

Kemal Akkaya

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RESEARCH INTERESTS ◇ Wireless Ad Hoc & Sensor Networks, Wireless Network Security, Smart Grid, Quality of Service, Energy-aware Routing, Topology Control, Ubiquitous Computing

EDUCATION ◇ **Doctor of Philosophy** May 2005
Department of Computer Science & Electrical Engineering
University of Maryland, Baltimore County (UMBC), Baltimore, MD, USA

◇ **Master of Science** June 1999
Department of Computer Science and Engineering
Middle East Technical University (METU), Ankara, Turkey

◇ **Bachelor of Science** June 1997
Department of Computer Engineering and Information Sciences
Bilkent University, Ankara, Turkey

EMPLOYMENT HISTORY ◇ **Associate Professor** Aug 2011 – on going
Department of Computer Science
Southern Illinois University Carbondale (SIUC)
Carbondale, IL

◇ **Assistant Professor** Aug 2005 – July 2011
Department of Computer Science
Southern Illinois University Carbondale (SIUC)
Carbondale, IL

◇ **Graduate Teaching Assistant** Aug. 2003 – May 2005
Department of Computer Science
University of Maryland Baltimore County, Baltimore, MD, USA

◇ **Graduate Research Assistant** Jan. 2002 – Aug. 2003
Department of Computer Science
University of Maryland Baltimore County, Baltimore, MD, USA

◇ **Research Assistant & Developer** Aug. 2000 – Dec. 2001
Maryland Center for Telecommunications Research (MCTR)
University of Maryland Baltimore County, Baltimore, MD, USA

- ◇ **Software Technical Application Systems Developer** Dec. 1999 – July 2000
Automation of Local Labor Offices for Turkish Employment Organization
CyberSoft Ltd., Ankara, Turkey
- ◇ **Graduate Teaching Assistant** Sept. 1997 – Dec. 2000
Department of Computer Science and Engineering
Middle East Technical University (METU), Ankara, Turkey

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- REFEREED BOOK CHAPTERS
- ◇ **1.** M. Younis, K. Akkaya and Moustafa Youssef “Efficient Handling of QoS Traffic in Wireless Sensor Networks”, *Book Chapter, Encyclopedia on Ad Hoc and Ubiquitous Computing*, Ed. Dharma P Agrawal and Bin Xie, World Scientific, pp. 257-281, Sept. 2009.
 - ◇ **2.** M. Younis and K. Akkaya “Node Positioning for Increased Dependability of Wireless Sensor Networks”, *Book Chapter, Algorithms and Protocols for Wireless Sensor Networks*, Ed. A. Boukerche, Wiley & Sons, New Jersey, pp. 225-266, 2008.
 - ◇ **3.** K. Akkaya and I. Ari, “In-network Data Aggregation in Wireless Sensor Networks”, *Book Chapter, Handbook of Computer Networks*, Ed. H. Bidgoli, John Wiley & Sons, Vol. 2, 2007, pp. 1131-1146.
 - ◇ **4.** A. Yazici and K. Akkaya, “Conceptual Design of GIS (Geographic Information Systems) applications”, *Book Chapter, Recent Research Issues on the Management of Fuzziness in Databases*, edited by G. Bordogna and G. Pasi, Physica- Verlag, Heidelberg and New York, 2000.

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- REFEREED JOURNAL PAPERS
- ◇ **1.** S. Uludag, T. Imboden, and K. Akkaya, “A taxonomy and evaluation for developing 802.11-based wireless mesh network testbeds”, *International Journal of Communication Systems* (to appear).
 - ◇ **2.** M. Riley, K. Akkaya and K. Fong, “A Group-based Hybrid Authentication Scheme for Cooperative Collision Warnings in VANETs”, *Wiley Security and Communication Networks Journal*, Vol. 4, No. 12, 1469 - 1482, 2011.
 - ◇ **3.** M. Riley, K. Akkaya and K. Fong, “A Survey of Authentication Schemes for Vehicular Ad Hoc Networks”, *Wiley Security and Communication Networks Journal*, Vol. 4, No. 10, 1137 - 1152, 2011.
 - ◇ **4.** F. Senel, M. Younis and K. Akkaya, “Bio-inspired Relay Node Placement Heuristics for Repairing Damaged Wireless Sensor Networks”, *IEEE Transactions on Vehicular Technology*, Vol. 60, No. 4, 1835 - 1848, 2011.
 - ◇ **5.** A. Newell and K. Akkaya, “Distributed Collaborative Camera Actuation for Redundant Data Elimination in Wireless Multimedia Sensor Networks”, *Elsevier Ad Hoc Networks Journal Special Issue on Wireless Multimedia Sensor Networks* (to appear).
 - ◇ **6.** R. S. Aygun, Y. Ma, K. Akkaya, G. Cox and A. Bicap, “A Conceptual Model for Data Management and Distribution in Peer-to-Peer Systems”, *Springer Peer-to-Peer Networking and Applications Journal* Vol. 3, No. 4, pp. 294-322, 2010.

- ◇ 7. K. Akkaya, I. Guneydas and A. Bicak, "Autonomous Actor Positioning in Wireless Sensor and Actor Networks using Stable-Matching", *International Journal of Parallel, Emergent and Distributed Systems (IJPEDS)* Vol. 25, No. 6, pp. 439 - 464, 2010.
- ◇ 8. K. Akkaya, F. Senel, A. Thimmapuram and S. Uludag, "Distributed Recovery from Network Partitioning in Movable Sensor/Actor Networks via Controlled Mobility", *IEEE Transactions on Computers*, Vol. 59, No. 2, pp. 258 - 271, 2010. **(Cited by 19)**
- ◇ 9. 5. W. Zhang, Y. Liu and K. Akkaya, "Static Worst-Case Energy and Lifetime Estimation of Wireless Sensor Networks", *Journal of Computing Science and Engineering (JCSE)*, Vol. 4. No. 2, 2010.
- ◇ 10. A. Abbasi, M. Younis and K. Akkaya, "Movement Assisted Connectivity Restoration in Wireless Sensor and Actor Networks", *IEEE Transactions on Parallel and Distributed Systems*, Vol. 20, No. 9, 2009, pp.1366-1379. **(Cited by 29)**
- ◇ 11. K. Akkaya and A. Newell, "Self-deployment of sensors for maximized coverage in underwater acoustic sensor networks", *Elsevier Computer Communications Journal*, vol. 32, no. 7, 2009, pp. 1233-1244. **(Cited by 14)**
- ◇ 12. K. Akkaya, F. Senel and B. Mclaughlan, "Clustering of Wireless Sensor and Actor Networks based on Sensor Distribution and Connectivity", *Elsevier Journal of Parallel and Distributed Computing*, vol. 69, no. 6, 2009, pp. 573-587. **(Cited by 18)**
- ◇ 13. K. Akkaya and F. Senel, "Detecting and Connecting Disjoint Sub-networks in Wireless Sensor and Actor Networks", *Elsevier Ad Hoc Networks Journal*, vol. 7, no. 7, 2009, pp. 1330-1346. **(Cited by 20)**
- ◇ 14. K. Akkaya and S. Janapala, "Maximizing Connected Coverage via Controlled Actor Relocation in Wireless Sensor and Actor Networks", *Elsevier Computer Networks Journal*, Vol. 52, Issue 14, 2008, pp. 2779-2796.
- ◇ 15. K. Akkaya and M. Younis, "Coverage and Delay aware Actor Placement Mechanisms for Wireless Sensor and Actor Networks," *International Journal of Sensor Networks*, Vol. 3, No. 3, 2008. **(Cited by 18)**
- ◇ 16. M. Younis and K. Akkaya, "Strategies and Techniques for Node Placement in Wireless Sensor Networks: A Survey," *Elsevier Ad Hoc Network Journal*, Vol. 6 No. 4, pp. 621-655, 2008. **(Cited by 171)**
- ◇ 17. K. Akkaya, M. Demirbas and R. S. Aygun, "The Impact of Data Aggregation on the Performance of Wireless Sensor Networks", *Wiley Wireless Communications & Mobile Computing (WCMC) Journal*, Vol. 8 pp. 171-193, 2008. **(Cited by 18)**
- ◇ 18. W. Youssef, M. Younis and K. Akkaya, "Improving Gateway Safety in Wireless Sensor Networks using Cognitive Techniques", *International Journal of Sensor Networks*, Vol. 43, No. 5, pp. 649668, 2007.
- ◇ 19. K. Akkaya, M. Younis and W. Youssef, "Positioning of Base-Stations in Wireless Sensor Networks," *IEEE Communications*, Vol. 45, No. 4, pp. 96-102, April 2007. **(Cited by 23)**

- ◇ **20.** K. Akkaya and M. Younis, “Sink Repositioning for Enhanced Performance in Wireless Sensor Networks,” *Elsevier Computer Networks Journal*, Vol. 49/4, pp. 512-534, 2005. **(Cited by 84)**
- ◇ **21.** K. Akkaya and M. Younis, “Energy-aware delay-constrained routing in wireless sensor networks,” *International Journal of Communication Systems, Special Issue on Service Differentiation and QoS in Ad Hoc Networks*, Vol. 17(6), pp. 663-687, 2004. **(Cited by 57)**
- ◇ **22.** K. Akkaya and M. Younis, “Energy-Aware and QoS Routing in Wireless Sensor Networks,” *Springer Cluster Computing Journal*, Vol. 8 pp. 179-188, 2005. **(Cited by 47)**
- ◇ **23.** K. Akkaya and M. Younis, “A Survey of Routing Protocols in Wireless Sensor Networks,” *Elsevier Ad Hoc Network Journal*, Vol. 3/3 pp. 325-349, 2005. **(Cited by 991)**

REFEREED
PROCEED-
INGS

- ◇ **1.** N. Saputro and K. Akkaya, “Performance Evaluation of Smart Grid Data Aggregation via Homomorphic Encryption”, in the *Proceedings of IEEE Wireless Communications and Networking Conference (WCNC’12)*, Paris, France, (to appear).
- ◇ **2.** H. Oztarak, K. Akkaya and A. Yazici, “Providing Automated Actions in Wireless Multimedia Sensor Networks via Active Rules”, in the *Proceedings of 26th International Symposium on Computer and Information Sciences*, London, UK, Sept. 2011.
- ◇ **3.** E. Yildiz, K. Akkaya, E. Sisikoglu, M. Sir, and I. Guneydas, “Camera Deployment for Video Panorama Generation in Wireless Visual Sensor Networks”, in the *Proceedings of International Workshop on Video Panorama in conjunction with IEEE Symposium on Multimedia (ISM’11)*, Dana Point, CA, USA, Dec. 2011.
- ◇ **4.** E. Yildiz, K. Akkaya, E. Sisikoglu, and M. Sir, “An Exact Algorithm for Providing Multi-Perspective Event Coverage in Wireless Multimedia Sensor Networks”, in the *Proceedings of IEEE International Wireless Communications and Mobile Computing Conference (IWCMC)*, Istanbul, Turkey, July 2011.
- ◇ **5.** A. Newell, K. Akkaya and E. Yildiz, “Providing Multi-perspective Event Coverage in Wireless Multimedia Sensor Networks”, in the *Proceedings of IEEE Local Computer Networks (LCN’10)*, Denver, CO, Oct. 2010.
- ◇ **6.** M. Riley, K. Akkaya and K. Fong, “Delay-Efficient Geodynamic Group-Based Authentication in VANETs”, in the *Proceedings of IEEE Local Computer Networks (LCN’10), short paper*, Denver, CO, Oct. 2010.
- ◇ **7.** S. Vemulapalli and K. Akkaya, “Mobility-based Self Route Recovery from Multiple Node Failures in Mobile Sensor Networks”, in the *Proceedings of 10th IEEE International Workshop on Wireless Local Networks (WLN) in conjunction with LCN’10*, Denver, CO, Oct. 2010.
- ◇ **8.** W. Zhang, Yu and K. Akkaya, “Static Worst-case Lifetime Analysis of Wireless Sensor Networks”, in the *Proceedings of IEEE International Performance Computing and Communications Conference (IPCCC’09)*, Scottsdale, AZ, Dec. 2009.
- ◇ **9.** H. Oztarak, K. Akkaya and A. Yazici, “Lightweight Object Localization with a Single Camera in Wireless Multimedia Sensor Networks”, in the *Proceedings*

of *IEEE Global Telecommunications Conference (GLOBECOM'09)*, Hawaii, USA, Dec. 2009.

- ◇ **10.** F. Senel, M. Younis and K. Akkaya, “A Robust Relay Node Placement Heuristic for Structurally Damaged Wireless Sensor Networks”, in the *Proceedings of IEEE Local Computer Networks (LCN'09)*, Zurich, Switzerland, Oct. 2009.
- ◇ **11.** A. Abbasi, U. Baraudi, M. Younis, K. Akkaya, “C2AM: An Algorithm for Application-Aware Movement-Assisted Recovery in Wireless Sensor and Actor Networks”, in the *Proceedings of IEEE International Conference on Wireless Communications and Mobile Computing*, Leipzig, Germany, June 2009.
- ◇ **12.** A. Newell and K. Akkaya, “Self-Actuation of Cameras for Redundant Data Elimination in Wireless Multimedia Sensor Networks”, in the *Proceedings of International Conference on Communications (ICC'09)*, Dresden, Germany, June 2009.
- ◇ **13.** I. Guneydas, K. Akkaya and A. Bicak, “Actor Positioning in Wireless Sensor and Actor Networks Using Matching Theory”, in the *Proceedings of International Workshop on Wireless Ad hoc and Sensor Networking (WWSAN'09)*, in conjunction with *ICDCS'09*, Montreal, Canada, June 2009.
- ◇ **14.** S. Uludag and K. Akkaya, “Distributed Channel Assignment in Wireless Mesh Networks with Guaranteed Connectivity”, in the *Proceedings of IEEE Local Computer Networks (LCN'08)*, short paper, Montreal, Canada, Oct. 2008.
- ◇ **15.** A. Sama and K. Akkaya, “Real-time Routing for Mobile Sensor/Actor Networks”, in the *Proceedings of 8th IEEE International Workshop on Wireless Local Networks (WLN) in conjunction with LCN'08*, Montreal, Canada, Oct. 2008.
- ◇ **16.** K. Akkaya, A. Thimmapuram, F. Senel and S. Uludag, “Distributed Recovery of Actor Failures in Wireless Sensor and Actor Networks,” in the *Proceedings of IEEE Wireless Communication and Networking Conference (WCNC'08)*, Las Vegas, NV, April 2008. **(Cited by 34)**
- ◇ **17.** F. Senel, K. Akkaya and M. Younis, “An efficient mechanism for establishing connectivity in Wireless Sensor and Actor Networks,” in the *Proceedings of IEEE Global Telecommunications Conference (GLOBECOM'07)*, Washington, DC, Nov. 2007. **(Cited by 13)**
- ◇ **18.** B. McLaughlan and K. Akkaya, “Coverage-based Clustering of Wireless Sensor and Actor Networks,” in the *Proceedings of IEEE International Conference on Pervasive Services (ICPS'07)*, Istanbul, Turkey, July 2007. **(Cited by 18)**
- ◇ **19.** A. Abbasi, K. Akkaya and M. Younis, “A distributed connectivity restoration Algorithm in Wireless Sensor and Actor Networks,” in the *Proceedings of IEEE International Conference on Local Computer Networks, (LCN'07)*, Dublin, Ireland, Oct. 2007. **(Cited by 33)**
- ◇ **20.** S. Uludag, L. Perkovic, A. Kashkanova and K. Akkaya, “Quality-of-Service Provisioning via Stochastic Path Selection under Weibullian Link Delays,” in the *Proceedings of IEEE/ACM International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine'07)*, Vancouver, CA, Aug. 2007.
- ◇ **21.** K. Akkaya and M. Younis, “C2AP: Coverage-aware and Connectivity Constrained Actor Positioning in Wireless Sensor and Actor Networks”, in the *Proceed-*

ings of IEEE International Performance Computing and Communications Conference (IPCCC'07), New Orleans, LA, April 2007.

- ◇ **22.** K. Akkaya and M. Younis, "COLA: A Coverage and Latency aware Actor Placement for Wireless Sensor and Actor Networks", in the *Proceedings of IEEE Vehicular Technology Conference (VTC'06)*, Montreal, CA, Sept. 2006. **(Cited by 31)**
 - ◇ **23.** W. Youssef, M. Younis and K. Akkaya, "An Intelligent Safety-Aware Gateway Relocation Scheme for Wireless Sensor Networks", in the *Proceedings of the IEEE International Conference on Communications (ICC'06)*, Istanbul, Turkey, June 2006. **(Cited by 11)**
 - ◇ **24.** K. Akkaya, M. Younis and M. Youssef, "Efficient Aggregation of Delay-Constrained Data in Wireless Sensor Networks," in the *Proceedings of Internet Compatible QoS in Ad Hoc Wireless Networks*, Cairo, Egypt, 2005. **(Cited by 27)**
 - ◇ **25.** K. Akkaya and M. Younis, "Energy-Aware Routing to a Mobile Gateway in Wireless Sensor Networks," in the *Proceedings of the IEEE Globecom Wireless Ad Hoc and Sensor Networks Workshop*, Dallas, TX, November, 2004. **(Cited by 38)**
 - ◇ **26.** K. Akkaya and M. Younis, "Relocation of gateway for enhanced timeliness in wireless sensor networks," in the *Proceedings of IEEE Workshop on Energy-Efficient Wireless Communications and Networks (EWCN)*, Phoenix, AZ, April 2004. **(Cited by 18)**
 - ◇ **27.** M. Younis, K. Akkaya, M. Eltowiessy and A. Wadaa, "On Handling QoS Traffic in Wireless Sensor Networks", in the *Proceedings of the International Conference HAWAII International Conference on System Sciences (HICSS-37)*, Big Island, Hawaii, Jan. 2004. **(Cited by 114)**
 - ◇ **28.** M. Younis, K. Akkaya and A. Kunjithapatham, "Optimization of Task Allocation in a ClusterBased Sensor Network" in the *Proceedings of the 8th IEEE Symposium on Computers and Communications (ISCC03)*, Antalya, Turkey, June 2003. **(Cited by 37)**
 - ◇ **29.** M. Younis, M. Bangad and K. Akkaya, "Base-Station Repositioning For Optimized Performance of Sensor Networks", in the *Proceedings of the IEEE VTC 2003 - Wireless Ad hoc, Sensor, and Wearable Networks*, Orlando, Florida, Oct. 2003. **(Cited by 49)**
 - ◇ **30.** K. Akkaya and M. Younis, "An Energy-Aware QoS Routing Protocol for Wireless Sensor Networks", in the *Proceedings of the IEEE Workshop on Mobile and Wireless Networks (MWN'03)*, Providence, Rhode Island, May 2003. **(Cited by 280)**
 - ◇ **31.** K. Akkaya and A. Yazici, "A Multi-dimensional Index Structure for Fuzzy Spatial Databases", in the *Proceedings of IFSA-2001*, Vancouver, Canada, July 2001.
 - ◇ **32.** K. Akkaya and A. Yazici, "An Indexing Method for Spatial Databases", in the *Proceedings of 17th International Symposium on Computer and Information Systems (ISCIS'99)*, Kusadasi, Turkey 1999.
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TECHNICAL REPORTS ◇ **1.** K. Akkaya, “Relocation of Base-Station for Jamming Attack Avoidance in Wireless Sensor Networks,” *Technical Report, TR-08-01, Department of Computer Science, Southern Illinois University Carbondale*, 2008.

◇ **2.** A. Newell and K. Akkaya, “Implementation Experiences with Motes and TinyDB in a Greenhouse Monitoring Application,” *Technical Report, TR-08-02, Department of Computer Science, Southern Illinois University Carbondale*, 2008.

COURSES TAUGHT ◇ **CS 215:** Discrete Mathematics (*Fall 2011, Spring 2011, Fall 2010, Spring 2010, Fall 2009, Spring 2008, Fall 2008, Spring 2007, Fall 2007, Spring 2007, Fall 2006, Spring 2006, Fall 2005*)

◇ **CS 330:** Introduction to the Design and Analysis of Algorithms (*Spring 2010*)

◇ **CS 410:** Computer Security (*Spring 2011*)

◇ **CS 441:** Mobile and Wireless Computing (*Fall, 2011, Fall 2010, Fall 2009, Fall 2008, Fall 2007, Fall 2006, Fall 2005*)

◇ **CS 591:** Wireless and Network Security (*Spring 2009*)

RESEARCH SUPERVISION ◇ **Ph.D.:**

· Nico Saputro (in progress)

· Tom Imboden (in progress)

· Izzet Senturk (in progress)

· Fatih Senel (Co-Advisor at UMBC) (in progress)

· Hakan Oztarak (Co-Advisor at METU, Turkey) (in progress)

◇ **M.S.:**

· Michale Gloff (in progress)

· Andrew Beussink (in progress)

· Shadi Jananefat (in progress)

· Enes Yildiz (defended in Spring 2011)

· Marshall Riley (defended in Spring 2010)

· Shanthi Vemulapalli (defended in Fall 2009)

· Aravind R. Sama (defended in Spring 2008)

· Fatih Senel (defended in Spring 2008)

· Ismail Guneydas (defended in Fall 2008)

· Srinavas Janapala (defended in Spring 2007)

· Aravind Thimmapuran (defended in Fall 2007)

◇ **M.S./Ph.D. Committees**

· Seung Hoon Baek, Ph.D., ECE (defended in Oct. 2011)

· Brian McLaughlan, Ph.D., CS (defended in Spring 2010)

· Muhammad R. Khan, Ph.D., ECE (proposed in Spring 2010)

· Ali D. Khudhair, M.S., ECE (defended in Spring 2009)

- Ketki Khambete, M.S., ECE (defended in Fall 2009)
 - Prashant Tonupunuri, M.S., CS (defended in Fall 2008)
 - Insook Choe, M.S., CS (defended in Fall 2007)
-

- PROF. ◇ **Area Editor** for Elsevier Ad Hoc Networks Journal, 2009, - present.
- ACTIVITIES ◇ **Demo Chair** for IEEE Local Computer Networks (LCN), 2012.
- ◇ **Publicity Chair** for IEEE Local Computer Networks (LCN), 2011.
- ◇ **Workshop Co-Chair** for IEEE IWCMC Workshop on Federated Sensor Systems, 2011.
- ◇ **Workshop Chair** for First IEEE LCN Workshop on Smart Grid Networking Infrastructure, 2010.
- ◇ **Guest Editor** for Elsevier Computer Communications Journal, “Specialized Routing and Node Placement Protocols for Emerging Wireless Ad Hoc Networks”, 2010.
- ◇ **Guest Editor** for Journal of High Speed Networks, “QoS Routing in Wireless Mesh Networks”, 2009.
- ◇ **Editorial Liaison Chair** for IEEE Local Computer Networks (LCN), 2010.
- ◇ **Session Chair** in IEEE International Conference on Communications (ICC), 2009.
- ◇ **Chair of Special Session on Wireless Sensor Networks**, International Conference on Computers and Their Applications (CATA), 2007.
- ◇ **Technical Program Committee Member** of
- Second International Workshop on Wireless Sensor, Actuator and Robot Networks (WiSARN), 2011, 2012
 - IEEE International Conference on Communications (ICC) Wireless Networking Symposium & Ad Hoc Networks Symposium, 2011
 - IEEE Global Telecommunications Conference (GLOBECOM), 2010, 2011
 - IEEE International Conference on Communications (ICC), 2010
 - First International Workshop on Wireless Sensor, Actuator and Robot Networks (WiSARN), 2010
 - First International Workshop on Mobility in Wireless Sensor Networks (MobiSensor), 2010, 2011
 - International Conference on Multimedia Computing and Information Technology (MCIT), 2010
 - IEEE Local Computer Networks (LCN), 2009
 - IEEE Global Telecommunications Conference (GLOBECOM), 2009
 - IEEE International Conference on Communications (ICC), 2009
 - IEEE Global Telecommunications Conference (GLOBECOM), 2008
 - IEEE International Conference on Communications (ICC), 2008
 - IEEE Wireless Communications and Networking Conference (WCNC), 2008
 - IEEE International Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems (MASCOTS), 2008

- IEEE International Conference on Computer Systems and Applications (AICCSA), 2008
 - IEEE International Conference on Pervasive Systems (ICPS), 2008
 - International Conference on Communications and Networking in China (CHINACOM), 2008
 - International Conference on Embedded and Ubiquitous Computing (EUC), 2008
 - IEEE Local Computer Networks (LCN), 2007
 - IEEE Global Telecommunications Conference (GLOBECOM), 2007
 - IEEE International Performance Computing and Communications Conference (IPCCC), 2007
 - IFIP Networking, 2007
 - International Conference on Computational Science, 2007
 - International Symposium on Computer and Information Sciences (ISCIS), 2007
 - International Conference on Embedded Software and Systems (ICCESS), 2007
 - IEEE International Conference on Advance Information Networking and Applications (AINA), 2006
 - International Conference on algorithms, systems, and applications (WASA), 2006
 - International Conference on Computational Science, 2006
- ◇ **Journal referee for (among others):**
- IEEE Transactions on Parallel and Distributed Systems,
 - IEEE Transactions on Computers
 - IEEE Transactions on Vehicular Technology
 - IEEE Transactions on Wireless Communications
 - IEEE Transactions on Mobile Computing
 - IEEE Transactions on Aerospace and Electronic Systems
 - ACM Transactions on Sensor Networks
 - ACM Journal of Selected Areas in Communications
 - Elsevier Ad Hoc Networks
 - Elsevier Computer Networks
 - Elsevier Computer Communications
 - IEEE Communications Letters
 - IEEE Communications Magazine
 - Journal of Parallel and Distributed Computing
 - Journal of Computer Science and Technology
 - Journal of Electrical and Computer Engineering
 - Journal on Ad Hoc and Sensor Wireless Networks
 - Wiley Wireless Communications and Mobile Computing Journal

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- International Journal of Parallel, Emergent and Distributed Systems
- International Journal of Computational Intelligence: Theory and Practice
- International Journal of Communication Systems
- Mobile Computing and Communications Review
- Mobile Networks and Applications

◇ **Panel member:**

- NSF NeTS Program (2010)
 - Swiss National Science Foundation (2009)
 - The Netherlands Organization for Scientific Research (2009)
 - ORDA Panel for Faculty Seed Grant SIUC (2009, 2010)
-

UNIVERSITY ◇ **Faculty Advisor:** Turkish Student Association (2005-2007)

SERVICE ◇ **Committees:** Computer Science Representative for Computing Advisory Committee (2009 - 2011), Computer Science Representative for Reflective Responsive University Grants Program (2006-2008)

COLLEGE ◇ **Outreach:** Served in Illinois Junior Science and Humanities Symposium (2008, SERVICE 2009)

◇ **Graduation Ceremony:** Computer Science Representative (May 2007), Usher (May 2008)

DEPT. ◇ **Committee member:** Graduate Committee (2005-2007), Undergraduate Com- SERVICE mittee (2007-), ABET CAC Committee (2009)

◇ **Outreach:** Served on CS Day as Presenter (2005-2010)

GRANT ◇ **Federating Disjoint Wireless Sensor Networks**

SUPPORT PI: Kemal Akkaya
National Science Foundation
\$191,878.00, 9/1/2010-8/31/2013

◇ **Delay and Coverage Aware Management of Wireless Sensor and Actor Networks**

PI: Kemal Akkaya
Southern Illinois University Carbondale, Faculty Seed, 2007
\$14,400 from 2007-2008

AWARDS & ◇ **Top Cited Article Award** for Elsevier Ad Hoc Networks, 2005-2010

HONORS ◇ **Total citations for the papers reached over 2800**, Google Scholar, Dec. 2011

◇ **Made the list for the 10 most downloaded papers** from Elsevier Ad Hoc Network Journal, 2007

◇ **Special Research Initiative Support (SRIS)**, University of Maryland Baltimore County, 2003

- ◇ **Best Project Award for Graduation Project**, 1997
 - ◇ **Full scholarship, Bilkent University**, Turkey, 1993
 - ◇ **Ranked in the top 200 among 1.2 million examinees in Nation-wide University Entrance Examinations**, Turkey, 1993
-

TALKS

- ◇ IEEE INFOCOM 2011, Shanghai, China, April 2011.
An Optimization-based Approach for Connecting Partitioned Mobile Sensor/Actuator Networks
 - ◇ IEEE Local Computer Networks (LCN'10), Denver, CO, Oct. 2010.
Providing Multi-perspective Event Coverage in Wireless Multimedia Sensor Networks
 - ◇ IEEE Local Computer Networks (LCN'10), Denver, CO, Oct. 2010.
Mobility-based Self Route Recovery from Multiple Node Failures in Mobile Sensor Networks
 - ◇ Dept. of Computer Science, SIUC, Colloquium, Oct. 2009.
A Group-based Lightweight Authentication Protocol for Vehicular Ad Hoc Networks
 - ◇ IEEE International Conference on Communications (ICC'09), Dresden, Germany, June 2009.
Self-Actuation of Cameras for Redundant Data Elimination in Wireless Multimedia Sensor Networks
 - ◇ Dept. of Computer Science and Engineering, Middle East Technical University, Ankara, Turkey, May 2008.
State-of-the-art and Future Research Trends in Wireless Sensor Networks
 - ◇ Dept. of Computer Science, SIUC, Colloquium, Oct. 2008.
Distributed Node Deployment in Underwater Acoustic Sensor Networks
 - ◇ IEEE Global Telecommunications Conference (Globecom'07), Washington, DC, Nov. 2007.
An efficient mechanism for establishing connectivity in Wireless Sensor and Actor Networks
 - ◇ Dept. of Computer Science, SIUC, Colloquium, Oct. 2007.
Maximizing Connected Coverage via Controlled Actor Deployment in Wireless Sensor and Actor Networks
 - ◇ IEEE International Conference on Pervasive Services (ICPS'07), Istanbul, Turkey, July 2007.
Coverage-based Clustering of Wireless Sensor and Actor Networks
 - ◇ IEEE International Conference on Vehicular Technology (VTC'06), Montreal, Canada, Sept. 2006.
COLA: A Coverage and Latency aware Actor Placement for Wireless Sensor and Actor Networks
-

COMPUTER SKILLS

- ◇ **Languages:** Pascal, C, C++, Java,
- ◇ **Operating systems:** UNIX, Linux, Windows, TinyOS

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- ◇ **Tools:** MS Visual Source Safe (VSS), MS Visual C++, Oracle8, Borland C++ Builder, Jini, JSP, JDBC, Java Servlets, PHP, Tomcat Webserver, Delphi, VHDL, Matlab
-