

Curriculum Vitae

Personal Information

Waltenegus Dargie (Prof. Dr.-Ing. habil.)
Reisewitzer Str. 47
01159 Dresden Germany
Tel.: +49 176 20949458
E-Mail: waltenegus.dargie@gmail.com

Birth date: 24 May 1969 in Neghelle Borena, Ethiopia
Citizenship: Naturalised German citizen since 2010
ORCID: <https://orcid.org/0000-0002-7911-8081>

Summary

Successfully acquired 5 German Research Foundation projects.
Since 2011, successfully supervised 7 PhDs. Two of them were women.
Additional 6 of my MSc students managed to successfully defend their PhD at different universities in Europe.
Co-authored more than 20 research articles in highly-regarded IEEE and ACM Journals and Transactions
H-index: 24; Total citation count: 3850.
Authored/co-authored two text books which are widely referenced and used as text books.

Education

- March 2010 Habilitation at the Faculty of Computer Science, Technische Universität Dresden, Germany
- Habilitation Title: Impact of Random Deployment on Operation and Data Quality of Sensor Networks
 - Supervisor: Prof. Dr. rer. nat. habil. Dr. h. c. Alexander Schill
- June 2006 PhD at the Technische Universität Dresden
- Title: A Distributed Architecture for computing Context in Mobile Devices
 - Supervisor: Prof. Dr. rer. nat. habil. Dr. h. c. Alexander Schill
- July 2002 MSc in Electrical Engineering at the Technical University of Kaiserslautern, Germany
- July 1997 BSc in Electrical and Electronics Technology, at Nazareth Technical College, Ethiopia
- July 1989 Diploma in Teaching (Electrical Technology) at Kotobe College of Teachers Education, Addis Ababa, Ethiopia

Work Experience

- Since 09/2021 Professor and Head of the Energy Lab at the Faculty of Computer Science, Technische Universität Dresden.
- 04/2010–08/2021 Associate Professor and Head of the Energy Lab at the Faculty of Computer Science, Technische Universität Dresden.
- Coordinator of Grand Research Challenges at the Faculty of Computer Science (Ref. Prof. Uwe Assmann, Dean, uwe.assmann@tu-dresden.de)
 - Member of the Examination Board for Distributed System Engineering
- 11/2005–03/2010 Researcher at the Technische Universität Dresden, Faculty of Computer Science, Chair of Computer Networks, Dresden
- 09/2000–12/2005 Researcher, University of Kassel, Department of Electrical Engineering and Computer Science
- 03/2001–03/2002 Research Assistant, Fraunhofer Institute for Experimental Software Engineering, Kaiserslautern
- 08/1997–09/2000 Lecturer, Defence Engineering College, Ethiopia
- 07/1989–08/1994 Teacher, Teppi Highschool, Ethiopia

Research Visits

- 09/2021 –08/2024 Visiting Professor at University of the Witwatersrand, Johannesburg, South Africa.
- 01-02/2011 Visiting Professor at Blaise Pascal University, France (ref.: Prof. Michel Mission, Director of the LIMOS Lab, mission@sancy.univ-bpclermont.fr)
- 02/2010 Visiting Lecturer at De Montfort University, Leicester, UK (ref.: Dr. Francois Siewe, Senior Researcher, FSiewe@dmu.ac.uk)
- 08/2009 Visiting Researcher at Loughborough University, UK (ref. Dr. Lin Guan, Senior Lecturer, L.Guan@lboro.ac.uk)
- 03/2009 Visiting Professor at Addis Ababa University, Ethiopia (ref.: Prof. Mohammed Abdo, abdo@ece.aau.edu.et)
- 05/2008 Visiting Researcher at IBM T.J. Watson Research Center, USA (ref. Dr. Johnathan M. Reason, Research Scientist, reason@us.ibm.com)

Professional Membership

- 01/2012 IEEE Senior Member
- 01/14 Journal of Computer Communications (Editorial Board Member)
- 01/12 Journal of Network and Computer Applications (Editorial Board Member)
- 01/2009 IEEE Communication Society (Member)

Research Projects

- 04/2019–03/2029 **Co-PI:** Else Kröner-Fresenius Centre for Digital Health: Else Kröner-Fresenius Stiftung (40 Million Euro Funding). Ref.: Prof. Jochen Hampe (jochen.hampe@tu-dresden.de, Prof. Uwe Assmann, uwe.assmann@tu-dresden.de)
- 05/2019–12/2021 **Principal Investigator:** SNIFFBOT: Sniffing Dangerous Gases with Immersive Robots: Sächsische Aufbaubank (1.7 Million Euro: Own share: 230,622 Euro)
- 06/2018–05/2021 **Principal Investigator:** Robust Reconstruction for Body Area Wireless Sensor Networks: German Research Foundation Grant DA 1211/7-1 (565,800 Euro)
- 03/2016–02/2018 **Principal Investigator:** A self-adaptive MAC protocol for supporting mobile nodes in wireless sensor networks: German Research Foundation Grant DA 1211/5-2 (190,000 Euro)
- 07/2015–06/2019 **Principal Investigator:** Highly Adaptive Energy-Efficient Computing – Phase II: German Research Foundation Grant (SFB 912/2, 330,000 Euro)

- 03/2014–02/2016 **Principal Investigator:** A self-adaptive MAC protocol for supporting mobile nodes in wireless sensor networks: German Research Foundation Grant DA 1211/5-1 (168,832 Euro)
- 07/2011–06/2015 **Principal Investigator:** Highly Adaptive Energy-Efficient Computing – Phase II: German Research Foundation Grant (SFB 912/1, 438,000 Euro)
- 01/2009–31/2013 **Principal Investigator:** Senceive project
- Combined grant from DAAD and Sächsische Aufbaubank for one PhD position over five years: (Dr. Qian Dong completed her PhD on Feb. 26, 2013 with this grant): 120,000 Euro
- 11/2005–10/2007 **Project Leader:** EMODE (EU Project with a total funding of 3,7 Mio Euro of which 400,401 Euro was TU Dresden’s share)

Short-Term Grant

- 2009 DFG International collaboration grant (4.600 Euro)
- 2007 Siemens AG (80,000 Euro)

PhD Supervision

- 08/2018–09/2021 Janis Lilienthal
- 12/2015–06/2019 Markus Hähnel
- 01/2014–10/2018 Jianjun Wen
- 01/2014–07/2018 Zeeshan Ansar
- 12/2011–12/2016 Kateryna Rybina
- 09/2011–12/2016 Christoph Möbius
- 01/2010–02/2013 Qian Dong

External Dissertation Review

- 12/2012 Liang Guang. Hierarchical Agent-based Adaptation for Self-Aware Embedded Computing Systems. University of Turku, Finland.
- 03/2012 Megha Bisht. Algorithms for optimal coverage in wireless sensor networks. Banasthali University, India.

External Project Review

- 2015 H2020 Project reviewer for the EU.

Teaching

SS 2021	Wireless Sensor Networks
WS 2020/2021	Prediction and Estimation Techniques
SS 2020	Wireless Sensor Networks
WS 2019/2020	Prediction and Estimation Techniques
SS 2020	Wireless Sensor Networks
WS 2019/2020	Prediction and Estimation Techniques
SS 2019	Wireless Sensor Networks
WS 2018/19	Prediction and Estimation Techniques
SS 2018	Wireless Sensor Networks
WS 2017/18	Prediction and Estimation Techniques
WS 2017/18	Mobile Communication and Computing
SS 2017	Wireless Sensor Networks
WS 2016/17	Prediction and Estimation Techniques
SS 2016	Wireless Sensor Networks
WS 2014/15	Prediction and Estimation Techniques
SS 2014	Wireless Sensor Networks
WS 2012/13	Mobile Communication and Computing
WS 2012/13	Prediction and Estimation Techniques
SS 2013	Wireless Sensor Networks
WS 2012/12	Mobile Communication and Computing
WS 2011/12	Prediction and Estimation Techniques
SS 2012	Wireless Sensor Networks
SS 2011	Wireless Sensor Networks
SS 2011	Computer Networks (Tutorial)
SS 2010	Computer Networks (Tutorial)
SS 2010	Wireless Sensor Networks
WS 2009/10	Mobile Communication and Mobile Computing
SS 2009	Computer Networks (Tutorial)
SS 2009	Wireless Sensor Networks

WS 2008/09	Wireless Sensor Networks
SS 2008	Computer Networks (Tutorial)
WS 2007/08	Wireless Sensor Networks
SS 2007	Computer Networks (Tutorial)
WS 2006/07	Wireless Sensor Networks
SS 2004	Optical Networks

Supervised Master- and Diplom Theses

1. R. Boeltzig. Modellierung Menschlicher Aktivitäten mit Hilfe von Elektrokardiogramm und Trägheitsmessungen. Oktober 2019.
2. J. Klimpke. Tensorbasierte Detektion von QRS-Komplexen im Elektrokardiogramm. Aug. 2019
3. L. Zimmermann. Untersuchung des Zusammenhangs von Bewegungs- und EKG-Signalen. Aug. 2019
4. C. Liang. A study of the impact of mobility on link quality in WSNs. Dec. 2017
5. W. He. An adaptive transmission power control algorithm for mobile WSNs. Dec. 2017
6. S. Slowik. Qualitätsverbesserung der Daten eines mobilen EKG mit Hilfe von Bewegungssensoren. Aug. 2015
7. J. Wen. Developing a stochastic link quality estimation model for supporting a seamless handover in a partially mobile wireless sensor network. Dec. 2013
8. A. Brihi. Dynamic voltage and frequency scaling in multimedia servers. Sep. 2012
9. S.K. Ejaz. Analysis of the trade-off between the performance and energy consumption of existing load balancing algorithms. Nov. 2011
10. Magenheimer, C. Mobility Estimation in Wireless Sensor Networks. Dez. 2010.
11. Epperlein, C. Qualitätsbewusste Bereitstellung von Standortinformationen durch flexible und intelligente Kombination verschiedener Ortungstechnologien. Jul. 2010
12. Tang, Z. Medium Access Control for a Wireless Sensor Network with Mobile Nodes. Feb. 2010
13. Zhang, X. Analysis of Data from Accelerometer Sensors to Reason about the 3D Movement of People and Objects. Feb. 2010

14. Qian, D. Analysis of the energy cost of control overheads at the Link Layer. Sep. 2009
15. Zimmerling, M. MAC Protocol Optimization using Constraint Programming. Aug. 2009
16. Krüger, R. Analysis of Data from Accelerometer Sensor to Model the 3D Movement of Objects. Dec. 2008
17. Wilkowski, R. Middleware for Device Integration and Cooperation. Mar. 2008
18. Mochaourab, R. Energy Efficient Topology Control Protocol for a Wireless Sensor Network with Mobile Nodes. Jan. 2008
19. Hermann, C. Senceive: Middleware for a Wireless Sensor Network. Sep. 2007
20. Chao, X. Analysis of the Energy Budget of typical fully functional Wireless sensor Networks. Sep. 2007
21. Kibrige, S. A Context-Aware Platform to Model Physical Environments with Data from Multiple Sensors. Jun. 2007
22. Zimmerling, M. Energy-Efficient Routing in Linear Wireless Sensor Networks. Apr. 2007
23. Bönisch, P. Mobile Erfassung von Dispositionsinformationen einer Werkseisenbahn in Form einer verteilten Anwendung. Apr. 2007
24. Tersch, T. Modellierung komplexer Situationen mit Akustischen Merkmalen. Apr. 2007
25. Hofmann, D. Lower-Level Context Recognition and Higher-Level Context Prediction using Audio Features. Mar. 2007
26. Wustmann, P. Ein kontextbasiertes Modell für den situationsabhängigen Einsatz von Ein- und Ausgabemodalitäten in adaptiven Benutzerschnittstellen. Sep. 2006

Publications

Books

1. W. Dargie. 2016. Principles and Applications of Ubiquitous Sensing. John Wiley & Sons. ISBN: 978-1-119-09132-5.
2. W. Dargie and C. Poellabauer. 2010. Fundamentals of Wireless Sensor Networks: Theory and Practice. John Wiley & Sons. ISBN: 978-0470997659, 2010.
3. W. Dargie. 2009 Context-Aware Computing and Self-Managing Systems. Chapman & Hall/CRC. ISBN: 978-1-42007-771-1, 2009.

Book Chapters

1. J. Wen, Z. Ansar, and W. Dargie. 2017. MobiLab: A Testbed for Evaluating Mobility Management Protocols in WSN. Testbeds and Research Infrastructures for the Development of Networks and Communities. Springer.
2. W. Dargie and F. Eichhorn. 2017. Dynamic Power Management in Data Centres. Advances in Computer Communications and Networks. River Publishers.
3. J. Lillis, L. Guan, X. Wang, A. Grigg, W. Dargie. 2009. Investigation into TCP Congestion Control Performance for a Wireless ISP. Book chapter in Springer Computer and Information Science 2009, pp. 285-294, ISBN 978-3-642-01208-2, ISSN 860949X.
4. W. Dargie. 2009. Context and Self-management. Chapman & Hall/CRC Studies in informatics Series, March 2009.

Journal Articles

1. W. Dargie. 2021. Quantification of Node Significance Based on Overall Connectivity and Relative Position. IEEE Sensors Journal 21.6 (2021): 8705-8715. 10.1109/JSEN.2021.3049550
2. J. Wen and W. Dargie. 2021. Evaluation of the Quality of Aerial Links in Low-Power Wireless Sensor Networks. IEEE Sensors Journal. 10.1109/JSEN.2021.3069298.
3. J. Wen and W. Dargie. 2021. Characterization of Link Quality Fluctuation in Mobile Wireless Sensor Networks. ACM Transactions on Cyber-Physical Systems 5.3 (2021): 1-24. 10.1145/3448737
4. W. Dargie and J. Wen. 2020. A Simple Clustering Strategy for Wireless Sensor Networks. IEEE Sensors Letters, 4(6). 10.1109/LSENS.2020.2991221

5. W. Dargie. 2019. A Quantitative Measure of Reliability for Wireless Sensor Networks. *IEEE Sensors Letters*, 3(8).
DOI: 10.1109/LSENS.2019.2931888
6. J. Martinovic, M., Haehnel, G. Scheithauer, W. Dargie, and A. Fischer. 2018. Cutting stock problems with nondeterministic item lengths: a new approach to server consolidation. *4OR-Q J Oper Res* (2018).
DOI: 10.1007/s10288-018-0384-4
7. M. Haehnel, J. Martinovic, G. Scheithauer, A. Fischer, A. Schill, and W. Dargie. 2018. Extending the Cutting Stock Problem for Consolidating Services with Stochastic Workloads. *IEEE Transactions on Parallel and Distributed Systems*, 29(11), 2018.
DOI: 10.1109/LCN.2018.8638052
8. W. Dargie. 2015. A Stochastic Model for Estimating the Power Consumption of a Processor. *IEEE Transactions on Computers*, 64(5), 2015.
DOI: 10.1109/TC.2014.2315629
9. C. Mobius, W. Dargie, A. Schill. 2014. Power Consumption Estimation Models for Processors, Virtual Machines, and Servers. *IEEE Transactions on Parallel and Distributed Systems*, 25(6), 2014.
DOI: 10.1109/TPDS.2013.183
10. Q. Dong and W. Dargie. 2012. A Survey on Mobility and Mobility-Aware MAC Protocols in Wireless Sensor Networks. *IEEE Communications Surveys & Tutorials*, 15(1), 2012.
DOI:10.1109/SURV.2012.013012.00051
11. W. Dargie. Dynamic Power Management in Wireless Sensor Networks: State-of-the-Art. *IEEE Sensor Journal*, 12(5), 2012.
DOI:10.1109/JSEN.2011.2174149
12. W. Dargie and M. K. Denko. 2010. Analysis of Error-Agnostic Time and Frequency Domain Features Extracted from Measurements of 3D Accelerometer Sensors. *IEEE Systems Journal* 4(1), 2010.
DOI:10.1109/JSYST.2009.2039735
13. W. Dargie. 2009. Adaptive Audio-Based Context Recognition. *IEEE Trans. Sys. Man Cyber. Part A* 39, 4 (Jul. 2009), 715-725.
DOI: <http://dx.doi.org/10.1109/TSMCA.2009.2015676>.
14. W. Dargie and T. Tersch. 2008. Recognition of Complex Settings by Aggregating Atomic Scenes. *IEEE Intelligent Systems* 23, 5 (Sep. 2008), 58-65.
DOI=<http://dx.doi.org/10.1109/MIS.2008.90>.
15. W. Dargie. A Medium Access Control Protocol that Supports a Seamless Handover in Wireless Sensor Networks. *Journal of Networks and Computer Applications* (Elsevier), 35(2), 2012, 778-86.
DOI:10.1016/j.jnca.2011.11.011

16. W. Dargie, R. Mochaourab, A. Schill and L. Guan. A Topology Control Protocol based on Eligibility and Efficiency Metrics. Elsevier Journal of Systems and Software. Elsevier journal of systems and software, 48(1), 2011.
DOI:10.1016/j.jss.2010.08.023
17. W. Dargie and A. Schill. 2010. Stability and Performance Analysis of Randomly Deployed Networks. Elsevier journal of computer and system science, 77(5), 2011.
DOI: 10.1016/j.jcss.2010.08.003
18. W. Dargie and A. Schill. Building an Intelligent Sensing System: A case study. International Journal of Autonomous and Adaptive Communications Systems, 5(1), 2012, 3-17.
19. W. Dargie, C. Xiaojuan, and M.K. Denko. 2009. Modelling the Energy Cost of a Fully Operational Wireless Sensor Network. Springer Journal of Telecommunication Systems. 44(1), 2010.
DOI=http://dx.doi.org/10.1007/s11235-009-9228-z.
20. L. Guan, I. Awan, M. Woodward, X. Wang, I. Phillips, and W. Dargie. 2008. Performance Analysis of Threshold Based Queue using Maximum Entropy. Elsevier journal of simulation, modelling practice and theory, 17(3): 558-568 2009.
DOC=http://dx.doi.org/10.1016/j.simpat.2008.09.006.
21. A. Behring, M. Heinrich, M. Winkler and W. Dargie. 2008. EMODE - Model-Driven Development of Multimodal, Context Sensitive Applications. Journal of communication and cooperation media, 6(3), 2008.
22. W. Dargie. 2006. Dynamic Generation of Context Rules. 2006. Lecture Notes in Computer Science, Springer Verlag, Volume 3996, Jun 2006, Pages 102 - 115.

Conference/Workshop Papers

1. W. Dargie and J. Wen. 2021. A Link Quality Estimation Model for a Joint Deployment of Unmanned Aerial Vehicles and Wireless Sensor Networks. The 30th International Conference on Computer Communications and Networks (ICCCN 2021), Athens, Greece.
2. J. Wen and W Dargie. 2020. Characterization of the Link Quality of a Coordinated Wireless Environment. The 10th International Conference on the Internet of Things, Malmö, Sweden, 5-9 October 2020.
3. J Lilienthal and W Dargie. Application of Tensor Decomposition in Removing Motion Artifacts from the Measurements of a Wireless Electrocardiogram. 23rd IEEE International Conference on Information Fusion (FUSION 2020).
4. W Dargie and J Lilienthal. 2020. Review of Motion Artifacts Removing Techniques for Wireless Electrocardiograms. 23rd IEEE International Conference on Information Fusion (FUSION 2020).

5. W. Dargie. 2019. Tensor-Based Resource Utilization Characterization in a Large-Scale Cloud Infrastructure. 12th IEEE/ACM International Conference on Utility and Cloud Computing, Auckland, New Zealand, December 2 -5, 2019.
6. W. Dargie and J. Lilienthal. 2019. Application of SVD for Removing Motion Artifacts from the Measurements of a Wireless Electrocardiogram. 22nd IEEE International Conference on Information Fusion (Fusion 2019), Ottawa, Canada, July 2-5, 2019.
7. J. Lilienthal and W. Dargie. 2019. Extraction of Motion Artifacts from the Measurements of a Wireless Electrocardiogram using Tensor Decomposition; 22nd IEEE International Conference on Information Fusion (Fusion 2019), Ottawa, Canada, July 2-5, 2019.
8. W. Dargie. 2019. Identification of Resource Utilisation Patterns in Data Centers using Tensor Decomposition. The 28th IEEE International Conference on Computer Communications and Networks (ICCCN 2019), Valencia, Spain, July 29 - August 3, 2019.
9. W. Dargie. 2019. Why Your heart Was Beating. 22nd IEEE International Conference on Information Fusion (Fusion 2019), Ottawa, Canada, July 2-5, 2019.
10. J. Wen and W. Dargie. 2018. A Handover Triggering Algorithm for Managing Mobility in WSNs. 21st International Conference on Information Fusion (FUSION), Cambridge, 2018, pp. 1646-1652.
11. W. Dargie. 2018. Motion Artefacts Modelling in the Application of a Wireless Electrocardiogram. 21st International Conference on Information Fusion (FUSION), Cambridge, 2018, pp. 239-244.
12. W. Dargie, D. Schoniger, X. An, and L. Szilagyi, R. Henker and F. Ellinger. 2017. A Highly Adaptive and Energy-Efficient Optical Interconnect for On-Board Server Communications. The 26th IEEE International Conference on Computer Communications and Networks (ICCCN 2017), July 31 -August 3, 2017, Vancouver, Canada.
13. Z. Ansar and W. Dargie. 2017. Adaptive Burst Transmission Scheme for WSNs. The 26th International Conference on Computer Communication and Networks (ICCCN), July 31 -August 3, 2017, Vancouver, Canada. doi: 10.1109/ICCCN.2017.8038493
14. F.M. Arega, and M. Haehnel and Waltenegus Dargie. 2017. Dynamic Power Management in a Heterogeneous Processor Architecture. The 30th International Conference on Architecture of Computing Systems (ARCS 2017), Vienna, Austria.
15. M. Haehnel, R. Khasanov, F.M. Arega, W. Dargie and Jeronimo Castrillon. 2017. Towards Energy-efficient Workload Management on Heterogeneous Micro-Server

Architectures. Big Data and Cloud Performance Workshop at INFOCOM 2017 (DCPerf 2017), Atlanta, Georgia.

16. J. Wen, Z. Ansar, W. Dargie. 2016. A System Architecture for Managing Complex Experiments in Wireless Sensor Networks. The 25th International Conference on Computer Communication and Networks (ICCCN 2016), August 1-4, 2016, Waikoloa, Hawaii, USA.
17. J. Wen, Z. Ansar, W. Dargie. 2016. MobiLab: A Testbed for Evaluating Mobility Management Protocols in WSN. 11th EAI International Conference on Testbeds and Research Infrastructures for the Development of Networks and Communities, June 14-15, 2016, Hangzhou, China.
18. M. Haehnel, Waltenege Dargie, Alexander Schill. 2016. Analysis of the Scope of Dynamic Power Management in Emerging Server Architectures. The 25th International Conference on Computer Communication and Networks (ICCCN 2016); IEEE; August 1-4, 2016, Waikoloa, Hawaii, USA.
19. W. Dargie, O. Alfandi, M. Badra. 2016. Dynamic and Efficient Brokering of Energy Suppliers and Consumers in a Smart Grid. The 2nd International Conference on Intelligent Green Building and Smart Grid (IGBSG 2016), Prague, Czech Republic, June 27-29, 2016; Prague, Czech Republic.
20. Z. Ansar, J. Wen, W. Dargie. 2016. Efficient Online Burst Transmission Scheme for Wireless Sensor Networks. The 25th International Conference on Computer Communication and Networks (ICCCN 2016), August 1-4, 2016, Waikoloa, Hawaii, USA.
21. Kateryna Rybina, Waltenege Dargie, Subramanya Umashankar, Alexander Schill. 2015. Modelling the Live Migration Time of Virtual Machines, OTM 2015, Rhodes, Greece.
22. Franz Eichhorn, Waltenege Dargie, Christoph Moebius, Kateryna Rybina. 2015. HAECubie: A Highly Adaptive and Energy-Efficient Computing Demonstrator, ICCCN 2015, Las Vegas, Nevada, USA, August 3-6, 2015.
23. Kateryna Rybina, Waltenege Dargie, Rene Schöne, Somayeh Malakuti. 2015. Mutual Influence of Application- and Platform-Level Adaptations on Energy-Efficient Computing, PDP 2015, March 4-6, 2015, Turku, Finland.
24. Zeeshan Ansar, Jianjun Wen, Eyuel Ayele. 2015. An Efficient Burst Transmission Scheme for Wireless Sensor Networks. MSWiM 2015, Cancun, Mexico, November 2-6, 2015.
25. Eyuel D. Ayele, Jianjun Wen, Zeeshan Ansar, and Waltenege Dargie. 2015. An Adaptive Sleep-Time Management Model for Wireless Sensor Networks. ICCCN 2015, Las Vegas, USA, August 3-6, 2016.

26. Jianjun Wen, Zeeshan Ansar, and Waltenege Dargie. 2015. A Link Quality Estimation Model for Energy-Efficient Wireless Sensor Networks. ICC 2015, .
27. Qian Dong, Waltenege Dargie, Mi Lu. 2015. Effects of Mobility on Latency in a WSN that Accommodates Mobile Nodes. WCNC 2015, New Orleans, USA, March 9-12, 2015
28. Jianjun Wen, Zeeshan Ansar, and Waltenege Dargie. 2015. A Link Quality Estimation Model for Energy-Efficient Wireless Sensor Networks. ICC 2015.
29. Qian Dong, Waltenege Dargie, and Mi Lu. 2015. Effects of Mobility on Latency in a WSN that Accommodates Mobile Nodes. IEEE Wireless Communications and Networking Conference (WCNC), March 9-12, New Orleans, LA, USA.
30. Kateryna Rybina, Waltenege Dargie, Renè Schöne, and Somayeh Malakuti. Mutual Influence of Application- and Platform-Level Adaptations on Energy-Efficient Computing. IEEE 23rd Euromicro International Conference on Parallel, Distributed, and Network-Based Processing, Turku, Finland, March 4-6, 2015.
31. W. Dargie. 2014. Estimation of the Cost of VM Migration. The 23rd International Conference on Computer Communications and Networks (ICCCN 2014), Shanghai, China August 4 - August 7, 2014.
32. W. Dargie and J. Wen. 2014. A Seamless Handover for WSN Using LMS Filter. The 39th IEEE Conference on Local Computer Networks (LCN), September 8-11, 2014, Edmonton, Canada.
33. W. Dargie and J. Wen. 2014. A MAC Protocol for Medical Applications. The 13th International Conference on Information Processing in Sensor Networks (IPSN), 15-17 April 2014, Berlin, Germany.
34. W. Dargie and J. Wen. 2014. Power-Latency Trade-offs in Virtualized Environments. The Tenth International Symposium on Frontiers of Information Systems and Network Applications (FINA 2014) - in conjunction with the 28th IEEE International Conference on Advanced Information Networking and Applications (AINA-2014), Victoria, Canada, May 13-16, 2014.
35. K. Rybina, W. Dargie, A. Strunk, and A. Schill. 2013. Investigation into the Energy Cost of Live Migration of Virtual Machines. The Third IFIP Conference on Sustainable Internet and ICT for Sustainability (SUSTAINIT 2013), October 30-31, Palermo, Italy.
36. W. Dargie and J. Wen. 2013. A stochastic model for estimating the power consumption of a processor and a NIC. The 11th IEEE International Symposium on Parallel and Distributed Processing with Applications (ISPA-13) Melbourne, Australia, 16-18 July, 2013.

37. A. Brihi and W. Dargie. 2013. Dynamic Voltage and Frequency Scaling in Multimedia servers. The 27th IEEE International Conference on Advanced Information Networking and Applications (AINA-2013), Barcelona, Spain, March 25-28, 2013.
38. A. Strunk and W. Dargie. 2013. Does Live Migration of Virtual Machines cost Energy? The 27th IEEE International Conference on Advanced Information Networking and Applications (AINA-2013), Barcelona, Spain, March 25-28, 2013.
39. Q. Dong and W. Dargie. 2013. Performance Analysis of a Handover Mechanism for a Mobile Wireless Sensor Network. The 10 Annual IEEE Consumer Communications and Networking Conference (CCNC), Las Vegas, Nevada, January 11-14, 2013.
40. W. Dargie, Eldora, J. Mendez, C. Moebius, K. Rybina, V. Thost, A.-Y. Turhan. 2013. Situation Recognition for Service Management Systems Using OWL 2 Reasoners. In Proceedings of the 10th IEEE Workshop on Context Modeling and Reasoning (CoMoRea'13); San Diego, California, 2013.
41. W. Dargie. 2012. Analysis of the Power Consumption of a Multimedia Server under Different DVFS Policies. The 5th International Conference on Cloud Computing (IEEE Cloud 2012), June 24-29 2012, Honolulu, Hawaii, USA.
42. W. Dargie and Alexander Schill. 2012. Analysis of the Power and Hardware Resource Consumption of Servers under Different Load Balancing Policies. The 5th International Conference on Cloud Computing (IEEE Cloud 2012), June 24-29 2012, Honolulu, Hawaii, USA.
43. Q. Dong and W. Dargie. 2012. Analysis of the Cost of Handover in a Mobile Wireless Sensor Network. The 10th International Conference on Wired/Wireless Internet Communications (WWIC 2012), Island of Santorini, Greece, June 6-8, 2012.
44. Q. Dong and W. Dargie. 2012. Evaluation of the reliability of RSSI for indoor localization. The third IEEE International Conference on Wireless Communications in Unusual and Confined Areas will be held in Clermont-ferrand, France, August 28th-30th, 2012.
45. W. Dargie. 2011. Why is context-aware computing less successful?. In Proceedings of the 5th ACM International Workshop on Context-Awareness for Self-Managing Systems (CASEMANS '11), Beijing, 2011.
46. F. Delobel, A. Guitton, and M. Misson, and W. Dargie. 2011. Minimization of the Diffusion Delay of a Tree-Based Wireless Sensor Network. IEEE GLOBECOM 2011. Houston, USA. December 3-7, 2011.
47. W. Dargie, A. Strunk, and A. Schill. 2011. Energy-Aware Service Execution. The 36th Annual IEEE Conference on Local Computer Networks (LCN 2011), Bonn, Germany, October 4-7, 2011.

48. F. Delobel, A. Guitton, M. Misson, and W. Dargie. 2011. Minimization of the Diffusion Delay of a Tree-Based Wireless Sensor Network. IEEE GLOBECOM 2011, Houston, Texas, December 5-9, 2011.
49. W. Dargie. 2010. Qualitative evaluation of cross-layer approaches in wireless sensor networks. ICCCN 2010. Zurich, Switzerland, August 2-5, 2010.
50. Q. Dong and W. Dargie and A. Schill. 2010. The Energy Cost of Control Packets in Hybrid MAC Protocols. The 12th IEEE International conference on high performance computing (HPCC 2010), Melbourne, Australia, September 1-3, 2010.
51. W. Dargie and Z. Tang. 2010. A Mobility-Aware Medium Access Control Protocol for Wireless Sensor Networks. The fifth IEEE international workshop on Heterogeneous, Multi-Hop, Wireless and Mobile Networks (Globecom 2010). Miami, Florida. December 6, 2010.
52. Q. Dong, W. Dargie and A. Schill. 2010. Effects of Sampling Rate on Collision Probability in Hybrid MAC Protocols in WSN. The fifth IEEE international workshop on Heterogeneous, Multi-Hop, Wireless and Mobile Networks (Globecom 2010). Miami, Florida. December 6, 2010.
53. Q. Dong and W. Dargie. 2010. Analysis of Collision Probability in Unsaturated Situation. The 25th ACM Symposium on Applied Computing. Sierre, Switzerland. March 22-26, 2010.
54. W. Dargie and A. Schill. Placement variations and their diagnosis. The 4th ACM international workshop on context-awareness for self-managing systems. Copenhagen, Denmark. September 26-29, 2010.
55. Gudymenko, W. Dargie and A. Schill. 2009. Evaluation of the Performance of Spontaneously Deployed, Independent Networks. In Proceedings of the 2009 Proceedings of 18th international Conference on Computer Communications and Networks (August 03 - 06, 2009). ICCCN. IEEE Computer Society, Washington, DC, 1-6.
DOI= <http://dx.doi.org/10.1109/ICCCN.2009.5235367>
56. W. Dargie. 2009. Analysis of Time and Frequency Domain Features of Accelerometer Measurements. In Proceedings of the 2009 Proceedings of 18th international Conference on Computer Communications and Networks (August 03 - 06, 2009). ICCCN. IEEE Computer Society, Washington, DC, 1-6.
DOI= <http://dx.doi.org/10.1109/ICCCN.2009.5235366>.
57. W. Dargie and A. Schill. 2009. Enabling Group-Awareness through Context-Based Service Provisioning. In Proceedings of the 3rd ACM international Workshop on Context-Awareness For Self-Managing Systems (Nara, Japan, May 11 - 11, 2009). Casemans '09. ACM, New York, NY, 25-30.
DOI= <http://doi.acm.org/10.1145/1538864.1538869>

58. W. Dargie and A. Schill. 2009. Building the Senceive System. In Proceedings of the 3rd ACM international Workshop on Context-Awareness For Self-Managing Systems (Nara, Japan, May 11 - 11, 2009). Casemans '09. ACM, New York, NY, 18-24.
DOI= <http://doi.acm.org/10.1145/1538864.1538868>
59. W. Dargie. 2009. A system Architecture for Dynamic Device Integration and Collaboration. Pervasive 2009-LBR. Nara, Japan, May 11-14, 2009.
60. W. Dargie, A. Schill, R. Mochaourab and L. Guan. 2009. A Topology Control Protocol for 2D Poisson Distributed Wireless Sensor Networks. In Proceedings of the 2009 international Conference on Advanced information Networking and Applications Workshops (May 26 - 29, 2009). IEEE Computer Society, Washington, DC, 582-587.
DOI= <http://dx.doi.org/10.1109/WAINA.2009.63>.
61. W. Dargie and C. Xiaojuan. 2008. Energy model for H2S Monitoring Wireless Sensor Network. In Proceedings of the 2008 11th IEEE international Conference on Computational Science and Engineering (July 16 - 18, 2008). IEEE Computer Society, Washington, DC, 402-409.
DOI= <http://dx.doi.org/10.1109/CSE.2008.33>.
62. T. Springer, P. Wustmann, I. Braun, W. Dargie, and M. Berger. 2008. A Comprehensive Approach for Situation-Awareness based on Sensing and Reasoning about Context. In Proceedings of the 5th international Conference on Ubiquitous intelligence and Computing (Oslo, Norway, June 23 - 25, 2008). F. E. Sandnes, Y. Zhang, C. Rong, L. T. Yang, and J. Ma, Eds. Springer-Verlag, Berlin, Heidelberg, 143-157.
DOI= http://dx.doi.org/10.1007/978-3-540-69293-5_13.
63. R. Mochaourab and W. Dargie. 2008. A Fair and Energy-Efficient Topology Control Protocol for Wireless Sensor Networks. In Proceedings of the 2nd ACM international Conference on Context-Awareness For Self-Managing Systems (Sydney, Australia, May 19 - 19, 2008). CASEMANS '08, vol. 281. ACM, New York, NY, 6-15.
DOI= <http://doi.acm.org/10.1145/1367943.1367944>.
64. M. Zimmerling, W. Dargie and J. Reason. 2008. Localized Power-Aware Routing in Linear Wireless Sensor Networks. In Proceedings of the 2nd ACM international Conference on Context-Awareness For Self-Managing Systems (Sydney, Australia, May 19 - 19, 2008). CASEMANS '08, vol. 281. ACM, New York, NY, 24-33.
DOI= <http://doi.acm.org/10.1145/1367943.1367946>.
65. C. Hermann and W. Dargie. 2008. Senceive: Middleware for a Wireless Sensor Network. In Proceedings of the 22nd international Conference on Advanced information Networking and Applications (March 25 - 28, 2008). IEEE Computer

Society, Washington, DC, 612-619.
DOI= <http://dx.doi.org/10.1109/AINA.2008.34>.

66. M. Winkler, M. Heinrich, A. Behring, J. Steinmetz, and W. Dargie. 2007. EMO-DE - ein Ansatz zur Werkzeugunterstützten Modellierung Multimodaler, Adaptiver Benutzerschnittstellen. Informatik 2007, Springer Verlag. 2007
67. M. Zimmerling, W. Dargie, and J. Reason. 2007. Energy-Efficient Routing in Linear Wireless Sensor Networks. The Fourth IEEE international conference on mobile ad-hoc and sensor systems, Pisa, Italy, 8-11 October, 2007.
68. W. Dargie and M. Zimmerling. 2007. Wireless Sensor Networks in the Context of Developing Countries. The 3rd IFIP world Information technology forum (WIT-FOR). Addis Ababa, Ethiopia, August 22-24, 2007.
69. W. Dargie, A. Strunck, M. Winkler, B. Mrhos, S. Thakar, and W. Enkelmann. 2007. A Model-Based approach for Developing Adaptive Multimodal Interactive Systems. 2nd international conference on software and data technologies. Barcelona, Spain, July 2007.
70. W. Dargie and T. Springer. 2007. Integrating Facts and Beliefs to Model and Reason about Context. In Proceedings of the 7th IFIP international conference on distributed applications and interoperable systems, Paphos, Cyprus, June 2007 (Springer Verlag)
71. W. Dargie. 2007. Managing Context Rules in Mobile Devices. In Proceedings of the 4th international forum on applied wearable computing, Tel Aviv, Israel, March 2007.
72. W. Dargie. 2007. The Role of Probabilistic Schemes in Multisensor Context-Awareness. In Proceedings of the Fifth IEEE international Conference on Pervasive Computing and Communications Workshops (March 19 - 23, 2007). IEEE Computer Society, Washington, DC, 27-32.
DOI= <http://dx.doi.org/10.1109/PERCOMW.2007.115>
73. W. Dargie and T. Hamann. 2006. A Distributed Architecture for Reasoning about a Higher-Level Context. In proceedings of the 2nd IEEE international conference on wireless and mobile computing, networking and communications (WiMob 2006), Montreal, Canada. IEEE Computer Society, June 2006
74. O. Drögehorn, W. Dargie, S. Haseloff, T. Löffler, S. Lun Lau, K. David. 2005. Context-Awareness in I-Centric systems - Dynamic Context Learning using a Rule-Based Approach. In proceedings of the 2005 intelligent sensors, sensor networks and information processing (ISSNIP 2005), December 5-8, Melbourne, Australia. IEEE Computer Society, 2005, pp. 211-216
75. W. Dargie, T. Loeffler, O. Drögehorn, and K. David. 2005. Composition of Reusable Higher-Level Contexts. In Proceedings of the 14th IST mobile and wireless communication summit, Dresden, Germany, June 19-23, 2005.

76. W. Dargie, T. Loeffler, O. Drögehorn, and K. David. 2005. Architecture for Higher-Level Context Composition. In proceedings of the workshop on context awareness for proactive services (CAPS 2005), Helsinki, Finland, June 16-17, 2005.
77. W. Dargie, O. Droegehorn, and K. David. 2004. Sharing Context Information in Pervasive Computing. In proceedings of the 13th IST mobile and wireless communication summit, Lyon, France, June 16-19, 2004.
78. W. Dargie and K. David. 2002. An Alternative Approach using a Photonic Mixer Device (PMD) as an Optical Detector for a High Speed LAN that employs a CDMA Infrared Link. In Proceedings of the 1st international optical group (IOG) workshop, Mannheim, Germany. September 19-21, 2002.

Edited proceedings

1. W. Dargie and A. Kumar. 2010. Proceedings of the 5th IEEE International Workshop on heterogeneous, multi-hop, wireless and mobile networks, IEEE computer society, 2010.
2. L. Guan and W. Dargie. 2010. Proceedings of the 4th IEEE International Workshop on Performance Modelling and Evaluation in Computer and Telecommunication Networks, IEEE computer society, 2010.
3. F. Siewe, N. Kuwahara and W. Dargie. 2010. Proceedings of the 4th ACM International Workshop on Context-Awareness for Self-Managing Systems. (Copenhagen, Denmark, September 26 - 29, 2010). Casemans '10. ACM, New York, NY.
4. W. Dargie and N. Kuwahara. 2009. CASEMANS 2009: the 3rd ACM International Workshop on Context-Awareness for Self-Managing Systems. In Proceedings of the 3rd ACM International Workshop on Context-Awareness for Self-Managing Systems (Nara, Japan, May 11 - 11, 2009). Casemans '09. ACM, New York, NY. DOI= <http://doi.acm.org/10.1145/1538864.1538865>
5. I. Awan, L. Guan, W. Dargie, and I. Phillips. 2009. Proceedings of the 3rd IEEE International Workshop on Performance Modelling and Evaluation in Computer and Telecommunication Networks, IEEE computer society, 2009. DOI= <http://doi.ieeeecomputersociety.org/10.1109/ICCCN.2009.5235396>
6. W. Dargie and B. Klauser. 2008. Proceedings of the 2nd International Conference on Context-Awareness and Self-Managing Systems, ACM Press, ISBN: 978-1-60558-010, May 2008.
7. N. Nasser, W. Dargie, M.K. Denko, and A.H. Zahran. 2008. Proceedings of the 2008 IEEE International Conference on Wireless & Mobile Computing, Networking & Communication (October 12 - 14, 2008). IEEE Computer Society,

Washington, DC.

DOI= <http://dx.doi.org/10.1109/WiMob.2008.127>

8. W. Dargie, T. Springer, and B. Klauser. 2007. Proceedings of the 1st International Workshop on Context-Awareness for Self-Managing Systems (Devices, Applications, and Networks), VDE Verlag, ISBN: 978-3-8007-3031-5, Berlin, 2007.

Professional Activity

Journal Editorial

1. Elsevier Journal of Computer Communications
2. Elsevier Journal of Network and Computer Applications
3. Elsevier Journal of Computer and System Sciences (Guest Editor)
4. Journal of Autonomous and Adaptive Communications Systems (Guest Editor)
5. International Journal of Embedded and Real-Time Communication Systems (Guest Editor)

Regular Journal Review (selected)

1. IEEE Transactions on Control Systems Technology
2. IEEE Transactions on Computers
3. IEEE Transactions on Circuits and Systems-Part II
4. IEEE/ACM Transactions on Networking
5. IEEE Transactions on Parallel and Distributed Systems
6. IEEE Journal of selected topics in communication
7. IEEE Transactions on System, Man, and Cybernetics, Part A
8. IEEE Transactions on Vehicular Communications
9. IEEE Communications Surveys and Tutorials
10. IEEE Systems Journal
11. IEEE Sensors Journal
12. IEEE Transactions on Education
13. Elsevier Journal of Computer Communications
14. Elsevier Journal of Networks

15. Elsevier Journal of Ad Hoc Networks
16. Elsevier Journal of Network and Computer Applications
17. Elsevier Journal of Simulation Modeling Practice and Theory
18. Elsevier Journal of Pervasive and Mobile Computing
19. Springer Journal of Mobile Communication, Computation and Information
20. Springer Journal of Telecommunication systems: Modelling, analysis, design and management

Conference and Workshop Chairing

1. ICCCN 2015: The 24th IEEE International Conference on Computer Communications and Networks, Las Vegas, USA: Track co-chair: Green Networks and Sustainable Computing
2. ICCCN 2014: The 23rd IEEE International Conference on Computer Communications and Networks, Shanghai, China, 2014: Track co-chair: Green Networks and Sustainable Computing
3. AINA 2014: The 28th IEEE International Conference on Advanced Information Networking and Applications (AINA-2014) Victoria, Canada, May 13-16, 2014: Track co-chair: Pervasive (Ubiquitous) Computing
4. AINA 2013: The 27th IEEE International Conference on Advanced Information Networking and Applications (AINA-2013) Barcelona, Spain, March 25-28, 2013: Track co-chair: Pervasive (Ubiquitous) Computing
5. HeterWMN 2012: The 7th IEEE Workshop on Heterogeneous, Multi-Hop, Wireless and Mobile Networks, Anaheim, California, December 3–7, 2012: Workshop co-chair
6. ICCCN 2011: The 20th IEEE International Conference on Computer Communications and Networks, Maui, Hawaii, July 31 - August 4, 2011: Workshop General Co-Chair
7. UIC 2011: The 8th International Conference on Ubiquitous Intelligence and Computing, Banff, Canada, September 1–4, 2011: Workshop General Co-Chair
8. Casemans 2011: The 5th ACM International Workshop on Context-Awareness on Self-Managing Systems, Beijing, China, Sept. 18, 2011: Workshop chair
9. HeterWMN 2011: The 6th IEEE Workshop on Heterogeneous, Multi-Hop, Wireless and Mobile Networks, Houston, Texas, December 9, 2010: Workshop co-chair
10. UIC 2010: The 7th International Conference on Ubiquitous Intelligence and Computing, Xi'an, China, October 26–29, 2010: Technical Program Vice Chair

11. HeterWMN 2010: The 5th IEEE Workshop on Heterogeneous, Multi-Hop, Wireless and Mobile Networks, Miami, Florida, December 6–10, 2010: Workshop co-chair
12. PMECT 2010: The 4th IEEE International Workshop on Performance Modelling and Evaluation in Computer and Telecommunication Networks , Zurich, Switzerland, August 2–6, 2010: Workshop co-chair
13. CoSDEO 2010: the 1st International Workshop on Context-Systems Design, Evaluation and Optimisation, February 23, 2010, Hannover, Germany: Workshop co-chair
14. PMECT 2009: The 3rd IEEE International Workshop on Performance Modelling and Evaluation in Computer and Telecommunication Networks, San Francisco, USA, August 2–6, 2009: Technical program co-chair
15. Casemans 2009: The 3rd ACM International Workshop on Context-Awareness on Self-Managing Systems, Nara, Japan, May 11, 2009: Workshop chair
16. HWN-RMQ 2009: The 3rd IEEE international Workshop on Heterogeneous Wireless Networks, Marrakech, Morocco, October 12–14, 2009: Workshop co-chair
17. Casemans 2007: The 2nd ACM International Workshop on Context-Awareness for Self-Managing Systems, Sedney, Australia, May 22, 2008: Workshop chair
18. HWN-RMQ 2010: The 2nd IEEE International Workshop on Heterogeneous Wireless Setwork, Avignon, France, October 12–14, 2008: Technical program co-chair
19. Casemans 2007: The International Workshop on Context-Awareness for Self-Managing Systems, Toronto, Canada, May 13, 2007: Workshop chair
20. Pervasive 2008: The 6th International Conference on Pervasive Computing, Sydney, Australia, May 19–22: Publication co-chair
21. DAIS 2007: The 7th IFIP International Conference on Distributed Applications and Interoperable Systems, Paphos, Cyprus, June 5–8, 2007: Session chair

Invited Talks (selected)

1. Mobility-Aware MAC. Computing Laboratory, Oxford University, February 17, 2010
2. Expressive Features: Analysis of Time and Frequency Domain Features to Reason about Measurements taken from Accelerometer Sensors. Advanced Telecommunication Research Institute International, Kyoto, Japan, May 14, 2009
3. Energy Model of a Fully Operational WSN. IBM T.J. Watson Research Center, New York, USA. May 12, 2008

4. Analysis of the Energy Budget of a WSN. Department of computer science, University of Loughborough, UK, August, 12, 2009
5. Reusing Self-Organising Protocols for Developing Adaptive Wireless Networks. Cisco System Inc., Zürich, Switzerland, March 10, 2008
6. Probabilistic Schemes for Modelling Everyday Situations. Siemens AG, Munich, Germany. October 4, 2006
7. Integrating Facts and Beliefs to Model and Reason about Context. Department of Computing, University of Lancaster, UK, March 13-15, 2006

Dresden, 07 May 2021