

MURAT DEMIRBAS

Computer Science and Engineering
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RESEARCH INTERESTS ◇ Distributed and networked systems, Cloud computing, Wireless sensor networks, Distributed algorithms, Fault-tolerant computing, Self-stabilization, Formal methods

EDUCATION ◇ **Post-doctorate** Sept 2004 – Aug 2005
Theory of Distributed Systems Group
MIT CSAIL, Cambridge, MA, USA
Supervisor: Prof. Nancy Lynch

◇ **Doctor of Philosophy** Aug 2004
Department of Computer Science and Engineering
The Ohio State University, Columbus, OH, USA
· Dissertation Title: “*Scalable Design of Fault-Tolerance for Wireless Sensor Networks*”
· Advisor: Prof. Anish Arora

◇ **Master of Science** March 2000
Department of Computer Science and Engineering
The Ohio State University, Columbus, OH, USA
· Thesis: “*Resettable Vector Clocks: A Case Study in Designing Graybox Fault-Tolerance*”
· Advisor: Prof. Anish Arora

◇ **Bachelor of Science** June 1997
Department of Computer Science and Engineering
Middle East Technical University, Ankara, Turkey

EMPLOYMENT HISTORY ◇ **Associate Professor** May 2011 – ongoing
Computer Science and Engineering Department
University at Buffalo, SUNY
Buffalo, NY

◇ **Assistant Professor** Aug 2005 – May 2011
Computer Science and Engineering Department
University at Buffalo, SUNY
Buffalo, NY

◇ **Post-doctoral Research Associate** Sept 2004 – Aug 2005
Theory of Distributed Systems Group
MIT CSAIL, Cambridge, MA, USA
Under the supervision of Prof. Nancy Lynch

◇ **Graduate Research Associate** Sept 1998 – Aug 2004
Department of Computer Science and Engineering
The Ohio State University, Columbus, OH, USA
Under the supervision of Prof. Anish Arora

◇ **Summer Intern** June 2001 – Sept 2001
Gryphon Project, IBM Research
IBM T.J. Watson Research Center, Hawthorne, NY, USA
Under the supervision of Dr. Robert Strom

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- AWARDS & HONORS
- ◇ **Google Research Award, 2011**
 - ◇ **Google Research Award, 2010**
 - ◇ **UB Exceptional Scholars Young Investigator Award, 2010**
 - ◇ **NSF CAREER Award, 2008** (CNS-0747209) for “An In-network Collaboration and Coordination Framework for Wireless Sensor Actor Networks”
 - ◇ **ICDCS 2002 Best Paper Award** for “Convergence Refinement”
1st place of 335 papers at the International Conference on Distributed Computing Systems (ICDCS), Vienna, Austria, July 2002.
 - ◇ **Outstanding Researcher Award** by the Department of Computer Science and Engineering at The Ohio State University, 2001-2002
 - ◇ **Full scholarship for participation in Advanced School on Mobile Computing**, Pisa, Italy, September 2003. Organized by Scuola Normale Superiore and LIST Group.
 - ◇ **Travel Awards** for attending:
 - BIRS Self-stabilization workshop, Banff, Canada, 2004
 - Advanced School on Mobile Computing, Pisa, Italy, 2003
 - Sixth Symposium on Self-Stabilizing Systems, San Francisco, USA, 2003
 - Seminar on Self-Stabilizing Systems, Luminy, France, 2002
 - International Conference on Distributed Computing Systems, Vienna, Austria, 2002
 - International Conference on Dependable Systems and Networks, Goteborg, Sweden, 2001
 - ◇ **Turkish Government Fellowship, 1998**
 - ◇ **Best Industrial Project Award for graduation project, 1997**
 - ◇ **Ranked in the top 100 among 1.4 million examinees in Nation-wide University Entrance Examinations, Turkey, 1993**

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- PROFESSIONAL MEMBERSHIPS AND ACTIVITIES
- Program committee** for 4th International Workshop on Assurance in Distributed Systems and Networks (ADSN) 2005; International Conference on Parallel and Distributed Systems (ICPADS) 2005; IEEE 20th International Conference on Advanced Information Networking and Applications (AINA) 2006; IEEE International Symposium on Ubisafe Computing 2007; 6th International Workshop on Assurance in Distributed Systems and Networks (ADSN) 2007; IEEE WoWMoM Workshop on Autonomic and Opportunistic Communications (AOC) 2007; First International Workshop on Protocols and Algorithms for Reliable and Data Intensive Sensor Networks (PARIS) 2007; 11th International Conference on Principles of Distributed Systems (OPODIS) 2007; IEEE International Conference on Communication (ICC) 2008; IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS) 2008; International Conference on Wireless Algorithms, Systems and Applications (WASA) 2008; IEEE/IFIP International Conference On Embedded and Ubiquitous Computing (EUC) 2008; 10th and 11th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS) 2008; IEEE International Conference on Communication (ICC) 2009; 10th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM) 2009; 34th IEEE Conference on Local Computer Networks (LCN) 2009; 18th International Conference on Computer Communications and Networks (ICCCN 2009); The 7th IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC-09); The Sixth International ICST Conference on Heterogeneous Networking for Quality, Reliability, Security and Robustness (QShine-09); International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS) 2009; The 25th ACM Symposium on Applied Computing (ACM-SAC-10); IEEE International Conference on Communication (ICC) 2010; The 30th International Conference on

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Distributed Computing Systems (ICDCS) 2010; IEEE International Conference on Sensor Networks, Ubiquitous, and Trustworthy Computing (SUTC) 2010; IEEE Globecom 2010; The 7th IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS) 2010; 35th IEEE Conference on Local Computer Networks (LCN) 2010; International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS) 2010; International Symposium on a World of Wireless, Mobile and Multimedia Networks (WOWMOM) 2011; International Workshop on Data Intensive Distributed Computing (DIDC) 2011; International Workshop on Data Intensive Computing in the Clouds (DataCloud) 2011

- ◇ **Journal referee for (among others):** ACM Distributed Computing, ACM Transactions on Embedded Computing Systems, ACM Transactions on Sensor Networks, Elsevier Ad Hoc Networks, Elsevier Computers and Electrical Engineering, Elsevier Theoretical Computer Science, IEEE Transactions on Parallel and Distributed Systems, IEEE Transactions on Computers, IEEE Transactions on Vehicular Technology, IEEE Communications Letters, Information Processing Letters, Journal of Parallel and Distributed Computing, Journal of Aerospace Computing, Information, and Communication, Journal of Systems and Software, SIAM Journal on Computing
- ◇ **Panel member:** Second International IEEE WoWMoM Workshop on Autonomic Communications and Computing ACC 2006, The Sixth International Workshop on Assurance in Distributed Systems and Networks (ADSN2007), Junior Faculty Panel for Future Faculty Workshop at UB 2009, Junior Faculty Panel for Future Faculty Workshop at UB 2010, Third IEEE WoWMoM Workshop on Autonomic and Opportunistic Communications 2010.

DEPARTMENTAL SERVICE **Committee member:** Graduate Studies Committee (2005-06, 2006-07, 2007-08, 2008-09, 2009-10), Graduate Admissions Committee (2005-06,2006-07,2009-10), Colloquium Committee (2006-07, 2007-08), Distinguished Speaker Committee (2009-10), Faculty Recruitment Committee (2009-10)

COURSES TAUGHT ◇ **CSE 646:** Wireless Networking & Mobile Computing (*Fall 2009, Fall 2008, Spring 2008, Fall 2006, Fall 2005*) with classes of around 20 students.
◇ **CSE 4/586:** Distributed Systems (*Spring 2010, Spring 2009*) with classes of 60 students.
◇ **CSE 4/589:** Modern Networking Concepts (*Fall 2007*) with a class of 120 students.
◇ **CSE 703 (earlier called 719):** Seminar on Wireless Sensor Networks (*Spring 2010, Fall 2009, Fall 2008, Fall 2007, Spring 2007, Spring 2006*) with classes of around 20 students.
◇ **UE141:** Discovery Seminar on iPhone Programming (*Fall 2009*), Discovery Seminar on Wireless Sensor Networks (*Fall 2007*)

PH.D. SUPERVISION ◇ **Xuming Lu:** *In-network querying and tracking for wireless sensor networks*, graduated Spring 09, working at Bloomberg Inc.
◇ **Murat Ali Bayir:** *Enabling location aware smartphone applications via mobility profiling*, (RA supported by ONR grant), graduated Summer 08, accepted a research scientist position at Ask.com
◇ **Onur Soysal:** *A distributed algorithms approach for improving reliability and energy efficiency in wireless sensor networks*, (RA supported by NSF CAREER grant), graduating Summer 10, accepted a position at Google Inc.
◇ **Ismail Bahadir Aydin:** (RA supported by ONR grant)
◇ **Hanifi Gunes:** (RA supported by ONR grant)
◇ **Yavuz Selim Yilmaz:** (TA)
◇ **Zuhale Tepecik:** (Government sponsored),
◇ **Serafettin Tasci:** (RA supported by NSF CSR grant),

- ◇ **Fatih Bulut:** (RA supported by NSF CAREER grant),
 - ◇ **Ismail Alan:** (Government sponsored)
- M.S. THESIS ◇ **Cuneyt Gurcan Akcora:** *Crowdsourced sensing and opinion mining using Twitter*, graduating Summer 10, accepted a PhD position in Italy.
- ◇ **Srivats Balachandran:** *Robcast: A reliable MAC layer protocol for broadcast in wireless sensor networks*, graduated Spring 08, working at Microsoft.
- M.S. PROJECT ◇ **M.S. project from CSE646 Wireless Sensor Networks:** Ken Yian Chow, Abhijeet More, Krishnan Narayanan, Brian Parfitt, Pradeep Phatak, Youngwhan Song, ChiehShyan Wan, and many many more ...
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- GRANT SUPPORT
- ◇ **An In-network Collaboration and Coordination Framework for Wireless Sensor Actor Networks**
 PI: Murat Demirbas
 NSF CAREER Award, 2008, (CNS-0747209)
 \$450,000 from 2008-2013
 - ◇ **Efficient and resilient querying and tracking services for wireless sensor networks**
 PI: Murat Demirbas
 Office of Naval Research, 2009
 \$510,000 from 2009-2012
 - ◇ **Tool-Support for Producing High-Assurance and Reliable Software for Wireless Sensor Actor Networks**
 PI: Murat Demirbas and coPI: Sandeep Kulkarni
 NSF CSR
 \$500,000 from 2009-2012.
 - ◇ **Crowdsourced sensing and collaboration using Twitter**
 PI: Murat Demirbas
 Google Research Award
 \$50,000 in 2010.
 - ◇ **1R21ES017826: Use of cellphone-based time-activity data for air pollutant exposure estimation**
 co-Investigator: Murat Demirbas
 NIH/NIEHS, \$330,000 from 10/1/10 to 9/30/12.
 - ◇ **PhoneLab: A Participatory Smartphone Cloud Testbed**
 CoPIs: Geoffrey Challen, Murat Demirbas, Steve Ko, Tevfik Kosar
 Google Research Award
 \$50,000 in 2011.
 - ◇ **Two-Rank Mobile Robot Fleet for Swarm Surveillance, Warfighter Assistance and other Army-related Research and Research-Related Education**
 CoPIs: Jason Corso, Murat Demirbas, Raymond Fu, Venkat Krovi, Rakesh Nagi
 Army Research Office DURIP program \$290,000 in 2011.
 - ◇ **Research Experiences for Undergraduates**
 PI: Murat Demirbas
 \$10,000 from 2008-2009
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- REFEREED BOOK CHAPTERS ◇ **1. Pursuer-Evader Tracking in Sensor Networks**
 M. Demirbas, A. Arora, and M. Gouda
 Sensor Network Operations, IEEE Press, Chapter 9, April 2006. (Cited by 12) (Conference version is cited by 60)
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- ◇ **1. A Line in the Sand: A Wireless Sensor Network for Target Detection, Classification, and Tracking**
A. Arora, P. Dutta, S. Bapat, V. Kulathumani, H. Zhang, V. Naik, V. Mittal, H. Cao, M. Demirbas, M. Gouda, Y. Choi, T. Herman, S. Kulkarni, U. Arumugam, M. Nesterenko, A. Vora, and M. Miyashita
Computer Networks (*Elsevier*), Volume 46, Issue 5, pages 605–634, December 2004. (cited by **348**)
- ◇ **2. Resettable Vector Clocks**
A. Arora, S. S. Kulkarni, and M. Demirbas
Journal of Parallel and Distributed Computing (JPDC), Volume 66, Issue 2, pages 221–237, February 2006. (cited by **25**)
- ◇ **3. A Fault-Local Self-Stabilizing Clustering Service for Wireless Ad Hoc Networks**
M. Demirbas, A. Arora, V. Mittal, V. Kulathumani
IEEE Transactions on Parallel and Distributed Systems, Special Issue on Localized Communication and Topology Protocols for Ad Hoc Networks, Volume 17, Issue 9, Pages 912–923, September 2006. (cited by **14**, conference version cited by **16**, workshop version cited by **36**)
- ◇ **4. The Impact of Data Aggregation on the Performance of Wireless Sensor Networks**
K. Akkaya, M. Demirbas, and S. Aygun
Journal of Wireless Communications and Mobile Computing, 8(2): 171-193, 2008. (cited by **9**)
- ◇ **5. An In-Network Querying Framework for Wireless Sensor Networks**
M. Demirbas, X. Lu*, P. Singla.
IEEE Transactions on Parallel and Distributed Systems, 99(1), 2008. (cited by **5**, conference version cited by **9**)
- ◇ **6. A Lightweight Querying Service for Wireless Sensor Networks**
M. Demirbas, A. Arora, V. Kulathumani.
Theoretical Computer Science Journal, Elsevier, 410(6-7): 500-513, 2009. (cited by **3**)
- ◇ **7. Consensus and collision detectors in radio networks**
G. Chockler, M. Demirbas, S. Gilbert, N. Lynch, C. Newport, and T. Nolte.
Distributed Computing (Springer), 21(1): 55–84, 2008. (cited by **16**, conference version cited by **55**)
- ◇ **8. Trail: A Distance-Sensitive Network Service for Distributed Object Tracking**
V. Kulathumani, A. Arora, M. Demirbas, M. Sridharan.
ACM Transactions on Sensor Networks (TOSN), 5(2): 1–40, 2009. (cited by **2**, conference version cited by **11**)
- ◇ **9. ABC: A Simple Geographic Forwarding Scheme Capable of Bypassing Routing Holes in Sensor Networks**
TK. Lee, C. Qiao, M. Demirbas, J. Xu.
Ad Hoc Networks, Elsevier, 8(4), 361-377, 2010.
- ◇ **10. Coordinated Locomotion and Monitoring using Autonomous Mobile Sensor Nodes**
SK Yoon, O. Soysal*, M. Demirbas, C. Qiao
To appear at the IEEE Transactions on Parallel and Distributed Systems.
- ◇ **11. A Lightweight Soft-State Tracking Framework for Dense Mobile Ad Hoc Networks**
X. Lu*, M. Demirbas.
To appear at the Elsevier Pervasive and Mobile Computing Journal.

- ◇ **12. Discovering SpatioTemporal Mobility Profiles of Cellphone Users**
M. A. Bayir*, M. Demirbas, N. Eagle.
To appear at the Elsevier Pervasive and Mobile Computing Journal, Special Issue on Human Behaviour in Ubiquitous Environments. (conference version cited by 6)
- ◇ **13. A Web Based Personalized Mobility Service for Smartphone Applications**
M. A. Bayir*, M. Demirbas, A. Cosar.
To appear at The Computer Journal.
- ◇ **14. ABC-MC: A New Multi-Channel Geographic Forwarding Scheme for Wireless Sensor Networks**
TK. Lee, C. Qiao, M. Demirbas, J. Xu.
To appear at Ad Hoc Networks, Elsevier.
- ◇ **15. Model-based Tracking for Mobile Ad Hoc Networks**
X. Lu*, M. Demirbas.
To appear at the International Journal Network Protocols and Algorithms.
- ◇ **16. A survey on in-network querying and tracking services for wireless sensor networks.**
Z. Can*, M. Demirbas.
Under submission to Elsevier Ad Hoc Networks.

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- REFEREED CONFERENCE PAPERS
- ◇ **1. Investigation of querying techniques for federated sensor networks**
M. Demirbas, Z. Can*.
IWCMC, pages 2034-2039, 2011.
 - ◇ **2. Optimistic Concurrency Control for multihop sensor networks**
O. Soysal*, B. I. Aydin*, M. Demirbas.
IWCMC, pages 89-94, 2011.
 - ◇ **3. PowerNap: An Energy Efficient MAC Layer for Random Routing in Wireless Sensor Networks**
O. Soysal*, S. Ayyorgun, M. Demirbas.
8th IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON), 2011.
 - ◇ **4. Singlehop Collaborative Feedback Primitives for Threshold Querying in Wireless Sensor Networks**
M. Demirbas, S. Tasci*, H. Gunes*, A. Rudra.
25th IEEE International Parallel & Distributed Processing Symposium, 2011. (acceptance ratio = **20%**)
 - ◇ **5. Slow is Fast for Wireless Sensor Networks in the presence of Message Losses**
M. Arumugam, M. Demirbas, S. Kulkarni.
The 12th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS), 2010.
 - ◇ **6. PRO: A Profile Based Routing Algorithm for Pocket Switched Networks**
M.A. Bayir* and M. Demirbas.
IEEE Global Communications Conference (Globecom), 2010.
 - ◇ **7. Data Spider: A Resilient Mobile Basestation Protocol for Efficient Data Collection in Wireless Sensor Networks.**
O. Soysal*, M. Demirbas.
The 6th IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS), 2010. (acceptance ratio = **29%** for the algorithms track)
 - ◇ **8. Crowd-sourced Sensing and Collaboration Using Twitter.**
M. Demirbas, M.A. Bayir*, C.G. Akcora*, Y. Yilmaz*, H. Ferhatosmanoglu.

⁰* denotes co-author was Murat's student when the work was done.

- 11th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM), 2010. (acceptance ratio = **21%**)
- ◇ **9. A Holistic Solution to the Pursuer Evader Tracking Problem.**
X. Lu*, M. Demirbas, C. Qiao.
The 28th IEEE Symposium on Reliable Distributed Systems (SRDS), Sept 2009. (acceptance ratio = **22%**)
 - ◇ **10. TRACK ME! A Web Based Location Tracking and Analysis System for Smartphone Users**
M. A. Bayir*, M. Demirbas, A. Cosar.
24th International Symposium on Computer and Information Sciences (ISCIS), Sept 2009.
 - ◇ **11. Discovering SpatioTemporal Mobility Profiles of Cellphone Users**
M. A. Bayir*, M. Demirbas, N. Eagle.
The 10th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WOWMOM), June 2009. (acceptance ratio = **24%**)
 - ◇ **12. A Plant-and-Play Wireless Sensor Network System for Gate Monitoring**
R. Sudhaakar, A. Sanzgiri*, M. Demirbas, C. Qiao.
The 10th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WOWMOM), June 2009. (acceptance ratio = **24%**)
 - ◇ **13. An Application of Specification-Based Design of Self-stabilization to Tracking in Wireless Sensor Networks**
M. Demirbas, A. Arora.
The 10th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS), pages 203-217, Nov 2008. (acceptance ratio < **30%**)
 - ◇ **14. A Lightweight Tracking Framework for Mobile Ad Hoc Networks**
X. Lu*, M. Demirbas.
The 5th IEEE International Conference on Mobile Ad Hoc and Sensor Systems (MASS), pages 359-364, Sept 2008. (acceptance ratio = **13%**)
 - ◇ **15. ABC: A Novel Integrated MAC and Routing Protocol for Wireless Ad Hoc Networks**
TK. Lee, C. Qiao, M. Demirbas, J. Xu.
17th IEEE International Conference on Computer Communications and Networks (ICCCN), Aug 2008. (acceptance ratio < **26%**)
 - ◇ **16. Coordinated Locomotion of Mobile Sensor Networks**
SK Yoon, O. Soysal*, M. Demirbas, C. Qiao
Fifth Annual IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON), pages 126-134, June 2008. (acceptance ratio = **21%**)
 - ◇ **17. Transact: A Transactional Programming Framework for Wireless Sensor/Actor Networks**
M. Demirbas, O. Soysal*, M. Hussain*
IEEE/ACM International Conference on Information Processing in Sensor Networks (IPSN), 295-306, April 2008. (acceptance ratio = **19%**)
 - ◇ **18. Singlehop Collaborative Feedback Primitives for Wireless Sensor Networks**
M. Demirbas, O. Soysal*, M. Hussain*.
IEEE INFOCOM 2008, pages 2047-2055. (acceptance ratio = **29%**) (cited by 10)
 - ◇ **19. Data Salmon: A Greedy Mobile Basestation Protocol for Efficient Data Collection in Wireless Sensor Networks**
M. Demirbas, O. Soysal*, and A. S. Tosun.
IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS), pages 267-280, June 2007. (acceptance ratio < **27%**) (cited by 8)
 - ◇ **20. Distributed Quad-Trees for Spatial Querying in Wireless Sensor Networks**
M. Demirbas, X. Lu*.

- IEEE International Conference on Communication (ICC), pages 3325–3332, June 2007. (Acceptance rate < **30%**) (Cited by **9**)
- ◇ **21. Trail: A Distance-Sensitive Network Service for Distributed Object Tracking**
V. Kulathumani, A. Arora, M. Demirbas, M. Sridharan.
European conference on Wireless Sensor Networks (EWSN), pages 83–100, January 2007. (acceptance ratio = **13%**) (cited by **11**)
 - ◇ **22. A Lightweight Querying Service for Wireless Sensor Networks**
M. Demirbas, A. Arora, V. Kulathumani.
International Conference on Principles of Distributed Systems (OPODIS), pages 242–257, December 2006. (acceptance rate = **13%**) (cited by **3**)
 - ◇ **23. A MAC Layer Protocol for Priority-based Reliable Multicast in Wireless Ad Hoc Networks**
M. Demirbas and M. Hussain*
Broadband Wireless Networking Symposium (BroadNets), October 2006. (cited by **4**)
 - ◇ **24. Consensus and Collision Detectors in Wireless Ad Hoc Networks**
G. Chockler, M. Demirbas, S. Gilbert, C. Newport, and T. Nolte
ACM Symposium on Principles of Distributed Computing (PODC), pages 197–206, July 2005. (acceptance ratio=**23%**) (cited by **55**)
 - ◇ **25. A Hierarchy-based Fault-local Stabilizing Algorithm for Tracking in Sensor Networks**
M. Demirbas, A. Arora, T. Nolte, and N. Lynch
International Conference on Principles of Distributed Systems (OPODIS), pages 299–315, December 2004. (acceptance ratio < **30%**) (cited by **35**, brief announcement version cited by **10**)
 - ◇ **26. Design and Analysis of a Fast Local Clustering Service for Wireless Sensor Networks**
M. Demirbas, A. Arora, V. Mittal, and V. Kulathumani
Invited paper at Broadband Wireless Networking Symposium (BroadNets), pages 700–709, October 2004. (acceptance rate < 30%) (cited by **16**, workshop version cited by **36**)
 - ◇ **27. Peer-to-Peer Spatial Queries in Sensor Networks**
M. Demirbas and H. Ferhatosmanoglu
IEEE International Conference on Peer-to-Peer Computing (P2P), pages 32–39, September 2003. (cited by **93**)
 - ◇ **28. A Pursuer-Evader Game for Sensor Networks**
M. Demirbas, A. Arora, and M. Gouda
Symposium on Self-Stabilizing Systems (SSS), pages 1–16, June 2003. (cited by **60**)
 - ◇ **29. Introducing Middle School Girls to Fault Tolerant Computing**
P. A. G. Sivilotti and M. Demirbas
Technical Symposium on Computer Science Education (SIGCSE), pages 327–331, February 2003. (cited by **6**)
 - ◇ **30. Convergence Refinement**
M. Demirbas and A. Arora
Best paper at International Conference on Distributed Computing Systems (ICDCS), pages 589–597, July 2002. (acceptance ratio=**18%**) (cited by **16**)
 - ◇ **31. Graybox Stabilization**
A. Arora, M. Demirbas, and S. S. Kulkarni
International Conference on Dependable Systems and Networks (ICDSN), pages 389–400, July 2001. (acceptance ratio=**35%**) (cited by **14**)
 - ◇ **32. Resettable Vector Clocks**
A. Arora, S. S. Kulkarni, and M. Demirbas

ACM Symposium on Principles of Distributed Computing (PODC), pages 269-278, July 2000. (acceptance rate= **27%**) (cited by **25**)

REFEREED
WORKSHOP
PAPERS

- ◇ **1. Crowdsourcing Location-based Queries.** M. F. Bulut, Y. S. Yilmaz, M. Demirbas. *Second IEEE Workshop on Pervasive Collaboration and Social Networking (PerCol)*, (in conjunction with IEEE PERCOM), 2011.
- ◇ **2. k+ Decision Trees.** J. Aspnes, E. Blais, M. Demirbas, R. O'Donnell, A. Rudra, S. Uurtamo. *International Workshop on Algorithms for Sensor Systems, Wireless Ad Hoc Networks and Autonomous Mobile Entities*, 2010
- ◇ **3. Identifying Breakpoints in Public Opinion.** C. G. Akcora*, M. A. Bayir*, M. Demirbas, H. Ferhatosmanoglu. *Workshop on Social Media Analytics 2010*, [Held in conjunction with The 16th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD 2010)]
- ◇ **4. Short Text Classification in Twitter to Improve Information Filtering.** B. Sriram, D. Fuhry, E. Demir, H. Ferhatosmanoglu, M. Demirbas. *Poster Session in the 33rd ACM SIGIR Conference 2010*.
- ◇ **5. iMAP: Indirect Measurement of Air Pollution with Cellphones.** M. Demirbas, C. Rudra, A. Rudra, M. A. Bayir* *International Workshop on Information Quality and Quality of Service for Pervasive Computing (in conjunction with IEEE PERCOM)*, March 2009
- ◇ **6. RoBcast: A Singlehop Reliable Broadcast Protocol for Wireless Sensor Networks** M. Demirbas, S. Balakrishnan* *International Workshop on Assurance in Distributed Systems and Networks*, June 2007.
- ◇ **7. A Transactional Framework for Programming Wireless Sensor/Actor Networks** M. Demirbas *Future Trends of Distributed Computing Systems (FTDCS)*, March 2007.
- ◇ **8. Position paper: High-Confidence Software Platforms for Cyber-Physical Systems** T. Herman and M. Demirbas *High-Confidence Software Platforms for Cyber-Physical Systems (HCSP-CPS) Workshop*, November 2006.
- ◇ **9. A MAC Layer Protocol for Priority-based Reliable Broadcast in Wireless Ad Hoc Networks** M. Demirbas and M. Hussain* *IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WOWMOM)*, Buffalo, NY, pages 447-449, June 2006.
- ◇ **10. An RSSI-based Scheme for Sybil Attack Detection in Wireless Sensor Networks** M. Demirbas and Y.W. Song* *Advanced EXPerimental activities ON WIRELESS networks and systems (EXPONWIRELESS) Workshop (as part of WOWMOM 2006)*, Buffalo, NY, pages 564-570, June 2006. (cited by **60**)
- ◇ **11. INSIGHT: Internet-Sensor Integration for Habitat Monitoring** M. Demirbas, K.Y. Chow*, and C.S. Wan* *Advanced EXPerimental activities ON WIRELESS networks and systems (EXPONWIRELESS) Workshop (as part of WOWMOM 2006)*, Buffalo, NY, pages 553-558, June 2006. (cited by **16**)
- ◇ **12. A Middleware Framework for Robust Applications in Wireless Ad Hoc Networks** G. Chockler, M. Demirbas, S. Gilbert, and C. Newport *Forty-third Annual Allerton Conference on Communication, Control, and Computing*, September 2005. (cited by **20**)

- ◇ **13. Reconciling the Theory and Practice of (Un)Reliable Wireless Broadcast**
G. Chockler, M. Demirbas, S. Gilbert, N. Lynch, C. Newport, and T. Nolte
International Workshop on Assurance in Distributed Systems and Networks, pages 42–48,
June 2005. (cited by **18**)
- ◇ **15. Brief announcement: STALK: A Self-Stabilizing Hierarchical Tracking Service for Sensor Networks**
M. Demirbas, A. Arora, T. Nolte, and N. Lynch
ACM Symposium on Principles of Distributed Computing (PODC), page 378, July 2004.
(cited by **10**)
- ◇ **16. FLOC: A Fast Local Clustering Service for Wireless Sensor Networks**
M. Demirbas, A. Arora, and V. Mittal
Workshop on Dependability Issues in Wireless Ad Hoc Networks and Sensor Networks (DI-
WANS/DSN), June 2004. (cited by **36**)

INVITED
TALKS

-
- ◇ University of Illinois at Urbana-Champaign, Illinois Center for Wireless Systems Seminar Series, August 2010.
Singlehop Coordination and Collaboration Primitives for WSANs
 - ◇ Workshop on Mobility in Wireless Sensor Networks (MobiSensors), June 2010
Employing the smartphone (and the smart human) for mobile sensing
 - ◇ Keynote at the Third IEEE WoWMoM Workshop on Autonomic and Opportunistic Communications, June 2010
Employing the smartphone (and the smart human) for mobile sensing
 - ◇ Cornell University, Cornell Systems Lunch, May 2010
Singlehop Coordination and Collaboration Primitives for WSANs
 - ◇ Harvard University, Sensor Networks Lab, April 2010
Singlehop Coordination and Collaboration Primitives for WSANs
 - ◇ MIT, CSAIL, Theory of Distributed Systems Seminar, April 2010
Singlehop Coordination and Collaboration Primitives for WSANs
 - ◇ University of Texas at San Antonio, CS Seminar Series, November 2007
A Transactional Programming Framework for Wireless Sensor/Actor Networks
 - ◇ University of Vermont, CSSA Seminar Series, Burlington, VT, April 2007
A Transactional Programming Framework for Wireless Sensor/Actor Networks
 - ◇ US Japan Next Generation Buildings Workshop, Honolulu, HI, Feb 2007
Wireless Sensor Networks for Monitoring Next Generation Buildings
 - ◇ Los Alamos National Labs, Los Alamos, NM, Sept 2006
Scalable Self-Healing in Wireless Sensor Networks
 - ◇ Middle East Technical University, Computer Science & Engineering Department, Ankara, Turkey, May 2006
Scalable Tracking and Querying in Wireless Sensor Networks
 - ◇ Bilkent University, Computer Science & Engineering Department, Ankara, Turkey, May 2006
Scalable Tracking and Querying in Wireless Sensor Networks

CONFERENCE
PRESENTA-
TIONS &
ATTENDANCE

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- ◇ IEEE Workshop on Pervasive Collaboration and Social Networking (PerCol), Seattle, WA, March 2011.
 - ◇ 12th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS), New York, NY, Sept 2010.
 - ◇ IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS) Santa Barbara, CA, June 2010.

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- ◇ The 11th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WOWMOM), Montreal, Canada, June 2010.
- ◇ The 28th IEEE Symposium on Reliable Distributed Systems (SRDS), Buffalo, NY, Sept 2009.
- ◇ The 10th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WOWMOM), Kos, Greece, June 2009.
- ◇ The 10th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS), Detroit, MI, Nov 2008.
- ◇ ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN) St. Louis, MI, April 2008.
- ◇ IEEE Infocom, Phoenix, AZ, April 2008.
- ◇ The Sixth International Workshop on Assurance in Distributed Systems and Networks (ADSN) (in conjunction with ICDCS) Toronto, CA, June 2007.
- ◇ IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS) Santa Fe, NM, June 2007.
- ◇ Future Trends of Distributed Computing Systems (FTDCS) Sedona, AZ, March 2007.
- ◇ International Conference on Principles of Distributed Systems (OPODIS) Bordeaux, France, December 2006.
- ◇ High-Confidence Software Platforms for Cyber-Physical Systems (HCSP-CPS) Workshop Washington, DC, November 2006.
- ◇ Broadband Wireless Networking Symposium (BroadNets) San Jose, CA, October 2006.
- ◇ IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks Buffalo, NY, June 2006.
- ◇ Joint Workshop on Cyber Security Buffalo, NY, March 2006.
- ◇ Networking of Sensor Systems (NOSS) Informational Meeting Boston, MA, October 2005.
- ◇ International Conference on Distributed Computing Systems (ICDCS) Columbus, OH, June 2005.
- ◇ Broadband Wireless Networking Symposium (BroadNets) San Jose, CA, October 2004.
- ◇ Third IEEE International Conference on Peer-to-Peer Computing (P2P) Linkoping, Sweden, September 2003.
- ◇ Sixth Symposium on Self-Stabilizing Systems (SSS) San Francisco, CA, June 2003
- ◇ Seminar on Self-Stabilizing Systems (Invited presentation) Luminy, France, October 2002
- ◇ Network Embedded Systems Technology Meeting (DARPA) Bar Harbor, ME, July 2002
- ◇ International Conference on Distributed Computing Systems (ICDCS) Vienna, Austria, July 2002
- ◇ International Parallel and Distributed Processing Symposium (IPDPS) Fort Lauderdale, FL, April 2002

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- ◇ International Conference on Dependable Systems and Networks (ICDSN)
Goteborg, Sweden, July 2001
- ◇ Network Embedded Systems Technology Meeting (DARPA)
Napa, CA, June 2001
- ◇ ACM Symposium on Principles of Distributed Computing (PODC)
Portland, OR, July 2000