Curriculum Vitae et Studiorum

Alberto Montresor

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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) Tel. 0461-283972. E-mail: `alberto.montresor@unitn.it`

2 Positions

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

3 Education and habilitations

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.

4 Publications

Books

[BM14]	Alan Bertossi and Alberto Montresor. *Algoritmi e strutture di dati - 3^a Ed.* Cittá Studi Edizioni, Torino, 2014.
[BM10]	Alan Bertossi and Alberto Montresor. *Algoritmi e strutture di dati - 2^a Ed.* Cittá Studi Edizioni, Torino, 2010.

Proceedings, editor

[MGL16]   Alberto Montresor and Pedro Garcia Lopez, editors. *Proceedings of the First Workshop on Edge Computing*. IEEE, June 2016.

[MPDV12]   Alberto Montresor, Evaggelia Pitoura, Anwitaman Datta, and Spyros Voulgaris. Topic 7: Peer to peer computing. In *Proc. of the 18th International Conference on Parallel Processing*, volume 7484 of *EuroPar'12*, page 363. Springer, August 2012.

[FBMB11]   Pascal Felber, Olivier Beaumont, Alberto Montresor, and Amitabha Bagchi. Topic 7 - Peer-to-Peer Computing. In *Proc. of the 17th International Conference on Parallel Processing*, volume 6852 of *EuroPar'11*, pages 514–515, Bordeaux, France, August 2011. Springer.

[MSM09]   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.

[LMP08]   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.

[EMJJ08]   Dick H. J. Epema, Alberto Montresor, Márk Jelasity, and Josep Jorba. Topic 7 - Peer-to-Peer Computing. In *Proc. of the 14th International Conference on Parallel Processing*, EuroPar'08, pages 599–600, Las Palmas de Gran Canaria (Spain), August 2008. Springer.

[HWW$^+$07] 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.

[MFEV07]   Alberto Montresor, Fabrice Le Fessant, Dick H. J. Epema, and Spyros Voulgaris. Topic 7 - Peer-to-Peer Computing. In *Proc. of the 13th International Conference on Parallel Processing*, EuroPar'07, pages 477–478. Springer, August 2007.

[MWS06]   Alberto Montresor, Adam Wierzbicki, and Nahid Shahmehri, editors. *Proc. of the 6th Int. Conference on Peer-to-Peer Computing (P2P'06)*. IEEE, September 2006.

[EM06]   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.

[BJM$^+$05] 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

[MMP18]   Giuliano Mega, Alberto Montresor, and Gianpietro Picco. Social overlays meet the cloud: A hybrid architecture for profile dissemination in decentralized social networks. *IEEE Transactions on Network Science and Engineering*, 2018.

[SKM18]   Nasrullah Sheikh, Zekarias Kefato, and Alberto Montresor. GAT2VEC: Representation learning for attributed graphs. *Computing*, 2018.

[Mon17]   Alberto Montresor. Gossip and epidemic protocol. *Wiley Encyclopedia of Electrical and Electronics Engineering*, 1, 2017.

[SA17]   Yannis Velegrakis Sabeur Aridhi, Alberto Montresor. BLADYG: A graph processing framework for large dynamic graphs. *Big Data Research*, 9:9–17, 2017.

[dCCSB+16] 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.

[GLME+15] 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.

[KCR+15] 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.

[MdPM13] Alberto Montresor, Francesco de Pellegrini, and Daniele Miorandi. Distributed k-core decomposition. *IEEE Trans. Parallel Distrib. Syst.*, 24(2):288–300, 2013.

[SM13] Jan Sacha and Alberto Montresor. Identifying frequent items in distributed data sets. *Computing*, 95(4):289–307, 2013.

[BM13] Marco Biazzini and Alberto Montresor. P2POEM: Function optimization in p2p networks. *Peer-to-Peer Networking and Application*, 6(2):213–232, 2013.

[MEvS12] Alberto Montresor, Guszti Eiben, and Maarten van Steen. Extreme distributed systems: from large scale to complexity. *Computing*, 94(8–10):619–620, 2012.

[GCM11] 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.

[JMvS10] Gian Paolo Jesi, Alberto Montresor, and Maarten van Steen. Secure peer sampling. *Computer Networks*, 54(13):2086–2098, June 2010.

[GCP+10] 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.

[JMB09] Márk Jelasity, Alberto Montresor, and Ozalp Babaoglu. T-Man: Gossip-based fast overlay topology construction. *Computer Networks*, 53(13):2321–2339, 2009.

[MMHB08] 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.

[JMB07] 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.

[BCD+06] 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.

[JMB05] Márk Jelasity, Alberto Montresor, and Ozalp Babaoglu. Gossip-based aggregation in large dynamic networks. *ACM Trans. Comput. Syst.*, 23(1):219–252, August 2005.

[BMZ04] Nadia Busi, Alberto Montresor, and Gianluigi Zavattaro. Data-driven coordination in peer-to-peer information systems. *Int. Journal of Cooperative Information Systems*, 13(1):63–89, March 2004.

[BDM01] Ozalp Babaoglu, Renzo Davoli, and Alberto Montresor. Group communication in partitionable systems: Specification and algorithms. *IEEE Transactions on Software Engineering*, 27(4):308–336, April 2001.

Invited articles in journals

[CGJ+07]   Paolo Costa, Vincent Gramoli, Márk Jelasity, Gian Paolo Jesi, Erwan Le Merrer, Alberto Montresor, and Leonardo Querzoni. Exploring the interdisciplinary connections of gossip-based systems. *SIGOPS Oper. Syst. Rev.*, 41(5):51–60, October 2007.

[BJK+06]   Ozalp Babaoglu, Márk Jelasity, Anne-Marie Kermarrec, Alberto Montresor, and Maarten van Steen. Managing clouds: A case for a fresh look at large unreliable dynamic networks. *SIGOPS Oper. Syst. Rev.*, 40(3):9–13, July 2006.

Book chapters

[BDM99]   Ozalp Babaoglu, Renzo Davoli, and Alberto Montresor. Group communication in partitionable systems: Specification and algorithms. In Sacha Krakoviak and Santosh Shirivastava, editors, *Advances in Distributed Systems*, number 1752 in Lecture Notes in Computer Science, pages 48–78. Springer-Verlag, 1999.

Refereed articles in conferences

[FLL+18]   Luca Forlizzi, Michael Lodi, Violetta Lonati, Claudio Mirolo, Mattia Monga, Alberto Montresor, Anna Morpurgo, and Enrico Nardelli. A core informatics curriculum for italian compulsory education. In *Proc. of 11th International Conference on Informatics in Schools: Situation, Evolution, and Perspectives (ISSEP'18)*, volume 11169 of *Lecture Notes in Computer Science*, pages 141–153. Springer, 2018.

[KSB+18]   Zekarias T. Kefato, Nasrullah Sheikh, Leila Bahri, Amira Soliman, Alberto Montresor, and Sarunas Girdzijauskas. CAS2VEC: network-agnostic cascade prediction in online social networks. In *Proc. of the 5th International Conference on Social Networks Analysis, Management and Security (SNAMS 2018)*, pages 72–79. IEEE, October 2018.

[SKM18]   Nasrullah Sheikh, Zekarias T. Kefato, and Alberto Montresor. Semi-supervised heterogeneous information network embedding for node classification using 1D-CNN. In *Proc. of the 5th International Conference on Social Networks Analysis, Management and Security (SNAMS 2018)*, pages 177–181. IEEE, October 2018.

[KSM18]   Zekarias T. Kefato, Nasrullah Sheikh, and Alberto Montresor. REFINE: Representation learning from diffusion events. In *Proc. of the 4th Conference on Machine Learning, Optimization and Data science*, LOD'18. Springer, September 2018.

[MGG+18]   Leonardo Maccari, Lorenzo Ghiro, Alessio Guerrieri, Alberto Montresor, and Renato Lo Cigno. On the distributed computation of load centrality and its application to DV routing. In *Proc. of the IEEE International Conference on Computer Communications*, INFOCOM'18. IEEE, April 2018.

[KSM17a]   Zekarias T. Kefato, Nasrullah Sheikh, and Alberto Montresor. Mineral: Multi-modal network representation learning. In *Proc. of the 3rd International Conference on Machine Learning, Optimization and Big Data*, MOD'17. ACM, September 2017.

[KSM17b]   Zekarias T. Kefato, Nasrullah Sheikh, and Alberto Montresor. Deepinfer: Diffusion network inference through representation learning. In *Proc. of the 13th International Workshop on Mining and Learning With Graphs*, MLG'17. ACM, August 2017.

[KM17]   Zekarias T. Kefato and Alberto Montresor. Personalized influencer detection: Topic and exposure-conformity aware. In *Proc. of the International Workshop on Mining Actionable Insights from Social Networks*, MAISoN'17. ACM, February 2017.

[LTM16]   Pedro García López, Raúl Gracia Tinedo, and Alberto Montresor. Towards data-driven software-defined infrastructures. In *2nd International Conference on Cloud Forward: From Distributed to Complete Computing*, volume 97 of *Procedia Computer Science*, pages 144–147, Madrid, Spain, October 2016. Elsevier.

[SAG+16]   Chayma Sakouhi, Sabeur Aridhi, Alessio Guerrieri, Salma Sassi, and Alberto Montresor1. DynamicD-FEP: A distributed edge partitioning approach for large dynamic graphs. In *Procedings of the 20th International Database Engineering & Applications Symposium*, IDEAS'16, Montreal, Canada, July 2016. ACM.

[GMC16]   Alessio Guerrieri, Alberto Montresor, and Simone Centellegher. ETSCH: Partition-centric graph processing. In *Proc. of the 1st International Conference on Cloud and Big Data Computing*, CBDCom'16, Toulouse, France, July 2016. IEEE.

[Mon16]   Alberto Montresor. Reflecting on the past, preparing for the future: from peer-to-peer to edge-centric computing. In *Proc. of the 36th Int. Conference on Distributed Computing Systems*, ICDCS'16, Nara, Japan, June 2016. IEEE Computer Society.

[ABVM16]   Sabeur Aridhi, Martin Brugnara, Yannis Velegrakis, and Alberto Montresor. Distributed k-core decomposition and maintenance in large dynamic graphs. In *Proc. of the 10th ACM International Conference on Distributed and Event-Based Systems*, DEBS'16, Irvine, CA, June 2016. ACM.

[AMV16]   Sabeur Aridhi, Alberto Montresor, and Yannis Velegrakis. BLADYG: A novel block-centric framework for the analysis of large dynamic graphs. In *Proceedings of the ACM Workshop on High Performance Graph Processing, HPGP@HPDC 2016*, pages 39–42, Kyoto, Japan, May 2016. ACM.

[KPMD16]   Hanna Kavalionak, Amir Payberah, Alberto Montresor, and Jim Dowling. NATCloud: Cloud-assisted NAT-traversal service. In *Proc. of the 31st Symposium on Applied Computing*, SAC'16, Pisa, Italy, April 2016. ACM.

[GM15]   Alessio Guerrieri and Alberto Montresor. DFEP: Distributed funding-based edge partitioning. In *Proc. of the 21th International Conference on Parallel Processing*, EuroPar'15. Springer, 2015.

[SRM14]   Giovanni Simoni, Roberto Roverso, and Alberto Montresor. RankSlicing: A decentralized protocol for supernode selection. In *Proc. of the 14th IEEE P2P Conference on Peer-to-Peer Computing*, P2P'14. IEEE, 2014.

[GMV14]   Alessio Guerrieri, Alberto Montresor, and Yannis Velegrakis. Top-k item identification on dynamic and distributed datasets. In *Proc. of the 20th International Conference on Parallel Processing*, EuroPar'14. Springer, 2014.

[EM13]   Benedikt Elser and Alberto Montresor. An evaluation study of BigData frameworks for graph processing. In *Proc. of the 2013 IEEE International Conference on Big Data*, BigData'13, pages 60–67, Santa Clara, CA, USA, October 2013. IEEE.

[PKM+13]   Amir H. Payberah, Hanna Kavalionak, Alberto Montresor, Jim Dowling, and Seif Haridi. Lightweight gossip-based distribution estimation. In *Proc. of IEEE International Conference on Communications*, ICC'13, pages 3439–3443, Budapest, Hungary, June 2013. IEEE.

[MMP13]   Giuliano Mega, Alberto Montresor, and Gian Pietro Picco. Cloud-assisted dissemination in social overlays. In *Proc. of the 13th IEEE P2P Conference on Peer-to-Peer Computing*, P2P'13, Trento, Italy, September 2013. IEEE.

[MMP12]   Giuliano Mega, Alberto Montresor, and Gian Pietro Picco. On churn and communication delays in social overlays. In *Proc. of the 12th IEEE P2P Conference on Peer-to-Peer Computing (P2P'12)*, pages 214–223, Tarragona, Spain, September 2012. IEEE.

[PKK+12]   Amir Hossein Payberah, Hanna Kavalionak, Vimalkumar Kumaresan, Alberto Montresor, and Seif Haridi. CLive: Cloud-assisted P2P live streaming. In *Proc. of the 12th IEEE P2P Conference on Peer-to-Peer Computing (P2P'12)*, pages 79–88, Tarragona, Spain, September 2012. IEEE.

[GM12]   Alessio Guerrieri and Alberto Montresor. DS-Means: Distributed data stream clustering. In *Proc. of the 18th International Conference on Parallel Processing*, EuroPar'12, pages 260–271. Springer, 2012.

[Mon12]   Alberto Montresor. Designing extreme distributed systems: Challenges and opportunities. In *Proc. of the 8th Int. ACM SIGSOFT Conference on Quality of Software Architectures (QoSA'12)*, Bertinoro, Italy, June 2012. ACM.

[KM12]   Hanna Kavalionak and Alberto Montresor. P2P and cloud: A marriage of convenience for replica management. In *Proc. of the 7th IFIP Int. Workshop on Self-Organizing Systems (IWSOS'12)*, number 7166 in Lecture Notes in Computer Science, pages 60–71, Delft, The Netherlands, March 2012. Springer.

[MA11]   Alberto Montresor and Luca 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. Best paper award.

[MMP11]   Giuliano Mega, Alberto Montresor, and Gian Pietro Picco. Efficient dissemination in decentralized social networks. In *Proc. of the 11th IEEE P2P Conference on Peer-to-Peer Computing (P2P'11)*, pages 338–347. IEEE, August 2011.

[BM10]   Marco Biazzini and Alberto Montresor. Gossiping differential evolution: a decentralized heuristic for function optimization in p2p networks. In *Proc. of the 16th Int. Conference on Parallel and Distributed Systems (ICPADS'10)*. IEEE, December 2010.

[ACM10]   Marco Ajelli, Renato Lo Cigno, and Alberto Montresor. Modeling botnets and epidemic malware. In *Proc. of the Int. Communications Conference (ICC'10)*. IEEE, May 2010.

[AM09]   Luca Abeni and Alberto Montresor. Scheduling in p2p streaming: From algorithms to protocols. In Thrasyvoulos Spyropoulos and Karin Anna Hummel, editors, *Proc. of the 4th IFIP Int. Workshop on Self-Organizing Systems (IWSOS'09)*, volume 5918 of *Lecture Notes in Computer Science*, pages 201–206, Zurich, Switzerland, December 2009. Springer.

[MJ09]   Alberto Montresor and Márk Jelasity. Peersim: A scalable p2p simulator. In *Proc. of the 9th Int. Conference on Peer-to-Peer (P2P'09)*, pages 99–100, Seattle, WA, September 2009. IEEE.

[MG09]   Alberto Montresor and Ali Ghodsi. Towards robust peer counting. In *Proc. of the 9th Int. Conference on Peer-to-Peer (P2P'09)*, pages 143–146, Seattle, WA, September 2009. IEEE.

[BBMJ09]   Marco Biazzini, Balázs Bánhelyi, Alberto Montresor, and Márk Jelasity. Distributed hyper-heuristics for real parameter optimization. In *Proc. of the 11th Genetic and Evolutionary Computation Conference (GECCO'09)*, pages 1339–1346, Montreal, Québec, Canada, July 2009. ACM.

[JM09]   Gian Paolo Jesi and Alberto Montresor. Secure peer sampling service: the mosquito attack. In *Proc. of the 5th WETICE Workshop on Collaborative Peer-to-Peer Systems (COPS'09)*, Groningen, The Netherlands, July 2009. IEEE.

[MM09]   Hein Meling and Alberto Montresor. Type-safe dynamic protocol composition in Jgroup/ARM. In *Proc. of the 3rd Int. DiscCoTec Workshop on Middleware-Application Interaction (MAI'09)*, pages 1–6, Lisbon, Portugal, June 2009. ACM.

[GMC+09]   Alessio Guerrieri, Alberto Montresor, Iacopo Carreras, Francesco De Pellegrini, and Daniele Miorandi. Distributed estimation of global parameters in delay–tolerant networks. In *Proc. of the 3rd IEEE WoWMoM Workshop on Autonomic and Opportunistic Communications (AOC'09)*, Kos, Greece, June 2009. IEEE.

[BBMJ09]   Balázs Bánhelyi, Marco Biazzini, Alberto Montresor, and Márk Jelasity. Peer-to-peer optimization in large unreliable networks with branch-and-bound and particle swarms. In *Applications of Evolutionary Computing*, Lecture Notes in Computer Science, pages 87–92. Springer, jul 2009. An extended version of the paper can be found here.

[MJB08]   Alberto Montresor, Márk Jelasity, and Ozalp Babaoglu. Decentralized ranking in large-scale overlay networks. In *Proc. of the 1st IEEE Selfman SASO Workshop*, pages 208–213, Isola di San Servolo, Venice, Italy, November 2008. IEEE. An extended version of the paper can be found here.

[Mon08a]   Alberto Montresor. Intelligent gossip. In *2nd Int. Symposium on Intelligent Distributed Computing (IDC'08)*, Catania, Italy, September 2008. Springer. Invited paper.

[Mon08b]   Alberto Montresor. Decentralized network analysis: a proposal. In *4th WETICE Workshop on Collaborative Peer-to-Peer Systems (COPS'08)*, Rome, Italy, June 2008. IEEE. Invited paper.

[BMB08]   Marco Biazzini, Alberto Montresor, and Mauro Brunato. Towards a decentralized architecture for optimization. In *Proc. of the 22nd IEEE Int. Parallel and Distributed Processing Symposium (IPDPS'08)*, Miami, FL, USA, April 2008. IEEE.

[MZ08]   Alberto Montresor and Roberto Zandonati. Absolute slicing in peer-to-peer systems. In *Proc. of the 5th Int. Workshop on Hot Topics in Peer-to-Peer Systems (HotP2P'08)*, Miami, FL, USA, April 2008. IEEE.

[BBJM07]   Ozalp Babaoglu, Toni Binci, Márk Jelasity, and Alberto Montresor. Firefly-inspired heartbeat synchronization in overlay networks. In *Proc. of the First IEEE Int. Conference on Self-Adaptive and Self-Organizing Systems (SASO'07)*, Boston, MA, USA, July 2007. IEEE.

[JMB06a]   Márk Jelasity, Alberto Montresor, and Ozalp Babaoglu. The bootstrapping service. In *Proc. of Int. ICDCS Workshop on Dynamic Distributed Systems (ICDCS-IWDDS'06)*, Lisboa, Portugal, July 2006. IEEE Computer Society.

[JMB06b]   Gian Paolo Jesi, Alberto Montresor, and Ozalp Babaoglu. Proximity-aware superpeer overlay topologies. In *Proc. of SelfMan'06*, volume 3996 of *Lecture Notes in Computer Science*, pages 43–57, Dublin, Ireland, June 2006. Springer-Verlag. **Best paper award.**

[BCD+05]   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. In *Proc. of the European Conference on Complex Systems*, Paris, France, November 2005.

[MJB05]   Alberto Montresor, Márk Jelasity, and Ozalp Babaoglu. Chord on demand. In *Proc. of the 5th Int. Conference on Peer-to-Peer Computing (P2P'05)*, pages 87–94, Konstanz, Germany, August 2005. IEEE.

[HMM05]   Bjarne Helvik, Hein Meling, and Alberto Montresor. An approach to experimentally obtain service dependability characteristics of the Jgroup/ARM system. In *Proc. of the 5th European Dependable Computing Conference (EDCC'05)*, Budapest, Hungary, April 2005. Springer.

[Mon04]   Alberto Montresor. A robust protocol for building superpeer overlay topologies. In *Proc. of the 4th Int. Conference on Peer-to-Peer Computing*, pages 202–209, Zurich, Switzerland, August 2004. IEEE.

[MJB04]   Alberto Montresor, Márk Jelasity, and Ozalp Babaoglu. Robust aggregation protocols for large-scale overlay networks. In *Proc. of the 2004 Int. Conference on Dependable Systems and Networks (DSN'04)*, pages 19–28, Florence, Italy, June 2004. IEEE Computer Society.

[JMB04]   Márk Jelasity, Alberto Montresor, and Ozalp Babaoglu. A modular paradigm for building self-organizing peer-to-peer applications. In *Engineering Self-Organising Systems: Nature-Inspired Approaches to Software Engineering*, number 2977 in Lecture Notes in Artificial Intelligence, pages 265–282. Springer-Verlag, April 2004.

[JM04] Márk Jelasity and Alberto Montresor. Epidemic-style proactive aggregation in large overlay networks. In *Proc. of the 24th Int. Conference on Distributed Computing Systems (ICDCS'04)*, pages 102–109, Tokyo, Japan, March 2004. IEEE Computer Society.

[MMB03a] Alberto Montresor, Hein Meling, and Özalp Babaoglu. Toward self-organizing, self-repairing and resilient distributed systems. In André Schiper, Alexander A. Shvartsman, Hakim Weatherspoon, and Ben Y. Zhao, editors, *Future Directions in Distributed Computing, Research and Position Papers*, volume 2584 of *Lecture Notes in Computer Science*, pages 119–126. Springer, 2003.

[MMB03b] Alberto Montresor, Hein Meling, and Ozalp Baboglu. Messor: Load-balancing through a swarm of autonomous agents. In *Proc. of the 1st Workshop on Agent and Peer-to-Peer Systems (AP2PC'02)*, number 2530 in Lecture Notes in Artificial Intelligence, pages 125–137, Bologna, Italy, July 2003. Springer-Verlag.

[BMMZ03] Nadia Busi, Cristian Manfredini, Alberto Montresor, and Gianluigi Zavattaro. PeerSpaces: Data-driven coordination in peer-to-peer networks. In *Proc. of the 18th Symposium on Applied Computing (SAC'03)*, pages 380–386, Melbourne, Florida, March 2003. ACM.

[BCP$^+$03] Alberto Bartoli, Cosimo Calabrese, Milan Prica, Etienne Antoniutti Di Muro, and Alberto Montresor. Adaptive message packing for group communication systems. In *Proc. of the Workshop on Reliable and Secure Middleware (WRSM'03)*, number 2889 in Lecture Notes in Computer Science, pages 912–925. Springer-Verlag, 2003.

[MMB02] Alberto Montresor, Hein Meling, and Ozalp Babaoglu. Towards adaptive, resilient and self-organizing peer-to-peer systems. In *Web Engineering and Peer-to-Peer*, number 2376 in Lecture Notes in Computer Science, pages 300–305. Springer-Verlag, 2002.

[BMMZ02] Nadia Busi, Cristian Manfredini, Alberto Montresor, and Gianluigi Zavattaro. Towards a data-driven coordination infrastructure for peer-to-peer systems. In *Web Engineering and Peer-to-Peer*, number 2376 in Lecture Notes in Computer Science, pages 295–299. Springer-Verlag, 2002.

[BMM02] Ozalp Babaoglu, Hein Meling, and Alberto Montresor. Anthill: A framework for the development of agent-based peer-to-peer systems. In *Proc. of the 22th Int. Conference on Distributed Computing Systems (ICDCS'02)*, Vienna, Austria, July 2002. IEEE.

[MDB01] Alberto Montresor, Renzo Davoli, and Ozalp Babaoglu. Enhancing Jini with group communication. In *Proc. of the 21st International Conference on Distributed Computing Systems Workshops (ICDCS'01)*, Phoenix, AZ, USA, April 2001. IEEE.

[Mon99] Alberto Montresor. The Jgroup reliable distributed object model. In *Proc. of the 2nd IFIP Int. Working Conference on Distributed Applications and Interoperable Systems (DAIS'99)*, pages 389–402, Helsinki, Finland, June 1999. Kluwer.

[BDMS98] Ozalp Babaoglu, Renzo Davoli, Alberto Montresor, and Roberto Segala. System support for partition-aware network applications. In *Proc. of the 18th Int. Conference on Distributed Computing Systems (ICDCS'98)*, pages 184–191, Amsterdam, The Netherlands, May 1998. IEEE.

Publications in other research areas

[BSM$^+$01] M.G. Braioni, G. Salmoiraghi, A. Montresor, G. Penna, and P.F. DeFranceschi. The banks quality in the monitoring and restoring of the watercourses. *Atti Associazione Italiana Oceanologia Limnologia*, 14:77–88, 2001.

[BM00] M.G. Braioni and A. Montresor. Qualità delle rive nel monitoraggio e nel ripristino dei corsi d'acqua (abstract). In *Atti XIV Congresso Nazionale Associazione Italiana di Oceanografia e Limnologia*, Garda (VR), Italy, 2000.

[BBG+00] M.G. Braioni, A. Braioni, L. Girelli, M. Masconale, M. Francescon, and A. Montresor. Analisi territoriale e cartografia tematica nel monitoraggio a rischio ambientale. informazione geografica : innovazione e formazione. In *Atti IV Conferenza Nazionale ASITA*, pages 287–289, Genova, Italy, October 2000.

[MAF+94] M.G. Braioni, A. Braioni, P. De Franceschi, F. Mason, S. Ruffo, B. Sambugar, P. Modena, M. Tessari, and A. Montresor. Indices for assessing river bank quality: the case of the river adige (north-east italy). In *Proc. of the International Workshop on the Ecology and Management of Acquatic-Terrestrial Ecotones*, pages 287–289, Seattle, WA, USA, 1994.

Software

Peersim is a simulator for peer-to-peer protocols, developed in Java starting in 2003, in cooperation with Mark Jelasity (Hungarian Academy of Science and University of Szeged). It has been downloaded more than 30.000 times and used in more than 800 scientific papers (January 2018).

Publication records

Database	H-index	# Citations	Top paper
Google Scholar	36	6234	857
Scopus	21	2755	486

Awards

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.

5   Grants

Project participant

2008-2010 Napa-wine – Network-Aware P2P-TV Application over Wise Networks - Contract no. FP7-214412, http://www.napa-wine.eu.

2006-2008 Cascadas – Component-ware for Autonomic Situation-aware Communications, and Dynamically Adaptable Services - Contract No. FP6–027807. http://www.cascadas-project.org/.

2006-2008 Bionets - BIOlogically inspired NETwork and Services - Contract No. FP6-027748. http://www.bionets.eu/.

2003-2005 BISON - Biology-Inspired techniques for Self-Organization in dynamic Networks - Contract No. IST-2001-38923. http://www.cs.unibo.it/bison/. Workpackage leader, coordination committee member.

2002-2005 ADAPT - Middleware Technologies for Adaptive and Composable Distributed Components - Contract No. IST-2001-37126. http://adapt.ls.fi.upm.es/adapt.htm.

1996-2004 CABERNET - Network of Excellence in Distributed and Dependable Distributed Computing Systems - Contract No. IST-2000-25088. http://www.newcastle.research.ec.org/cabernet/index.html

1996-1999 BROADCAST-WG - Basic Research On Advanced Distributed Computing: from Algorithms to Sys-Tems - ESPRIT Basic Research Working Group 22455

Project coordination

Title	Year	Agency & Type	Role	Own Budget	Total Amount
Conto Terzi Grant	2019	U-Hopper	Coordinator	45.000€	
Progetto CLIC	2018	PAT	Member	12.500€	25.000€
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€	
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				471.870€	

6 Teaching

Courses

2016-	"Scientific Programming", C.d.L. Magistrale in Computational and Quantitative Biology, University of Trento
2005-	"Algoritmi e Strutture Dati", C.d.L. in Informatica, , University of Trento
2006-	"Distributed Systems", C.d.L. Magistrale in Informatica, , University of Trento.
2008,2010	"P2P Systems", Doctorate School in ICT, University 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

2017-2018   "Laboratorio di Pensiero Computazionale", in Percorsi di aggiornamento "Lo studio della mente e l'arte di insegnare", University of Trento.

2017   "Computational thinking", in Corso di Perfezionamento in "Tecnologia per l'Educazione: Dispositivi e Diversità", University of Trento.

2003-2005   "Sicurezza nei Sistemi Operativi", Master Almaweb in Sicurezza dei Sistemi Informativi.

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.

E-learning

2003-2004   "Sistemi Operativi", Progetto A3 (Ambiente Accessibile d'Apprendimento), Università di Bologna.

Thesis supervision

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

2005-2018   At the University of Trento, he supervised and co-supervised 61 B.Sc. theses and 31 M.Sc. theses

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

2008-2013   Ph.D. Co-supervision, Giuliano Mega, now researcher at SpazioDati

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

2011-2015   Ph.D. Supervision, Alessio Guerrieri, now researcher at SpazioDati

2014-   Ph.D. Supervision, Cristian Consonni

2014-   Ph.D. Supervision, Zekarias Kefato

2016-   Ph.D. Supervision, Nasrullah Sheikh

7   Professional activities

Administration activities

2018-   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	Delegato per l'orientamento, Faculty of Science, University of Trento
2009-2012	Delegato per la disabilità, Faculty of Science, University of Trento
2006-2009	Coordinator of the Computer Science Degree Committee (Consiglio d'Area Didattica in Informatica), Faculty of Science, University of Trento.

Editorial Board

2011-	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

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.

Organization

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.

Program committee member

SAC'19, CryBlock'18, OPODIS'18, CLOUDCOM'18, TD-LSG'18, DaMNet'18, SAC'18, ICCCN'18, UCC'17, DAIS'17, HPDC'17, DAIS'16, Middleware'16, ICPADS'16, LSDVE'16, ICDCS'16, Middleware'15, ICPADS'15, P2P'15, DAIS'15, Middleware'14, DAIS'14, ORMACLOUD'14 P2P'13, DAIS'13, OPODIS'13, PDP'13 ORMACLOUD'13 P2P'12, DAIS'12, EDCC'12, MSOP2P'12, OPODIS'11, SCS'11, P2P'11, SASO'11, SCS'11, MSOP2P'11, COMSWARE'11, SASO'10, P2P'10, DAIS'10, EDCC'10, HICCS'10, Hot-P2P'10, SCS'10, COPS'09 DAIS'09, AP2PC'09, Hot-P2P'09, SOPDS'09, HICCS'09, ComP2P'08, P2P'08, DBISP2P'08, SASO'08, ATC'08, AP2PC'08, SOPDS'08, ASSESS'08, PPN'07, EEDAS'07, Auto-nomics'07, SASO'07, DBIP2P'07, PPN'07, Coordination'07, DAIS'07, AP2PC'07, AP2PC'06, ATC'06, ESOA'06, I2CS'06, STD3S'06, DBISP2P'06, Bio-Adit'06, P2P'05, StoDis'05, AAMAS'05, AP2PC'05, ESOA'05, SIC'05, DBISP2P'05, IAT'05, Self-* 2004, P2PKM'04, AP2PC'04, P2P'04, IAT'04, DBISP2P'04, Bio-Adit'04, P2P'03, AP2PC'03, DBISP2P'03

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

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.

8 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.

9 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.

10 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 Com-

munity (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".