need for resilience, self-healing, dynamic content and volatile environments". It was composed of 18 partners

ResIST integrates leading researchers active in the multidisciplinary domains of Dependability, Security, and Human Factors, in order that Europe will have a well-focused coherent set of research activities aimed at ensuring that future "ubiquitous computing systems", the immense systems of ever-evolving networks of computers and mobile devices which are needed to support and provide Ambient Intelligence (AmI), have the necessary resilience and survivability, despite any residual development and physical faults, interaction mistakes, or malicious attacks and disruptions. The objectives of the Network are: (i) Integration of teams of researchers so that the fundamental topics concerning scalably resilient ubiquitous systems are addressed by a critical mass of co-operative, multi-disciplinary research. (ii) Identification, in an international context, of the key research directions (both technical and socio-technical) induced on the supporting ubiquitous systems by the requirement for trust and confidence in AmI. (iii) Production of significant research results (concepts, models, policies, algorithms, mechanisms) that pave the way for scalably resilient ubiquitous systems.

**Year 2007**

Role: PI

Title: (Ricerche universitarie, "La Sapienza") "Algoritmi di ricerca basata su chiave in sistemi peer-to-peer su reti wireless mobili"

Category: Ricerche di Ateneo Federato

Grant: 10 K€

Program: The aim of this research is to design and study distributed algorithms for key based resource discovery in mobile ad hoc networks, which can be casted as small p2p networks. Resource discovery is an important functionality in such systems, as they are completely autonomous and dynamic.

## **Part VII – Research Activities**

Activity 1 [2004-2013].

Keywords: MANET, Dynamic Networks, Gossip protocols, Random walks

Brief Description.

Mobile Ad hoc NETWORKS (MANETs) are an important class of ad hoc spontaneous networks with many potential applications in the real life. One fundamental primitive in a MANET is searching a path from a source node to a destination. This is the key ingredient in pure reactive routing protocols, service discovery, etc. As the topology graph of a MANET changes over time, path discovery cannot be faced with classical routing protocols. Different solutions, based on probabilistic protocols have been then proposed and analysed mathematically and via simulations. In particular, the use of biased random walks and polarized gossip protocols have been considered. Biasing natural random walks and pure gossip has been obtained exploiting temporal correlation in the dynamic topology graph and exploiting the percolation theory. These algorithms have also been applied to low duty cycle sensor networks, where topological changes are due to the sensor duty cycle. Another and more general key issue related to dynamic networks, is information dissemination. Dissemination protocols based on network coding have been studied.

Activity 2.[2009-current]

Keywords: Distributed Systems, Dissemination protocols, pub/sub

Brief Description

A pub/sub system is a mechanism used to efficiently diffuse events issued by publishers to a set of subscribers that can dynamically change. Pub/Sub is a convenient abstraction of a distributed system, and efficient protocols for proper event dissemination is a key issue for this topic. In this research activity, a specific implementation for WANs, based on overlay networks has been proposed. This architecture has received the “10 years’ time best research paper” from the related scientific community. The architecture exploits random walks to hit specific per-topic based overlays. Event dissemination becomes particularly difficult when deadline is attached to events. We have proposed dynamic tree overlay topology with in-network coding to face this challenging scenario. Both mathematical analysis and validation through simulations have been used.

Activity 3.[2013-current]

Keywords: Edge Computing, Fog Computing, IoT, cyber-space

Brief Description.

The Internet of Things is believed by many communities to be the next ‘big step’ in ICT; Smart devices (objects) will form a huge cyberspace that is expected to scale at an extraordinary rate in the forthcoming years, with an estimation of about 6 devices per person in 2020. The huge volume of data and computation facilities required by IoT, urge the necessity to create a backend to deal with the volume, variety, and velocity of data generated ensuring low latency communications and

highly responsive system. In this context, we have considering the new Fog Computing paradigm that has been proposed in the literature and consisting in deploying computation facilities close to the end device, thus providing the missing link in the cloud-to-thing. Fog computing rely on Fog nodes deployed close to the Things. To provide flexible and elastic computing services, we have proposed several cooperation algorithms among fog nodes. The root of these algorithms is the well-known power-of-choice result, that guided the proposed solutions. Opportunistic code offloading among mobile device has also been studied as support to IoT. Edge computing is another term used to refer the usage of local computation resources without cloud support. In this context, we have studied different protocols for direct mobile-to-mobile cooperation.

## **Part VII.b –Conference Program Committee Membership**

### *Year 2018*

1. ACM Int Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems, MSWiM 2018
2. MobiApps 2018 International Workshop on Mobile Applications 6-8 August 2018, Barcelona, Spain
3. ICC 2018 3rd Workshop on Non-Orthogonal Multiple Access (MOMA) Techniques for 5G, Kansas City
4. ICC 2018 3rd Workshop on Convergent Internet of Things (C-IoT), Kansas City
5. I4CT 2018 (4th International Conference on Computer, Communication and Control Technology) Krabi, Thailand

### *Year 2017*

1. 2017 IEEE Globecom 2017 , 4-8 December 2017, Singapore
2. 2017 WS06-Convergent Internet of Things, IEEE Internation Conference on Communication, 21-25 May 2017 Paris, France

### *Previous years*

1. 2015 International Conference on Computer, Communications, and Control Technology (I4CT) I4CT
2. 10th International Conference on Cognitive Radio Oriented Wireless Networks, April 21–23, 2015 Doha, Qatar CrownCom2015
3. 2nd Advancement in Information Technology International Conference, ADVKIT'2014
4. 17th ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems MAWiM 2014
5. Second International Conference on Advances in Computing, Communications and Informatics ICACCI-2013
6. XVI ACM Int Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems, Barcelona, Nov 3-8th, 2013 MSWiM 2013
7. XXIII Int Workshop on Wireless Local Networks, 21-24 October, 2013, Citigate Central, Sydney, Australia IEEE LCN 2013
8. XXII Int Workshop on Wireless Local Networks, Clearwater, Florida IEEE LCN 2012
9. VI Int Conference on Broadband and Wireless Computing, Communication and Applications, Victoria, Canada BWCCA 2012
10. XV ACM Int Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems, Paphos Cyprus MSWiM 2012
11. IX ACM Int Symposium on Performance Evaluation of Wireless Ad Hoc, Sensor, and Ubiquitous Networks PE-WASUN 2012
12. IEEE Workshop on Green Internet of Things, hosted by GLOBECOM 2012 G-IoT 2012
13. 17 th International Conference on Telecommunications ( ICT2010);

14. 29th Int'l Conference on Distributed Computing Systems ICDCS 2009
15. 26th IEEE Symposium on Reliable Distributed Systems SRDS 2007

**Part VII.c – Conference Organization**

- Co-Chair "First International Workshop on Distributed Dynamic Systems, IWDDS 2006" in IEEE International Conference on Distributed Computing Systems (ICDCS), 2006 , July 4-7, 2006 - Lisboa, Portugal
- Vice chair ed organizzatore, "Third International ICST Conference, Autonomics 2009", Limassol, Cyprus.

**Part VII.d – PhD Committee Member**

"Ingegneria Informatica", DIAG, "La Sapienza" University, 2007-current

**Part VIII – Summary of Scientific Achievements**

Product type	Number	Data Base	Start	End
International Papers	71	Scopus	1994	2017
Journal papers	28	Scopus	1994	2017
Conference Papers	43	Scopus	1994	2017
Book Chapter	1	Scopus	2006	

Product type	Number	Title		
Teaching Book	1	"Lezioni di Calcolatori Elettronici", ISBN: 8874882637 (224 pagine)	2008	

Total Citations	686 [scopus], 2062[Google Scholar]
Average citations per paper	9,66 [scopus], 29,04 [Google Schoar]
Hirsch (H) index	14 [scopus], 21 [Google Scholar]
Total Impact factor	52,709 (*)
Average Impact factor	2,928

(\*) Sum of 18 out of 28 journal papers appearing on scopus that have an IF

## Part IX– Selected Publications

List of the publications selected for the evaluation. For each publication report title, authors, reference data, journal IF (if applicable), citations, press/media release (if any).

1. ***Exploiting user feedback for online filtering in event-based systems***, Fabio Petroni, Leonardo Querzoni, Roberto Beraldi, Mario Paolucci,, Future Generation Computer. Systems. 71: 202-211 (2017), *IF=3.997*
2. ***LCBM: a fast and lightweight collaborative filtering algorithm for binary ratings***, Fabio Petroni, Leonardo Querzoni, Roberto Beraldi, Mario Paolucci. Journal of Systems and Software 117: 583-594 (2016), *IF=2.444*
3. ***Enhancing communication adaptability between payment card processing networks***, Mian Adnan Noor, Hameed Abdul, Khayyam Muhammad Umar, Ahmed Farooq, Beraldi Roberto” IEEE COMMUNICATIONS MAGAZINE, vol. 53, p. 58-64, (2015), *IF=10.435*
4. ***Reliable and Timely Event Notification for Publish/Subscribe Services Over the Internet*** Christian Esposito, Marco Platania, Roberto Beraldi. IEEE-ACM TRANSACTIONS ON NETWORKING, vol. 22, p. 230-243, (2014), *IF=3.376*
5. ***Network-coding based event diffusion for wireless networks using semi-broadcasting***, H. Alnuweiri, M.R. Rebai, Roberto Beraldi. AD HOC NETWORKS, vol. 10, p. 871-885, (2012), *IF=3.047*
6. ***On the uniformity of peer sampling based on view shuffling***, Yann Busnel, Roberto Beraldi, Roberto Baldoni, JOURNAL OF PARALLEL AND DISTRIBUTED COMPUTING, vol. 71, p. 1165-1176, (2011), *IF=1.930*
7. ***A Biased Random Walk Routing Protocol for Wireless Sensor Networks: The Lukewarm Potato Protocol***, Roberto Beraldi, Roberto Baldoni, Ravi Prakash. IEEE TRANSACTIONS ON MOBILE COMPUTING, vol. 9, p. 1649-1661, (2010), *IF=3.822*
8. ***Random walk with long jumps for wireless ad hoc networks***, Roberto Beraldi, AD HOC NETWORKS, vol. 7, p. 294-306, 2009, ISSN: 1570-8705, (2008), *IF=3.047*
9. ***A Survey of Service Discovery Protocols in Multihop Mobile Ad Hoc Networks***, Adnan Noor Mian, Roberto Baldoni, Roberto Beraldi. IEEE PERSASIVE COMPUTING, vol. 8, p. 66-74, (2009), *IF=3.250*
10. ***Biased random walks in uniform wireless networks***, Beraldi Roberto, IEEE Transaction on Mobile Computing, vol. 8, p. 500-513, (2008), *IF=3.822*
11. ***Low hitting time random walks in wireless networks*** , Roberto Beraldi, Leonardo Querzoni, Roberto Baldoni, Wireless Communications and Mobile Computing, (2009), *IF=1.899*
12. ***The polarized gossip protocol for path discovery in MANETs***, Roberto Beraldi, Ad Hoc Networks, (2008), *IF=3.047*

## **Part.IX,B . Full list of published contributions** (source: SCOPUS)

- 1) Beraldi, R., Mtibaa, A., Alnuweiri, H.  
Cooperative load balancing scheme for edge computing resources  
(2017) 2017 2nd International Conference on Fog and Mobile Edge Computing, FMEC 2017, art. no. 7946414, pp. 94-100.
- 2) Petroni, F., Querzoni, L., Beraldi, R., Paolucci, M.  
Exploiting user feedback for online filtering in event-based systems  
(2017) Future Generation Computer Systems, 71, pp. 202-211.
- 3) Petroni, F., Querzoni, L., Beraldi, R., Paolucci, M.  
LCBM: A fast and lightweight collaborative filtering algorithm for binary ratings  
(2016) Journal of Systems and Software, 117, pp. 583-594.
- 4) Petroni, F., Querzoni, L., Beraldi, R., Paolucci, M.  
Exploiting user feedback for online Filtering in event-based systems  
(2016) Proceedings of the ACM Symposium on Applied Computing, 04-08-April-2016, pp. 2021-2026.
- 5) Calice, G., Mtibaa, A., Beraldi, R., Alnuweiri, H.  
Mobile-to-mobile opportunistic task splitting and offloading  
(2015) 2015 IEEE 11th International Conference on Wireless and Mobile Computing, Networking and Communications, WiMob 2015, art. no. 7348012, pp. 565-572.
- 6) Mian, A.N., Hameed, A., Khayyam, M.U., Ahmed, F., Beraldi, R.  
Enhancing communication adaptability between payment card processing networks  
(2015) IEEE Communications Magazine, 53 (3), art. no. 7060519, pp. 58-64.
- 7) Mtibaa, A., Snober, M.A., Carelli, A., Beraldi, R., Alnuweiri, H.  
Collaborative mobile-to-mobile computation offloading  
(2015) CollaborateCom 2014 - Proceedings of the 10th IEEE International Conference on Collaborative Computing: Networking, Applications and Worksharing, art. no. 7014597, pp. 460-465.
- 8) Esposito, C., Platania, M., Beraldi, R.  
Reliable and timely event notification for publish/subscribe services over the internet  
(2014) IEEE/ACM Transactions on Networking, 22 (1), art. no. 6470733, pp. 230-243.
- 9) Petroni, F., Querzoni, L., Beraldi, R., Paolucci, M.  
LCBM: Statistics-based parallel collaborative filtering  
(2014) Lecture Notes in Business Information Processing, 176 LNBIP, pp. 172-184.
- 10) Massri, K., Beraldi, R., Vitaletti, A.  
Erasure-coding based data delivery in delay tolerant networks  
(2013) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 8121 LNCS, pp. 188-200.
- 11) Mian, A.N., Fatima, I., Beraldi, R.  
Traffic density estimation protocol using vehicular networks



(2013) Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, LNICST, 120 LNICST, pp. 1-12.

12) Beraldi, R., Massri, K., Alnuweiri, H.

Erasure-coding based dissemination protocol for mobile clouds

(2013) Proceedings - 2013 8th International Conference on P2P, Parallel, Grid, Cloud and Internet Computing, 3PGCIC 2013, art. no. 6681264, pp. 416-421.

13) Beraldi R. et al

Welcome message from the WLN chairs

(2013) Proceedings - Conference on Local Computer Networks, LCN, art. no. 6761231, pp. lx.

14) Cortese, G., Morabito, F., Davide, F., Virgillito, A., Beraldi, R., Quema, V.

Data aggregation in large scale distributed systems

(2012) Emerging Communication: Studies in New Technologies and Practices in Communication, 8, pp. 53-78.

15) Qusa, H., Baldoni, R., Beraldi, R.

A privacy preserving scalable architecture for collaborative event correlation

(2012) Proc. of the 11th IEEE Int. Conference on Trust, Security and Privacy in Computing and Communications, TrustCom-2012 - 11th IEEE Int. Conference on Ubiquitous Computing and Communications, IUCC-2012, art. no. 6296057, pp. 837-843.

16) Alnuweiri, H., Rebai, M.R., Beraldi, R.

Network-coding based event diffusion for wireless networks using semi-broadcasting

(2012) Ad Hoc Networks, 10 (6), pp. 871-885.

17) Platania, M., Beraldi, R., Lodi, G., Querzoni, L., Baldoni, R.

Supporting NGNs core software services: A hybrid architecture and its performance analysis

(2012) Journal of Network and Systems Management, 20 (2), pp. 181-199.

18) Esposito, C., Russo, S., Beraldi, R., Platania, M., Baldoni, R.

Achieving reliable and timely event dissemination over WAN

(2012) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 7129 LNCS, pp. 265-280.

19) Esposito, C., Russo, S., Beraldi, R., Platania, M.

On the benefit of network coding for timely and reliable event dissemination in WAN

(2011) Proceedings of the IEEE Symposium on Reliable Distributed Systems, art. no. 6076450, pp. 84-89.

20) Beraldi, R., Cerocchi, A., Papale, F., Querzoni, L.

Brief announcement: Distributed self-organizing event space partitioning for content-based publish/subscribe systems (2011) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 6976 LNCS, pp. 437-438.

21) Busnel, Y., Beraldi, R., Baldoni, R.

On the uniformity of peer sampling based on view shuffling

(2011) Journal of Parallel and Distributed Computing, 71 (8), pp. 1165-1176.

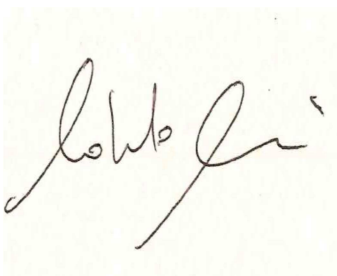
- 22) Beraldi, R., Alnuweiri, H.  
A network-coding based event diffusion protocol for wireless mesh networks  
(2010) Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 23 LNICST, pp. 17-31.
- 23) Beraldi, R., Alnuweiri, H.  
Delay tolerant podcasting with network coding  
(2010) 2010 IFIP Wireless Days, WD 2010, art. no. 5657757, .
- 24) Mian, A.N., Beraldi, R., Baldoni, R.  
On the coverage process of random walk in wireless ad hoc and sensor networks  
(2010) 2010 IEEE 7th International Conference on Mobile Adhoc and Sensor Systems, MASS 2010, art. no. 5663954, pp. 146-155.
- 25) Beraldi, R., Galiffa, M., Alnuweiri, H.  
W-Coolstreaming a protocol for collaborative data streaming for wireless networks  
(2010) Proceedings - International Conference on Distributed Computing Systems, art. no. 5628839, pp. 221-226.
- 26) Baldoni, R., Beraldi, R., Lodi, G., Platania, M., Querzoni, L.  
Moving core services to the edge in NGNs for reducing managed infrastructure size  
(2010) Proceedings of the 2010 International Conference on Network and Service Management, CNSM 2010, art. no. 5691247, pp. 410-413.
- 27) Beraldi, R., Baldoni, R., Prakash, R.  
A biased random walk routing protocol for wireless sensor networks: The lukewarm potato protocol  
(2010) IEEE Transactions on Mobile Computing, 9 (11), art. no. 5506090, pp. 1649-1661.
- 28) Mian, A.N., Baldoni, R., Beraldi, R.  
A robust and energy efficient protocol for random walk in ad hoc networks with IEEE 802.11  
(2010) International Journal of Parallel, Emergent and Distributed Systems, 25 (5), pp. 363-379.
- 29) Busnel, Y., Beraldi, R., Baldoni, R.  
A formal characterization of uniform peer sampling based on view shuffling  
(2009) Parallel and Distributed Computing, Applications and Technologies, PDCAT Proceedings, art. no. 5372779, pp. 360-365.
- 30) Beraldi, R., Baldoni, R., Prakash, R.  
Lukewarm potato forwarding: A biased random walk routing protocol for wireless sensor networks  
(2009) 2009 6th Annual IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks, SECON 2009, art. no. 5168944, .
- 31) Zecca, G., Couderc, P., Banâtre, M., Beraldi, R.  
A swarm of robots using RFID tags for synchronization and cooperation  
(2009) International Journal of Intelligent Computing and Cybernetics, 2 (4), pp. 846-869.
- 32) Zecca, G., Couderc, P., Banâtre, M., Beraldi, R.  
Swarm robot synchronization using RFID tags  
(2009) 7th Annual IEEE International Conference on Pervasive Computing and Communications, PerCom 2009, art. no. 4912788, .

- 33) Beraldi, R., Querzoni, L., Baldoni, R.  
Low hitting time random walks in wireless networks  
(2009) *Wireless Communications and Mobile Computing*, 9 (5), pp. 719-732.
- 34) Beraldi, R.  
Biased random walks in uniform wireless networks  
(2009) *IEEE Transactions on Mobile Computing*, 8 (4), art. no. 4657358, pp. 500-513.
- 35) Beraldi, R.  
Random walk with long jumps for wireless ad hoc networks  
(2009) *Ad Hoc Networks*, 7 (2), pp. 294-306.
- 36) Mian, A.N., Baldoni, R., Beraldi, R.  
A survey of service discovery protocols in multihop mobile Ad Hoc networks  
(2009) *IEEE Pervasive Computing*, 8 (1), art. no. 4736481, pp. 66-74.
- 37) Zecca, G., Couderc, P., Banâtre, M., Beraldi, R.  
Cooperation in a Swarm of robots using RFID landmarks  
(2008) *ROSE 2008 - IEEE International Workshop on Robotic and Sensors Environments Proceedings*, art. no. 4669171, pp. 1-6.
- 38) Mian, A.N., Baldoni, R., Beraldi, R.  
An efficient biasing strategy for random walk in wireless ad hoc networks  
(2008) *IWCMC 2008 - International Wireless Communications and Mobile Computing Conference*, art. no. 4600088, pp. 1087-1092.
- 39) Mian, A.N., Beraldi, R., Baldoni, R.  
A robust and energy efficient protocol for randomwalk in ad hoc networks with IEEE 802.11  
(2008) *IPDPS Miami 2008 - Proceedings of the 22nd IEEE International Parallel and Distributed Processing Symposium, Program and CD-ROM*, art. no. 4536491, .
- 40) Beraldi, R.  
The polarized gossip protocol for path discovery in MANETs  
(2008) *Ad Hoc Networks*, 6 (1), pp. 79-91.
- 41) Baldoni, R., Beraldi, R., Quema, V., Querzoni, L., Tucci-Piergiovanni, S.  
TERA: Topic-based event routing for peer-to-peer architectures  
(2007) *ACM International Conference Proceeding Series*, 233, pp. 2-13.
- 42) Baldoni, R., Beraldi, R., Querzoni, L., Virgillito, A.  
Efficient publish/subscribe through a self-organizing broker overlay and its application to SIENA  
(2007) *Computer Journal*, 50 (4), pp. 444-459.
- 43) Beraldi, R. A directional gossip protocol for path discovery in MANETs  
(2006) *Proceedings - International Conference on Distributed Computing Systems*, art. no. 1648970, .
- 44) Beraldi, R., Cugola, G.  
IWDDS 2006 foreword  
(2006) *Proceedings - International Conference on Distributed Computing Systems*, art. no. 1648873, .

- 45) Beraldi, R., et al  
Middleware and architectural reflection  
(2006) Mobile Information Systems: Infrastructure and Design for Adaptivity and Flexibility, pp. 81-114.
- 46) Beraldi, R., Querzoni, L., Baldoni, R.  
A hint-based probabilistic protocol for unicast communications in MANETs  
(2006) Ad Hoc Networks, 4 (5), pp. 547-566.
- 47) Baldoni, R., Beraldi, R., Cugola, G., Migliavacca, M., Querzoni, L.  
Structure-less content-based routing in mobile ad hoc networks  
(2005) Proceedings - International Conference on Pervasive Services, ICPS '05, 2005, art. no. 1506387, pp. 37-46.
- 48) Baldoni, R., Beraldi, R., Querzoni, L., Cugola, G., Migliavacca, M.  
Content-based routing in highly dynamic mobile ad hoc networks  
(2005) International Journal of Pervasive Computing and Communications, 1 (4), pp. 277-288.
- 49) Baldoni, R., Beraldi, R., Piergiovanni, S.T., Virgillito, A.  
On the modelling of publish/subscribe communication systems  
(2005) Concurrency Computation Practice and Experience, 17 (12), pp. 1471-1495.
- 50) Beraldi, R., Querzoni, L., Baldoni, R.  
A hint-based probabilistic protocol for unicast communications in MANETs  
(2005) Proceedings of the International Conference on Parallel and Distributed Systems - ICPADS, 1, pp. 432-438.
- 51) Baldoni, R., Beraldi, R., Querzoni, L., Virgillito, A.  
Subscription-driven self-organization in content-based publish/subscribe  
(2004) Proceedings - International Conference on Autonomic Computing, pp. 332-333.
- 52) Quaglia, F., Beraldi, R.  
Space uncertain simulation events: Some concepts and an application to optimistic synchronization  
(2004) Proceedings - Workshop on Parallel and Distributed Simulation, 18, pp. 181-188.
- 53) Baldoni, R., Beraldi, R., Piergiovanni, S.T., Virgillito, A.  
Measuring notification loss in publish/subscribe communication systems  
(2004) Proceedings - IEEE Pacific Rim International Symposium on Dependable Computing, pp. 84-93.
- 54) Patini, M., Beraldi, R., Marchetti, C., Baldoni, R.  
A middleware architecture for inter ad-hoc networks communication  
(2004) Proceedings - 4th International Conference on Web Information Systems Engineering Workshops,
- 55) Beraldi, R., Baldoni, R.  
A caching scheme for routing in mobile ad hoc networks and its application to ZRP  
(2003) IEEE Transactions on Computers, 52 (8), pp. 1051-1062.

- 56) Virgillito, A., Beraldi, R., Baldoni, R.  
On event routing in content-based publish/subscribe through dynamic networks  
(2003) Proceedings of the IEEE Computer Society Workshop on Future Trends of Distributed Computing Systems, 2003-January, art. no. 1204354, pp. 322-328.
- 57) Beraldi, R., Nigro, L., Orlando, A.  
Temporal Uncertainty Time Warp: An Implementation Based on Java and ActorFoundry  
(2003) SIMULATION, 79 (10), pp. 581-597.
- 58) Beraldi, R., Nigro, L., Orlando, A., Pupo, F.  
Temporal uncertainty time warp: An agent-based implementation  
(2002) Proceedings - Simulation Symposium, 2002-January, art. no. 1000088, pp. 72-79.
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A handwritten signature in black ink on a light-colored background. The signature is cursive and appears to read 'Roberto Beraldi'.