Curriculum Vitae et Studiorum

Alberto Montresor

January 1$^{\text{st}}$, 2025

1 Introduction

Name   Alberto Montresor

Birth   Verona, July 28th,1971

Address   University of Trento, Dipartimento di Ingegneria e Scienza dell'Informazione
via Sommarive 9, I-38123 Povo (TN)
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Positions

2020-	Full Professor – Department of Information Science and Engineering, University of Trento.
2005-2020	Associate Professor – Department of Information Science and Engineering, University of Trento.
2002-2005	Assistant researcher – Faculty of Science, University of Bologna.
2000-2002	Post-doc – University of Bologna. Funded by Sun Microsystems and the European Project ADAPT.
1998	Visiting researcher at the Computer Science Department of the University of Twente (Enschede, The Netherlands), invited by Prof. Sape Mullender.

Education and habilitations

2018	Habilitation as Full Professor, SSD 09/H1
2014	Habilitation as Full Professor, SSD 01/B1
1995-2000	Ph.D. in Computer Science – University of Bologna.
1990-1995	Ms.C. in Computer Science – University of Bologna. 110/110 cum laude.

2 Research

During my Ph.D. under the supervision of Prof. Babaoglu, and in the years immediately following (1996-2001), my research focused on distributed systems and fault tolerance, with particular attention to group communication systems in partitionable environments. I studied and implemented mechanisms to ensure high availability through replication, defining specifications for the group membership service (GMS) and the reliable multicast service (RMS), which ensure consistency among group members and reliable message delivery. In this context, I developed Jgroup, a group communication system extending Java RMI.

From 2002 to 2015, my research focused on epidemic protocols, applied to peer-to-peer (P2P) systems to enhance their scalability and robustness. I developed solutions for key challenges such as aggregation, load balancing, decentralized ranking, and topology construction. Many of these studies were implemented and evaluated using Peersim, a P2P network simulator that I co-designed with Mark Jelasity (Hungarian Academy of Science and University of Szeged) starting in 2003 during my time in Bologna. Over time, Peersim has become a reference tool in the research community: as of January 2025, it has been downloaded 40,000 times and cited in over 1,200 publications.

Since 2010, my research has progressively focused on the development of centralized and distributed algorithms for the analysis of large-scale graphs, tackling challenges such as structural decomposition, community detection, and decentralized ranking. I have worked on multilayer networks and hypergraphs, developing multiplex network metrics and efficient methods for identifying recurring motifs in large hypergraphs.

In recent years, my research has expanded into Computer Science Education, with a focus on innovative teaching strategies for computer science, computational thinking, and programming, as well as methodologies to promote their sustainable integration in primary and secondary education. To address this challenge, I have extended my research into disciplines such as psychology and pedagogy, contributing with high-impact publications in these fields as well.

Publication records

4	textbooks for university and high school
11	proceedings publications as editor
34	journal articles
2	invited journal articles
2	book chapters
89	conference papers

Database	H-index	# Citations	Top paper
Google Scholar	43	9260	1202
Scopus	27	4360	793

Awards

2018   Z. T. Kefato, N. Sheikh, L. Bahri, A. Soliman, A. Montresor, and S. Girdzijauskas. CAS2VEC: network-agnostic cascade prediction in online social networks. In Proc. of the 5th International Conferenceon Social Networks Analysis, Management and Security (SNAMS 2018), pages 72–79. IEEE, October 2018.

2011   A. Montresor and L. Abeni. Cloudy weather for P2P, with a chance of gossip. In Proc. of the 11th IEEE P2P Conference on Peer-to-Peer Computing (P2P'11), pages 250-259. IEEE, August 2011.

2006   G. P. Jesi, A. Montresor, and O. Babaoglu. Proximity-aware superpeer overlay topologies. In Proc. of SelfMan'06, LNCS 3996, pages 43-57. Springer-Verlag, Dublin, Ireland, June 2006.

3   Grants

Title	Year	Agency & Type	Role	Own Budget	Total Amount
VIPPSTAR	2025	Horizon	Member	166.200€	
Sparkle	2025	Repubblica Digitale	Member	42.525€	
Smaca	2024	Euregio	Member	4.900€	
Minerva	2023-2025	FSE	Member	30.100€	
Learning Informatics	2023-2026	MUR Prin	Coordinator	46.730€	214.388€
Progetto Lauree Scientifiche	2023	MUR	Local unit coord.	30.000€	
Cloudstars	2023-2026	MUR	Member	86.000€	
STEM Kit	2021	MUR	Coordinator	56.000€	100.000
Computational Thinking Academy	2021	Erasmus+	Local unit coord.	56.227€	
Progetto Lauree Scientifiche	2021	MUR	Local unit coord.	20.000€	
Progetto Lauree Scientifiche	2019	MUR	Local unit coord.	22.000€	
Conto Terzi Grant	2019	U-Hopper	Coordinator	45.000€	45.000€
Progetto CLIC	2018	PAT	Member	12.500€	
Sensemaking Service – Entity Linking for Big Linked Data	2017	EIT ICTLabs Activity	Local unit coord.	55.000€	
Sensemaking Service – Entity Linking for Big Linked Data	2016	EIT ICTLabs Activity	Local unit coord.	50.000€	
Conto Terzi Grant	2015	SpazioDati	Coordinator	20.000€	20.000€
Large Scale Graph Proc.for Big Linked Data Analytics	2014	EIT ICTLabs Activity	Local unit coord.	60.000€	
Europa	2013	EIT ICTLabs Activity	Local unit coord.	29.000€	
Europa	2012	EIT ICTLabs Activity	Local unit coord.	32.000€	
Autonomic Security	2010-2102	MIUR PRIN	Project coord.	48.370€	201.000€
ATLAS	2007-2011	Atlantis Double-Degree Project	Project coord.	146.000€	408.000€
"Gossip-based Strategies in Global Optimization"	2008	ESA - Ariadna Project	Local unit coord.	29.000€	
Total				1.067.522€	

4 Teaching

Courses

2005-	"Algoritmi e Strutture Dati", C.d.L. in Informatica, Univ. of Trento
2020-2023	"Laboratory of Computer Science Education", C.d.L. Magistrale in Informatica, Univ. of Trento.
2006-2021	"Distributed Systems", C.d.L. Magistrale in Informatica, Univ. of Trento.
2016-2019	"Scientific Programming", C.d.L. Magistrale in Computat. and Quantitative Biology, Univ. of Trento and C.d.L. Magistrale in Data Science, Univ. of Trento
2008,2010	"P2P Systems", Doctorate School in ICT, Univ. of Trento (in collaboration with Renato Lo Cigno)
2002-2005	"Sistemi Operativi MZ", C.d.L. in Informatica, Università di Bologna.
2002-2005	"Laboratorio di Sistemi Operativi MZ", C.d.L. in Informatica, Università di Bologna.
2003-2005	"Laboratorio di Elementi di Informatica AL", C.d.L. in Biotecnologie, Università di Bologna.

Other Courses

2024-	"Informatica per l'Apprendimento", Percorso 60-CFU - Corso trasversale a tutte le classi, Univ. of Trento
2024-	"Didattica dell'Informatica e Fondamenti della Disciplina", Percorso 60-CFU classe A-41, Univ. of Trento
2024-	"Didattica degli Algoritmi", Percorso 60-CFU classe A-41, Univ. of Trento
2017-2019	"Laboratorio di Pensiero Computazionale", in Percorsi di aggiornamento "Lo studio della mente e l'arte di insegnare", Univ. of Trento.
2017	"Computational thinking", in Corso di Perfezionamento in "Tecnologia per l'Educazione: Dispositivi e Diversità", Univ. of Trento.
2003-2005	"Sicurezza nei Sistemi Operativi", Master Almaweb in Sicurezza dei Sistemi Informativi.
2003-2004	"Sistemi Operativi", Progetto A3 (Ambiente Accessibile d'Apprendimento), Università di Bologna.
2001-2005	"Tecnologie e Servizi Internet / Programmazione Web" (Laboratory Course), Master Almaweb in Comunicazione e Tecnologie della Comunicazione / Tecnologie Web per le Imprese.

Teaching assistantship

2001-2002	"Laboratorio di Sistemi Operativi", C.d.L. in Informatica, Università di Bologna.
2000-2002	"Architetture degli Elaboratori", C.d.L. in Informatica, Università di Bologna.
2000-2005	"Sistemi Complessi Adattivi", C.d.L. in Informatica, Università di Bologna.
1997-1999	"Sistemi 1", C.d.L. in Informatica, Università di Bologna.

Thesis supervision

2005-   At the Univ. of Trento, he supervised and co-supervised 184 B.Sc. theses and 71 M.Sc. theses

2002-2005   At the University of Bologna, he supervised and co-supervised 13 B.Sc. theses and 17 M.Sc. theses

2006-2010   Ph.D. Supervision, Marco Biazzini, Development Engineer at Amadeus IT Group

2008-2013   Ph.D. Co-supervision, Giuliano Mega, researcher at SpazioDati (Italy), CTO at Playax (Brazil)

2009-2013   Ph.D. Supervision, Hanna Kavalionak, post-doc at CNR - Pisa

2011-2015   Ph.D. Supervision, Alessio Guerrieri, researcher at SpazioDati (Italy)

2014-2019   Ph.D. Supervision, Zekarias Kefato, post-doc at KTH (Stockholm)

2016-2019   Ph.D. Supervision, Nasrullah Sheikh, IBM - Almaden

2014-2019   Ph.D. Supervision, Cristian Consonni, Eurecat - Barcelona

2019-2023   Ph.D. Co-supervision, Francesca Fiore, post-doc at Università di Trento

2021-   Ph.D. Supervision, Francesco Lotito

2023-   Ph.D. Supervision, Giulia Paludo

2024-   Ph.D. Supervision, Marta Valentini

2024-   Ph.D. Supervision, David Martin Zikovitz

5 Professional activities

Administration activities

2024-   Vice-rector for Third Mission and Relations with Schools, University of Trento

2021-   Member of the Academic Senate, University of Trento

2022-   Coordinator of the Centre on Teacher Training and Relations with Schools, University of Trento

2022-   Member of the Committee for the Implementation of the Strategic Plan, University of Trento

2021-   Member of the Scientific Committee FormID, Teaching and Learning Center, University of Trento

2020-   Scientific Coordinator of FabLab UniTrento

2022-2024   Delegate of the Rector for Third Mission, University of Trento

2019-2022   Delegate of the Rector for ICT Services, University of Trento.

2018-2022   Delegate for the relationships with Secondary Schools, Dept. of Information Engineering and Computer Science, University of Trento.

2015-2018   Delegate for the relationships with CLA, Dept. of Information Engineering and Computer Science, University of Trento.

2012-2015   Education Coordinator, Dept. of Information Engineering and Computer Science, University of Trento.

2010-2013   Member of the "Nucleo di Valutazione" of the University of Trento.

2007-2012	Coordinator of the ATLAS Project - Double Degree in Computer Science in Cooperation with Georgia Institute of Technology, Technischen Universitaet Muenchen
2009-2012	Delegate for school orientation, Faculty of Science, University of Trento
2009-2012	Delegate for disabilities, Faculty of Science, University of Trento
2006-2009	Coordinator of the Computer Science Degree Committee, Faculty of Science, University of Trento.

Editorial Board

2011-2020	Associate Editor, Springer Computing Journal.

Special Issues

2012	Extreme Distributed Systems, Springer Computing Journal.

Steering committee member

2007-2009	Int. Conf. on Distributed Systems and Interoperable Applications (DAIS).
2007-2013	Int. Conf. on P2P Computing (P2P). Since October 2010, steering commitee chair.

General chair

2020	1st Int. Workshop on Distributed Infrastructure for Common Good (DICG'20).
2018	12th Int. Conf. on Peer-to-Peer Computing (SASO'18).
2007	7th Int. Conf. on Self-Adaptive and Self-Organizing Systems (P2P'07).

Programme committee chair

2016	1st Workshop on Edge Computing (WEC'16)
2009	3rd Int. Conf. on Self-Adaptive and Self-Organizing Systems (SASO'09), Program Co-Chair.
2008	Distributed Objects, Middleware, and Applications (DOA'08), Program Co-Chair.
2006	6th Int. Conf. on Peer-to-Peer Computing (P2P'06), Program Co-Chair.
2006	6th Int. Conf. on Distributed Systems and Interoperable Applications (DAIS'06), Program Co-Chair.
2004	Int. Workshop on Self-* Properties in Complex Information Systems (SelfStar'04), Program Co-Chair.

Track chair

2018	Distributed Systems and Algorithms Topic, EuroPar 2018, Topic Co-Chair.
2014	Social Networks, Crowdsourcing, and P2P systems Track, ICDCS'14, Track Chair
2012	Peer-to-Peer Computing Topic, EuroPar 2012, Topic Co-Chair.

2011	Peer-to-Peer Computing Topic, EuroPar 2011, Topic Co-Chair.
2008	Peer-to-Peer Computing Topic, EuroPar 2008, Vice Co-Chair.
2007	Peer-to-Peer Computing Topic, EuroPar 2007, Topic Co-Chair.

Finance chair

| **2013** | 13th Int. Conf. on Peer-to-Peer Computing (P2P'13), Trento, Italy |
| **2008** | 2nd Int. Conf. on Self-Adaptive and Self-Organizing Systems (SASO'08), Venice, Italy. |

Organizational activities

2002-2004	Bertinoro Int. Summer School, Bertinoro (Forlì), Italy
2002	7th Cabernet Radicals Workshop, Bertinoro (Forlì), Italy.
2002	1st Int. Workshop on Future Directions in Distributed Computing, Bertinoro, Italy.
2001	4th European Research Seminar on Advances in Dist. Comp. Systems (ERSADS'01), Bertinoro, Italy,
1996	10th Int. Workshop on Distributed Algorithms (WDAG'96), Bologna, Italy.

Journal review activities

ACM Computing Survey, IEEE Trans. on Parallel and Distributed Systems, IEEE Trans. on Computers, IEEE Trans. on Computer Communication, IEEE Trans. on Computer Networks, IEEE Trans. on Knowledge Engineering, IEEE Trans. on Network and Service Management, IEEE Trans. on Dependable and Secure Computing, IEEE Trans. on Autonomous and Adaptive Systems, IEEE Trans. on Systems, Man, and Cybernetics, IEEE Journal on Selected Areas in Communications, IEEE Internet Computing, Elsevier Journal of Parallel and Distributed Computing, Elsevier Distributed Computing, Elsevier Computer Networks, Elsevier Journal of Network and Computer Applications, Springer Swarm Intelligence. Springer Peer-to-Peer Networking and Applications, Wiley Concurrency and Computation: Practice and Experience, Oxford Computer Journal, IOP Distributed Systems Engineering,

Project review activities

2016	External Reviewer, Swiss National Science Foundation, Switzerland
2014,2015	External Reviewer, Qatar National Research Fund, Qatar.
2013	External Reviewer, Swedish Knowledge Foundation, Sweden.
2010	External reviewer, ERC Advanced Grant 3rd Call - 2010.
2009,2010	External reviewer, Nanyang Technological University, Singapore.
2006	External reviewer, Nordunet3 Research Programme in network research.
2004	External reviewer, Swedish Research Council.

External Ph.D. Examiner

2020   Abhishek Singh, invited by Roman Vitenberg, University of Oslo, Norway

2018   Lucas L. Provensi, invited by Frank Eliassen, University of Oslo, Norway

2016   Istvan Hegedus, invited by Mark Jelasity, University of Szeged, Hungary

2016   Tommaso Pirini, invited by Claudio Sartori, Universitá di Bologna, Italy

2015   Ruma Paul, invited by Vladimir Vassov, KTH, Sweden

2013   Roberto Roverso, invited by Seif Haridi, KTH, Sweden

2013   Tallat Shafaat, invited by Seif Haridi, KTH, Sweden

2013   Paal Evensen, invited by Hein Meling, University of Stavanger, Norway

2013   Rajesh Sharma, invited by Anwitaman Datta, Nanyang Technological University, Singapore

2012   Jan Mark Wams, invited by Maarten van Steen, VU University Amsterdam, The Netherlands

2011   Amir Payberah, invited by Seif Haridi, KTH, Sweden.

2011   Rameez Rahman, invited by Henk Sips, Delft University of Technology, The Netherlands

2010   Kovendhan Ponnavaikko, invited by J. Dharanipragada, IIT Madras, India.

2009   Bartosz Biskupski, invited by Renè Meier, Trinity College, Dublin, Ireland.

2009   Marc Sanchez, invited by Pedro Garcia Lopez, Univ. Pompeu Fabra, Spain.

2008   Roman Schmidt, invited by Karl Aberer, EPFL, Switzerland.

6   Keynote Speaker

2012   "Designing extreme distributed systems: challenges and opportunities". Comparch 2012, Bertinoro, Italy.

2010   "Cloudy Weather for P2P, with a Chance of Gossip". Brazilian Symposium on Computer Networks and Distributed Systems (SBRC), Gramado, Brasil, 2010.

2008   "Intelligent Gossip". 2nd International Symposium on Intelligent Distributed Computing (IDC 2008), Catania, Italy.

7   Invited talks, seminars and tutorials

2016   "Gossip as a framework". Middleware 2016, December 2016, Trento, Italy.

2016   "Reflecting on the past, preparing for the future: from peer-to-peer to edge-centric computing". International Conference on Distributed Computing Systems. June 2016, Nara, Japan

2010   "Cloudy Weather for P2P, with a Chance of Gossip". International Workshop on Distributed Systems (IWDS). November 2010, IIT-Kanpur, India

2009   "Gossiping in P2P networks". International Workshop on Distributed Systems (IWDS). December 2009,

IIT-Madras, India

2006	"The Bootstrapping Service". EPFL, Switzerland. Invited Seminar.
2005	"The Peer-to-Peer Paradigm", GARR'05 Conference "La rete daPERtutto", Pisa, Italy. Tutorial.
2004	"Computing Aggregate Functions on Large-Scale Distributed Systems". Università di Trento, Italy. Invited seminar.
2004	"Computing Aggregate Functions on Large-Scale Distributed Systems". Università di Verona, Italy. Invited seminar.
2003	"The Bison Project", 1st COE Symposium on Networked Information System, Osaka, Japan. Invited talk.
2002	"The Jgroup Project", University of Trondheim, Norway. Invited seminar.
2001	"The Jgroup Project", Università di Roma, Italy. Invited seminar.
2001	"Experience with Reliable Group Communication", ICDCS Workshop on Reliable Group Communication, Mesa, AZ. Panelist.
2000	Sun Laboratory at Burlington, MA. Research visit.
1999	Sun Laboratory at Aspen, CO, and Burlington, MA. Research visit
1999	"The Jgroup Distributed Object Model". Dept. of Computer Science, University of Cambridge, UK. Invited seminar.

8 Publications

Books

[1] Maurizio Boscaini, Alberto Montresor, and Massimiliano Masetti. *Hashtag – Corso di informatica con Python per il Liceo scientifico opzione scienze applicate – Volume 3*. Hoepli, Milano, September 2024.

[2] Maurizio Boscaini, Alberto Montresor, and Massimiliano Masetti. *Hashtag – Corso di informatica con Python per il liceo scientifico opzione scienze applicate – Volume 2*. Hoepli, Milano, 2023.

[3] Maurizio Boscaini, Alberto Montresor, and Massimiliano Masetti. *Hashtag – Corso di informatica con Python per il liceo scientifico opzione scienze applicate – Volume 1*. Hoepli, Milano, 2022.

[4] Alan Bertossi and Alberto Montresor. *Algoritmi e strutture di dati - 3^a Ed*. Cittá Studi Edizioni, Torino, 2014.

Proceedings, editor

[1] Alberto Montresor and Pedro Garcia Lopez, editors. *Proc. of the First Workshop on Edge Computing*. IEEE, June 2016.

[2] Alberto Montresor, Evaggelia Pitoura, Anwitaman Datta, and Spyros Voulgaris. Topic 7: Peer to peer computing. In *Proc. of the 18th Int. Conference on Parallel Processing*, volume 7484 of *EuroPar'12*, page 363. Springer, August 2012.

[3] Pascal Felber, Olivier Beaumont, Alberto Montresor, and Amitabha Bagchi. Topic 7 - Peer-to-Peer Computing. In *Proc. of the 17th Int. Conference on Parallel Processing*, volume 6852 of *EuroPar'11*, pages 514–515, Bordeaux, France, August 2011. Springer.

[4] Alberto Montresor, Fabrice Saffre, and Nenad Medvidovic, editors. *3rd IEEE Int. Conference on Self-Adaptive and Self-Organizing Systems (SASO'09)*, San Francisco, CA, September 2009. IEEE.

[5] Mark Little, Alberto Montresor, and Greg Pavlik, editors. *Proc. of the 10th Int. Symposium on Distributed Objects, Middleware, and Applications (DOA'08)*, volume 5331 of *Lecture Notes in Computer Science*, Monterrey, Mexico, November 2008. Springer.

[6] Dick H. J. Epema, Alberto Montresor, Márk Jelasity, and Josep Jorba. Topic 7 - Peer-to-Peer Computing. In *Proc. of the 14th Int. Conference on Parallel Processing*, EuroPar'08, pages 599–600, Las Palmas de Gran Canaria (Spain), August 2008. Springer.

[7] Manfred Hauswirth, Adam Wierzbicki, Klaus Wherle, Alberto Montresor, and Nahid Shahmehri, editors. *Proc. of the 7th Int. Conference on Peer-to-Peer Computing (P2P'07)*. IEEE, September 2007.

[8] Alberto Montresor, Fabrice Le Fessant, Dick H. J. Epema, and Spyros Voulgaris. Topic 7 - Peer-to-Peer Computing. In *Proc. of the 13th Int. Conference on Parallel Processing*, EuroPar'07, pages 477–478. Springer, August 2007.

[9] Alberto Montresor, Adam Wierzbicki, and Nahid Shahmehri, editors. *Proc. of the 6th Int. Conference on Peer-to-Peer Computing (P2P'06)*. IEEE, September 2006.

[10] Frank Eliassen and Alberto Montresor, editors. *Distributed Applications and Interoperable Systems: 6th IFIP WG 6.1 Int. Conference, DAIS'06*, volume 4025 of *Lecture Notes in Computer Science*. Springer-Verlag, June 2006.

[11] Ozalp Babaoglu, Márk Jelasity, Alberto Montresor, Christof Fetzer, Stefano Leonardi, Aad van Moorsel, and Maarten van Steen, editors. *Self-Star Properties in Complex Information Systems*, volume 3460 of *Lecture Notes in Computer Science, Hot Topics*. Springer-Verlag, May 2005.

Refereed articles in journals

[1] Alberto Montresor, Agnese Del Zozzo, Giulia Paludo, Francesca Fiore, and Giorgia Bissoli. Informatics and constructionism for transdisciplinary teacher training. *Q-Times – Journal of Education, Technology and Social Studies*, pages 1–19, 2025. To appear.

[2] Simi Surendran, Alberto Montresor, and Maneesha Vinodini Ramesh. A reinforcement learning approach for routing in marine communication network of fishing vessels. *SN COMPUT. SCI.*, 6(62):1–19, 2025.

[3] Sruthy Anand, Mojtaba Enayati, Dhanesh Raj, Alberto Montresor, and Maneesha Vinodini Ramesh. Internet over the ocean: A smart IoT-enabled digital ecosystem for empowering coastal fisher communities. *Technology in Society*, 79:102686, December 2024.

[4] Quintino Francesco Lotito, Alberto Montresor, and Federico Battiston. Multiplex measures for higher-order networks. *Applied Network Science*, 9(55), September 2024.

[5] Quintino Francesco Lotito, Federico Musciotto, Alberto Montresor, and Federico Battiston. Hyperlink communities in higher-order networks. *J. Complex Networks*, 12(2), April 2024.

[6] Quintino Francesco Lotito, Federico Musciotto, Federico Battiston, and Alberto Montresor. Exact and sampling methods for mining higher-order motifs in large hypergraphs. *Springer Computing*, pages 475–494, February 2024.

[7] Quintino Francesco Lotito, Martina Contisciani, Caterina De Bacco, Leonardo Di Gaetano, Luca Gallo, Alberto Montresor, Federico Musciotto, Nicolò Ruggeri, and Federico Battiston. Hypergraphx: a library for higher-order network analysis. *Journal of Complex Networks*, 11(3), May 2023.

[8] Simi Surendran, Maneesha V. Ramesh, Alberto Montresor, and Martin Montag. Link characterization and edge-centric predictive modelling in an ocean network. *IEEE Access*, 11:5031–5046, January 2023.

[9] Quintino Francesco Lotito, Federico Musciotto, Alberto Montresor, and Federico Battiston. Higher-order motif analysis in hypergraphs. *Communications Physics*, 5(1):79, 2022.

[10] Giovanni De Toni, Cristian Consonni, and Alberto Montresor. A general method for estimating the prevalence of influenza-like-symptoms with Wikipedia data. *PLoS ONE*, 16(28):e0256858, 2021.

[11] Simi Surendran, Maneesha Vinodini Ramesh, Martin J. Montag, and Alberto Montresor. Modelling communication capability and node reorientation in offshore communication network. *Computers & Electrical Engineering*, 87, 2020.

[12] Cristian Consonni, David Laniado, and Alberto Montresor. Cyclerank, or there and back again: Personalized relevance scores from cyclic paths on directed graphs. *Philosophical Transactions of the Royal Society of London. Series A, Mathematical and Physical Sciences*, 476(2241), September 2020.

[13] Leonardo Maccari, Lorenzo Ghiro, Alessio Guerrieri, Alberto Montresor, and Renato Lo Cigno. Exact distributed load centrality computation: Algorithms, convergence, and applications to distance vector routing. *IEEE Trans. Parallel Distrib. Syst.*, 31(7):1693–1706, 2020.

[14] Giuliano Mega, Alberto Montresor, and Gian Pietro Picco. Social overlays meet the cloud: A hybrid architecture for profile dissemination in decentralized social networks. *IEEE Transactions on Network Science and Engineering*, 6(4):613–627, Oct 2019.

[15] Nasrullah Sheikh, Zekarias Kefato, and Alberto Montresor. GAT2VEC: Representation learning for attributed graphs. *Computing*, 101(3):187–209, 2019.

[16] Alberto Montresor. Gossip and epidemic protocol. *Wiley Encyclopedia of Electrical and Electronics Engineering*, 1, 2017.

[17] Yannis Velegrakis Sabeur Aridhi, Alberto Montresor. BLADYG: A graph processing framework for large dynamic graphs. *Big Data Research*, 9:9–17, 2017.

[18] Weverton Luis da Costa Cordeiro, Flavio Roberto Santos, Marinho Pilla Barcelos, Luciano Paschoal Gaspary, Hanna Kavalionak, Alessio Guerrieri, and Alberto Montresor. Making puzzles green and useful for adaptive identity management in large-scale distributed systems. *Computer Networks*, 95:97 – 114, 2016.

[19] Pedro Garcia Lopez, Alberto Montresor, Dick Epema, Anwitaman Datta, Teruo Higashino, Adriana Iamnitchi, Marinho Barcellos, Pascal Felber, and Etienne Riviere. Edge-centric computing: Vision and challenges. *SIGCOMM Comput. Commun. Rev.*, 45(5):37–42, September 2015.

[20] Hanna Kavalionak, Emanuele Carlini, Laura Ricci, Alberto Montresor, and Massimo Coppola. Integrating peer-to-peer and cloud computing for massively multiuser online games. *Peer-to-Peer Networking and Application*, 8(2):301–319, 2015.

[21] Alberto Montresor, Francesco de Pellegrini, and Daniele Miorandi. Distributed k-core decomposition. *IEEE Trans. Parallel Distrib. Syst.*, 24(2):288–300, 2013.

[22] Jan Sacha and Alberto Montresor. Identifying frequent items in distributed data sets. *Computing*, 95(4):289–307, 2013.

[23] Marco Biazzini and Alberto Montresor. P2POEM: Function optimization in p2p networks. *Peer-to-Peer Networking and Application*, 6(2):213–232, 2013.

[24] Alberto Montresor, Guszti Eiben, and Maarten van Steen. Extreme distributed systems: from large scale to complexity. *Computing*, 94(8–10):619–620, 2012.

[25] Gabriela Gheorghe, Renato Lo Cigno, and Alberto Montresor. Security and privacy issues in P2P streaming systems: A survey. *Peer-to-Peer Networking and Application*, 4(2):75–91, 2011.

[26] Gian Paolo Jesi, Alberto Montresor, and Maarten van Steen. Secure peer sampling. *Computer Networks*, 54(13):2086–2098, June 2010.

[27] Alessio Guerrieri, Iacopo Carreras, Francesco De Pellegrini, Daniele Miorandi, and Alberto Montresor. Distributed estimation of global parameters in delay–tolerant networks. *Computer Communications*, 33(13):1472–1482, August 2010.

[28] Márk Jelasity, Alberto Montresor, and Ozalp Babaoglu. T-Man: Gossip-based fast overlay topology construction. *Computer Networks*, 53(13):2321–2339, 2009.

[29] Hein Meling, Alberto Montresor, Bjarne Helvik, and Ozalp Babaoglu. Jgroup/ARM: A distributed object group platform with autonomous replication management. *Software Prac. Exper.*, 38(9):885–923, July 2008.

[30] Gian Paolo Jesi, Alberto Montresor, and Ozalp Babaoglu. Proximity-aware superpeer overlay topologies. *IEEE Transactions on Network and Service Management*, 4(2):74–83, September 2007.

[31] Ozalp Babaoglu, Geoffrey Canright, Andreas Deutsch, Gianni Di Caro, Frederick Ducatelle, Luca Gambardella, Niloy Ganguly, Márk Jelasity, Roberto Montemanni, and Alberto Montresor. Design patterns from biology for distributed computing. *ACM Transactions on Autonomous and Adaptive Systems*, 1(1):26–66, September 2006.

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Publications in other research areas

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9 Other Professional Activities

2002   Scientific editing of "Quattro.Zero", by Federico Tibone; Appendix "Quattro.Zero – Materiali per l'insegnante". Zanichelli Editore (Bologna, Italy)

2002   Scientific editing of "A Portata di Mouse", by Federico Tibone; realization of the Appendix "A Portata di Mouse – Materiali per l'insegnante". Zanichelli Editore (Bologna, Italy)

2001   Scientific editing of "Computer Multimediale" by G. Russo, J. Jamrich-Parsons and D. Oja, "Scrivere e comunicare con il computer" by G. Russo, M.L. Swangson, D.I. Barker and C.L.H. Barker. Zanichelli Editore (Bologna, Italy).

2000-2002   Teaching activity for Sun Microsystems Italia (Java, Java RMI, Servlet, Enterprise JavaBeans, Java security).

2000   Teaching activity for NCH (Network Computer House, Bologna, Italy), financed by the European Community (Computer Science fundamentals, computer architectures, operating systems, networks, security and programming).

2000-2002   Software design and implementation for landscape analysis. Dipartimento di Biologia dell'Università di Padova.

1998   Scientific editing of the translation of "Computer Networks"" by L. Peterson e B. Davie. Norma Srl (Parma, Italy) and Zanichelli Editore (Bologna, Italy).

1996-1997   Translation from English to Italian of "Computer Networks" (chapter 5,6), by Andrew S. Tanenbaum. Società UTET Libreria S.r.l.

1996   Software design and implementation for timetables scheduling. Università di Venezia "Cà Foscari".

1992-2001   Software design and implementation for river bank analysis. Provincia di Verona, Regione Veneto and Dipartimento di Biologia, Università di Padova.

1991   Software design and implementation for text analysis. Università di Venezia "Cà Foscari".