

# Dr. Mihaela Cardei

Associate Dean for Graduate Studies and Professor  
Computer & Electrical Engineering and Computer Science  
Florida Atlantic University  
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## Research Interest

Wireless Networking, Wireless Sensor Networks, Combinatorial Optimization in Wireless Networks, Network Protocols and Algorithm Design.

## Education

Ph.D. in Computer Science, University of Minnesota, Minneapolis, MN, 2003  
M.S. in Computer Science, University of Minnesota, Minneapolis, MN, 1999  
M.S. in Computer Science, Politehnica University of Bucharest, Romania, 1996  
B.S. in Computer Science, Politehnica University of Bucharest, Romania, 1995

## Honors and Awards

Researcher of the Year (Assistant Professor), Florida Atlantic University, 2006-2007.  
Best paper award, The 35<sup>th</sup> IEEE International Performance Computing and Communications Conference (IEEE IPCCC), Dec. 2016.  
Best paper award, The 10th IEEE International Conference on Mobile Ad-hoc and Sensor Networks (IEEE MSN), Dec. 2014.  
Best paper award, The 2nd IEEE International Conference on Mobile Ad-hoc and Sensor Systems (IEEE MASS), Nov. 2005.  
FAU Faculty Travel Award: Mar. 2005 and Aug. 2005.  
Doctoral Dissertation Fellowship, Graduate School, University of Minnesota, 2002-2003.  
Academic Merit Award, Dept. Computer Science & Engineering, University of Minnesota, 1999.

## Professional Experience

Associate Dean for Graduate Studies, Computer & Electrical Engineering and Computer Science, June 2018 – present  
Professor, FAU, Computer & Electrical Engineering and Computer Science, Aug. 2014 – present  
Associate Professor, FAU, Computer Science & Engineering, Aug. 2008 – July 2014  
Assistant Professor, FAU, Computer Science & Engineering, Aug. 2003 – July 2008  
Intern, Honeywell Laboratories, Minneapolis, Apr. 1999 – Oct. 1999  
Development Engineer, CoManage Corporation, Sep. 2000 – Jun. 2001

## Grant Awards

- Equipment Grant: MSC-Mobile Switching Center, GSN-GPRS Support Node, GSM Base Station (1900 MHz) and OMCR, CDMA Base Station (850 MHz) and BSM Server, FAU NSF/IUCRC, co-PI, Jan 2012 – Dec 2014, \$965,000.
- Efficient Protocols and Algorithms for Wireless Networks, FAU NSF/IUCRC, co-PI, Feb 2012 – May 2014, \$17,359 (Total grant \$100,000).
- Design and Evaluation of Wireless Networks Protocols, FAU Foundation/Tecore Networks, co-PI, Jan 2012 – May 2014, \$15,156 (Total grant \$100,000).
- Data Link and Communication Protocols for Underwater Laser Sensor Networks, FAU Division of Research (Seed Grant), co-PI, 2012-2013, \$20,000.
- Campus-2020 project: Campus Driving and Directions Assistant, FAU NSF/IUCRC, investigator, 2012-2013, \$20,240 (Total grant \$300,000).
- **NSF CAREER Optimization Problems in Wireless Sensor Network Design and Applications, National Science Foundation (NSF), PI, 06/01/06-01/31/12, \$400,000.**
- NSF Research Experiences for Undergraduates (REU), National Science Foundation (NSF), 05/15/09 – 12/15/09 PI, \$15,750.
- NSF CISE Instrumentation: Wireless and Sensor Networking Laboratory, National Science Foundation (NSF) & Division of Research at FAU, PI, 09/01/04-09/01/07, \$85,851.
- Secure Telecommunication Networks, Secure Routing Protocols for Ad Hoc Wireless Networks, DoD Defense-wide RTDE grant, investigator, 09/01/04-08/31/06, \$37,000.
- New Project Development Program, Wireless Sensor Networks Design and Experimentation, FAU Division of Research, PI, 01/01/06-12/31/06, \$15,000.
- NSF MRI: Acquisition of a NUMA-based Supercluster for High Performance Computing, National Science Foundation (NSF), co-PI, 08/01/05-07/31/09, \$459,065.
- Secure Telecommunication Network, Global Information Grid Simulation, DoD Defense-wide RTDE grant, investigator, 01/09/08-01/09/09, \$35,000.

## Teaching

### Graduate Courses:

- COT 6930: Wireless Networks
- COT 6405: Analysis of Algorithms
- COT 6930: Algorithms for Bioinformatics
- COT 6930: Wireless Networks Design and Optimization
- COT 6930: Distributed Algorithms
- COT 6930: Wireless Sensor Networks

### Undergraduate Courses:

- CDA 4500: Introduction to Data Communications
- COT 4400: Design and Analysis of Algorithms
- COT 4420: Introduction to Formal Languages and Automata
- STA 4821: Stochastic Models for CS

## Student Supervision

### Ph.D. Dissertations Supervised (8):

- Catalina Aranzazu-Suescun, Spring 2019, “Distributed Algorithms for Energy-Efficient Data Gathering and Barrier Coverage in Wireless Sensor Networks” (advisor)
- Yueshi Wu, Fall 2016, “Channel Assignment in Cognitive Radio Wireless Networks” (advisor)
- Amalya Mihnea, Spring 2015, “Channel Assignment in Multi-Radio Networks” (advisor)
- Army Ambrose, Fall 2011, “A Patient-centric Hurricane Evacuation Management System” (advisor)
- Mirela Marta, Fall 2010, “Mechanisms for Improving Energy Efficiency in Wireless Sensor Networks” (advisor)
- Yinying Yang, Spring 2010, “Mechanisms for Prolonging Network Lifetime in Wireless Sensor Networks” (advisor)
- Shuhui Yang, Summer 2007, “Connected Dominating Set in Wireless Ad Hoc Networks: Variations with Applications” (co-advisor with Dr. Jie Wu)
- Ali Abu-el Humos, Summer 2005, “Low Latency and Energy Efficient MAC Protocols for Wireless Sensor Networks” (co-advisor with Dr. Bassem Alhalabi)

### Master’s Theses Supervised (9):

- Rafael Papa, Summer 2018, “Hummingbird: An UAV-aided Energy Efficient Algorithm for Data Gathering in Wireless Sensor Networks” (advisor)
- Andrew Steinberg, Fall 2017, “A Collision Free Drone Scheduling System” (advisor)
- Iana Zankina, Fall 2012, “Campus Driver Assistant on an Android Platform” (advisor)
- Pedro Heshike, Spring 2012, “Implementation of a Mobile Data Collector in Wireless Sensor Networks” (advisor)
- Anthony Marcus, Spring 2011, “Web-based Wireless Sensor Networks Monitoring using Smartphones” (advisor)

- Anupama Sahu, Fall 2010, “Patterns for Wireless Sensor Networks” (advisor; co-advisor Dr. E. Fernandez)
- Army Ambrose, Fall 2008, “Scheduling for Composite Event Detection in Wireless Sensor Networks” (advisor)
- Mohammad Pervaiz, Summer 2006, “Range Assignment Problem and Security in Wireless Networks” (advisor)
- Wael Awada, Spring 2006, “Energy-efficient Target Coverage in Heterogeneous Wireless Sensor Networks” (advisor)

## Professional Organizations

Senior Member, Institute of Electrical and Electronics Engineers (IEEE)

## Professional Activities

- Editor for *Ad Hoc & Sensor Wireless Networks* Journal, OCP Science, September 2009 – September 2012.
- Editor for *Computer Communications* Journal, Elsevier, February 2009 – February 2010.
- Panelist, National Science Foundation, 2003, 2005, 2008, 2012.
- Organizer of the *Wireless Networking Seminar* at the University of Minnesota, 2001-2003.
- One of the organizers of the *Doctoral Dissertation Fellows Seminar* (2002-2003), event conducted by the Graduate School at the University of Minnesota.
- Co-editor of *Theoretical and Algorithmic Aspects of Sensor, Ad Hoc Wireless, and Peer-to-Peer Networks*, special issue in the Journal of Parallel and Distributed Computing (JPDC), Vol 65, No 2, Feb. 2005.
- Local arrangement chair for *IEEE MASS'04*.
- Publicity co-chair and workshop co-chair for *The Second International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine'05)*.
- Technical program co-chair for *The International Conference on Systems and Networks Communications (ICSNC) 2006*.
- Poster chair for *ACM MobiHoc 2008*.
- Session chair for *IEEE WoWMoM 2008*.
- Program Co-Chair *COCOA 2019*.
- TPC member for *IEEE ICC 2011, ALGOSENSORS 2011, IEEE ICPADS 2011, SIMPDA 2011, MSN 2011, IEEE/IFIP EUC 2013, MSN 2013, CSoNet 2014, WASA 2014, ICPADS 2014, IEEE MSN 2014, PLOP 2014, WASA 2015, ICDCS 2015, MSN 2015, WASA 2016, WASA 2017, IEEE IPCCC 2018, IEEE ICDCS 2019, IEEE IPCCC 2019, COCOA 2019*.

## Florida Atlantic University Services

Director of CEECS Graduate Studies (Jan. 2013 – July 2014, Jan. 2015 – June 2018)

Chair of the CoECS Graduate Programs (Oct. 2017 – June 2018)

Member of the UGPC and UGC (Oct. 2017 – present)  
Member of FAU Graduate Associate Deans Council (GADC) (June 2018 – present)  
Member of the CoECS Graduate Programs (Jan. 2013 – July 2014, Jan. 2015 – Oct. 2017)  
Member of the CEECS Executive Committee (Jan. 2013 – July 2014, Jan. 2015 – June 2018)  
Member of the CEECS Personnel Committee (2010 – July 2014, Jan. 2015 – Aug. 2016)  
Member of the CEECS Resource Committee (2013 – July 2014, Jan. 2015 – June 2018)  
Member of the CEECS Graduate Programs Committee (2009 – July 2014, Jan. 2015 – June 2018)  
Member of the CoECS CP&D Committee (Aug. 2012 – Jan. 2013)  
CSE PhD QE Coordinator (Sept 2009 – Dec 2011)  
Member of the CSE Dept. Graduate Programs and Research Committee (2007 – 2009)  
Member of the CSE Dept. Executive Committee (2006 – 2007)  
Member of the CSE Dept. TA/GA Committee (2005 – 2007)  
Member of the FAU University Faculty Senate (2005 – 2006)  
Member of the CSE Dept. Labs/Equipment Committee (2003 – 2005, 2008 – 2010)  
Graduate Marshal FAU Commencement Ceremony Spring 2007, Spring 2016, Fall 2018  
Faculty Advisor of the Alpha Omega Epsilon- Beta Delta Chapter at FAU (July 2012 – July 2014)  
Advisor of the MS Information Technology & Management Program (Aug. 2009 – July 2014, Jan. 2015 – June 2018)

## **Publications**

- **8,500 citations on Google Scholar**

## **Conference Papers**

1. C. Aranzazu-Suescun and M. Cardei, UAV-aided Weak-Barrier Coverage with Adaptive Sensor Rotation, *The 13th Annual IEEE International Systems Conference (SysCon 2019)*, Apr. 2019.
2. I. Cardei, M. Cardei, and R. Papa, UAV-enabled Data Gathering in Wireless Sensor Networks, *37th IEEE International Performance Computing and Communications Conference*, Nov. 2018.
3. C. Aranzazu-Suescun and M. Cardei, Networking Protocols for Wireless Sensor Networks with Mobile Sink, *LACCEI International Multi-Conference for Engineering, Education, and Technology*, Jul. 2018.
4. C. Aranzazu-Suescun and M. Cardei, Weak-Barrier Coverage with Adaptive Sensor Rotation, *The 12th Annual International Conference on Combinatorial Optimization and Applications (COCOA 2018)*, Dec. 2018.
5. M. Cardei, I. Cardei, and A. Steinberg, UAS Trajectory Scheduling System, *IEEE Systems Conference*, Apr. 2018.

6. C. Aranzazu-Suescun and M. Cardei, Spatio-Temporal Event Detection and Reporting in Mobile-Sink Wireless Sensors Networks, *The 36th IEEE International Performance Computing and Communications Conference (IPCCC)*, Dec. 2017.
7. C. Aranzazu-Suescun and M. Cardei, Reactive Routing Protocol for Event Reporting in Mobile-Sink Wireless Sensor Networks, *The 13th ACM International Symposium on QoS and Security for Wireless and Mobile Networks*, Nov. 2017.
8. Y. Wu and M. Cardei, A Cognitive Radio Approach for Data Collection in Border Surveillance, *IEEE International Performance Computing and Communications Conference (IPCCC)*, Dec. 2016.
9. C. Aranzazu Suescun and M. Cardei, Event-based Clustering for Composite Event Detection in Wireless Sensor Networks, *IEEE International Performance Computing and Communications Conference (IPCCC)*, Dec. 2016 (**Best Paper Award**).
10. C. Aranzazu Suescun and M. Cardei, Unmanned Aerial Vehicle Networking Protocols, *LACCEI International Multi-Conference for Engineering, Education, and Technology*, Jul. 2016.
11. A. Mihnea and M. Cardei, Methods to Improve Capacity in Grid Networks, *The 29<sup>th</sup> International Conference on Computer Applications in Industry and Engineering (CAINE)*, Sept. 2016.
12. Y. Wu, D. Raviv, and M. Cardei, Campus Navigation System with Seamless Real-Time Information, *International Conference on Computers and Their Applications (CATA)*, Apr. 2016.
13. A. Mihnea and M. Cardei, Analysis of Interference for a Multi-Radio Channel Assignment Algorithm, *International Conference on Computers and Their Applications (CATA)*, Apr. 2016.
14. Y. Wu and M. Cardei, Distributed Algorithm for Mending Barrier Gaps via Sensor Rotation in Wireless Sensor Networks, *The 9<sup>th</sup> Annual International Conference on Combinatorial Optimization and Application (COCOA 2015)*, Dec. 2015.
15. Y. Wu and M. Cardei, Robust Topology using Reconfigurable Radios in Wireless Sensor Networks, *IEEE International Conference on Mobile Ad-hoc and Sensor Networks (MSN 2014)*, Dec. 2014 (**Best Paper Award**).
16. M. Cardei and Y. Wu, Using Reconfigurable Radios to Increase Throughput in Wireless Sensor Networks, *IEEE International Conference on Mobile Ad-hoc and Sensor Networks (MSN 2014)*, Dec. 2014.

17. A. Mihnea and M. Cardei, A Robust Channel Assignment Method for Multi-Radio Networks, Principles, *Systems and Applications of IP Telecommunications (IPTComm 2014)*, Sept. 2014.
18. A. Mihnea and M. Cardei, Bounds on Capacity in Multi-Channel Grid Networks, *Wireless Telecommunications Symposium (WTS 2014)*, Apr. 2014.
19. M. Cardei and A. Mihnea, Channel Assignment in Cognitive Wireless Sensor Networks, *International Conference on Computing, Networking and Communications (ICNC 2014)*, Feb. 2014.
20. M. Cardei and A. Mihnea, Distributed Protocol for Channel Assignment in Cognitive Wireless Sensor Networks, *IEEE International Performance Computing and Communications Conference (IPCCC 2013)*, Dec. 2013.
21. M. Cardei, B. Jones, and D. Raviv, A Pattern for Context-Aware Navigation, *Conference on Pattern Languages of Programs (PLoP 2013)*, Oct. 2013.
22. D. Rashkin, F. Dalglish, I. Cardei, B. Ouyang, A. Vuorenkoski, and M. Cardei, Experimental Validation of an Undersea Free Space Laser Network Simulator in Turbid Costal Conditions, *Proc. SPIE 8724, Ocean Sensing and Monitoring V*, 872404 (June 3, 2013); doi:10.1117/12.2019192, Jun. 2013.
23. M. Cardei, I. Zankina, I. Cardei, D. Raviv, Campus Assistant Application on an Android Platform, *IEEE SoutheastCon 2013*, Apr. 2013.
24. B. Furht, V. Aalo, V. Aalo, A. Agarwal, I. Cardei, M. Cardei, N. Erdol, S. Huang, H. Kalva, T. Khoshgoftaar, I. Mahgoub, O. Marques, M. Petrie, D. Raviv, V. Ungvichian, H. Zhu, Creating Entrepreneurial University, *International Conference of Education, Research and Innovation (ICERI 2013)*, Nov. 2013.
25. D. Rashkin, I. Cardei, M. Cardei, F. Dalglish, and T. Giddings, Detector Noise Model Verification for Undersea Free Space Optical Data Links, *MTS/IEEE Oceans 2012*, Oct. 2012.
26. M. Cardei, A. Marcus, I. Cardei, and T. Tavtilov, Web-based Heterogeneous WSN Integration using Pervasive Communication, *IEEE International Performance Computing and Communications Conference (IPCCC 2011)*, Nov. 2011.
27. M. Cardei, E. B. Fernandez, A. Sahu, and I. Cardei, A Pattern for Sensor Network Architectures, *Asian Conference on Pattern Languages of Programs (AsianPLoP 2011)*, Oct. 2011.
28. A. Ambrose, M. Cardei, and I. Cardei, Patient-centric Hurricane Evacuation Management System, *IEEE International Performance Computing and Communications Conference (IPCCC 2010)*, Dec. 2010.

29. M. Fonoage, M. Cardei, and A. Ambrose, A QoS Based Routing Protocol for Wireless Sensor Networks, *IEEE International Performance Computing and Communications Conference (IPCCC 2010)*, Dec. 2010.
30. A. Sahu, E. B. Fernandez, M. Cardei, and M. VanHilst, A Pattern for a Sensor Node, *Conference on Pattern Languages of Programs (PLoP 2010)*, Oct. 2010.
31. M. Marta, Y. Yang, and M. Cardei, Energy-efficient Composite Event Detection in WSNs, *International Conference on Wireless Algorithms, Systems and Applications (WASA'09)*, Aug. 2009.
32. Y. Yang, A. Ambrose, and M. Cardei, Sensor Scheduling Mechanisms for Composite Event Detection in Wireless Sensor Networks, *INFOCOM 2009, Student Workshop*, Apr. 2009.
33. Y. Yang and M. Cardei, Sensor Deployment for Composite Event Detection in Mobile WSNs, *International Conference on Wireless Algorithms, Systems and Applications (WASA'08)*, Oct. 2008.
34. M. Marta and M. Cardei, Using Sink Mobility to Increase Wireless Sensor Networks Lifetime, *IEEE Intl. Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM'08)*, Jun. 2008.
35. M. Cardei, Y. Yang, and J. Wu, Non-Uniform Sensor Deployment in Mobile Wireless Sensor Networks, *IEEE Intl. Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM'08)*, Jun. 2008.
36. S. Yang, J. Wu, and M. Cardei, Efficient Broadcast in MANETs Using Network Coding and Directional Antennas, *IEEE INFOCOM 2008*, Apr. 2008.
37. J. Wu, S. Yang, and M. Cardei, On Maintaining Sensor-Actor Connectivity in Wireless Sensor and Actor Networks, *IEEE INFOCOM 2008*, Apr. 2008.
38. Y. Yang and M. Cardei, Movement-Assisted Sensor Redeployment Scheme for Network Lifetime Increase, *ACM/IEEE Intl. Symposium on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWIM'07)*, Oct. 2007.
39. M. Cardei, J. Wu, and S. Yang, Fault-Tolerant Topology Control for Heterogeneous Wireless Sensor Networks, *IEEE Intl. Conf. on Mobile Ad-hoc and Sensor Systems (MASS'07)*, Oct. 2007.
40. M. Cardei, M. O. Pervaiz, and I. Cardei, Energy-Efficient Range Assignment in Heterogeneous Wireless Sensor Networks, *International Conference on Wireless and Mobile Communications (ICWMC'06)*, Jul. 2006.



41. W. Awada and M. Cardei, Energy-Efficient Data Gathering in Heterogeneous Wireless Sensor Networks, *IEEE Intl. Conf. on Wireless and Mobile Computing, Networking and Communications (WiMob'06)*, Jun. 2006.
42. S. Yang, F. Dai, M. Cardei, and J. Wu, On Multiple Point Coverage in Wireless Sensor Networks, *The 2nd IEEE Intl. Conf. on Mobile Ad-hoc and Sensor Systems (MASS'05)*, Nov. 2005 (**Best Paper Award**).
43. M. Lu, J. Wu, M. Cardei, and M. Li, Energy-Efficient Connected Coverage of Discrete Targets in Wireless Sensor Networks, *International Conference on Computer Networks and Mobile Computing (ICCNMC'05)*, Aug. 2005.
44. M. Cardei, J. Wu, M. Lu, and M. O. Pervaiz, Maximum Network Lifetime in Wireless Sensor Networks with Adjustable Sensing Ranges, *IEEE Intl. Conf. on Wireless and Mobile Computing, Networking and Communications (WiMob'05)*, Aug. 2005.
45. J. Wu, M. Cardei, F. Dai, and S. Yang, Extended Dominating Set in Ad Hoc Networks Using Cooperative Communication, *NETWORKING 2005*, May 2005.
46. M. Cardei, M. Thai, Y. Li, and W. Wu, Energy-Efficient Target Coverage in Wireless Sensor Networks, *IEEE INFOCOM 2005*, Mar. 2005, Miami, USA.
47. M. Cardei, J. Wu and S. Yang, Topology Control in Ad hoc Wireless Networks with Hitch-hiking, *The First IEEE International Conference on Sensor and Ad hoc Communications and Networks (SECON04)*, Oct. 2004, Santa Clara, USA.
48. M. Cardei, J. Wu and S. Yang, Low Power Hitch-hiking Broadcast in Ad Hoc Wireless Networks, *NSF International Workshop on Theoretical Aspects of Wireless Ad Hoc, Sensor and Peer-to-Peer Networks (TAWN04)*, Jun. 2004, Chicago, USA.
49. X. Cheng, M. Cardei, J. Sun, and D.-Z. Du, Energy Efficient Topology for Ad Hoc Wireless Networks, *NSF International Workshop on Theoretical and Algorithmic Aspects of Sensor, Ad Hoc Wireless and Peer-to-Peer Networks*, Feb. 2004, Florida, USA.
50. M. Cardei, X. Cheng, X. Cheng, and D.-Z. Du, Connected domination in ad hoc wireless networks, *Sixth International Conference on Computer Science and Informatics (CS&I 2002)*, Mar. 2002, North Carolina, USA.
51. M. Cardei, X. Cheng, X. Cheng, and D.-Z. Du, A Tale on Guillotine Cut, *Proceedings of Novel Approaches to Hard Discrete Optimization*, pp. 41-54, Apr. 2001, Ontario, Canada.
52. M. Cardei, I. Cardei, R. Jha, and A. Pavan, Hierarchical Feedback Adaptation for Real-Time Sensor-based Distributed Applications, *The 3rd IEEE International Symposium on Object-oriented Real-time distributed Computing (ISORC)*, Mar. 2000, California, USA.

53. I. Cardei, R. Jha, M. Cardei, and A. Pavan, Hierarchical Architecture For Real-Time Adaptive Resource Management, *The IFIP/ACM International Conference on Distributed Systems Platforms and Open Distributed Processing*, Apr. 2000, New York, USA.

## Journal Articles

1. C. Aranzazu-Suescun and M. Cardei, Energy-efficient Weak-Barrier Coverage with Adaptive Sensor Rotation, *Journal of Combinatorial Optimization*, DOI: 10.1007/s10878-019-00491-1.
2. C. Aranzazu-Suescun and M. Cardei, Anchor-based Routing Protocol with Dynamic Clustering for Internet of Things WSNs, *Eurasip Journal on Wireless Communications and Networking*, <https://doi.org/10.1186/s13638-019-1447-8>, <https://rdcu.be/bDXEb>, 2019.
3. C. Aranzazu-Suescun and M. Cardei, Distributed Algorithms for Event Reporting in Mobile-Sink WSNs for Internet of Things, *Tsinghua Science and Technology*, Vol. 22, No. 4, pp. 413 - 426, Aug. 2017.
4. Y. Wu and M. Cardei, Distributed Algorithms for Barrier Coverage via Sensor Rotation in Wireless Sensor Networks, *Journal of Combinatorial Optimization*, DOI: 10.1007/s10878-016-0055-3, 2016.
5. Y. Wu and M. Cardei, Multi-Channel Approaches for Wireless Sensor Networks, *Computer Communications Journal (Elsevier)*, DOI: 10.1016/j.comcom.2016.08.010, Vol. 94, pp. 30 – 45, Nov. 2016.
6. Y. Wu and M. Cardei, Distributed Algorithms for a Robust Topology using Reconfigurable Radios Wireless Sensor Networks, *International Journal of Sensor Networks (IJSNet)*, DOI: 10.1504/IJSNET.2016.10001264, 2016.
7. A. Mihnea and M. Cardei, Efficient Wireless Communication in Grid Networks, *International Journal of Interdisciplinary Telecommunications and Networking (IJITN)*, Vol. 7(3), pp. 57-79, 2015.
8. A. Mihnea and M. Cardei, Robustness to Multiple Primary Users and Balanced Channel Assignment in Cognitive Radio Networks, *International Journal of Computer and Communication System Engineering (IJCCSE)*, Vol. 2(3), pp. 553-560, 2015.
9. F. Dalglish, J. Shirron, D. Rashkin, T. Giddings, A. Vuorenkoski, I. Cardei, B. Ouyang, F. Caimi, M. Cardei, A Physical Layer Simulator for Undersea Free Space Laser Communications, *Optical Engineering* 53(5), DOI: 10.1117/1.OE.53.5.051410, Apr. 2014.
10. A. Ambrose, M. Cardei, and I. Cardei, HEMS, a Hurricane Evacuation Management System, *Ad Hoc & Sensor Wireless Networks*, Old City Publishing, Vol. 17, No. 1-2, pp. 143 – 167, 2013.

11. A. Marcus, M. Cardei, I. Cardei, E. Fernandez, F. Frati, E. Damiani, A Pattern for Web-based WSN Monitoring, *Journal of Communications*, Vol. 6, No. 5, pp. 393-399, Aug. 2011.
12. Y. Yang, A. Ambrose, and M. Cardei, Coverage for Composite Event Detection in Wireless Sensor Networks, *Wireless Communications and Mobile Computing*, *Wireless Communications and Mobile Computing*, Wiley InterScience, Vol. 11, Issue 8, pp. 1168-1181, Aug. 2011.
13. Y. Yang and M. Cardei, Adaptive Energy Efficient Sensor Scheduling for Wireless Sensor Networks, *Optimization Letters*, Springer, ISSN 1862-4472, Vol. 4, No. 3, pp. 359-369, Aug. 2010.
14. Y. Yang and M. Cardei, Delay-Constrained Energy-Efficient Routing in Heterogeneous Wireless Sensor Networks, *International Journal of Sensor Networks*, Vol. 7, No. 4, pp. 236-247, 2010.
15. Y. Yang, M. Fonoage, and M. Cardei, Improving Network Lifetime with Mobile Wireless Sensor Networks, *Computer Communications Journal (Elsevier)*, Vol. 33, No. 4, pp. 409-419, Mar. 2010.
16. M. Marta and M. Cardei, Improved Sensor Network Lifetime with Multiple Mobile Sinks, *Elsevier Journal of Pervasive and Mobile Computing*, Vol. 5, No. 5, pp. 542-555, Oct. 2009.
17. M. Lu, J. Wu, M. Cardei, and M. Li, Energy-Efficient Connected Coverage of Discrete Targets in Wireless Sensor Networks, *International Journal of Ad Hoc and Ubiquitous Computing (IJAHUC)*, Vol. 4, No. 3/4, pp. 137-147, 2009.
18. M. Cardei, S. Yang, and J. Wu, Algorithms for Fault-Tolerant Topology in Heterogeneous Wireless Sensor Networks, *IEEE Transactions on Parallel and Distributed Systems*, Vol. 19, No. 4, pp. 545-558, Apr. 2008.
19. I. Cardei and M. Cardei, Energy-Efficient Connected-Coverage in Wireless Sensor Networks, *International Journal of Sensor Networks (IJSNet)*, Vol. 3, No. 3, 2008.
20. S. Yang, F. Dai, M. Cardei, J. Wu, and F. Patterson, On Connected Multiple Point Coverage in Wireless Sensor Networks, *Intl. Journal of Wireless Information Networks (IJWIN)*, Vol. 13, No. 4, pp. 289-301, Oct. 2006.
21. I. Cardei, M. Cardei, L. Wang, B. Xu, and D.-Z. Du, Optimal Relay Location for Energy Constrained Wireless Ad-hoc Networks, *Journal of Global Optimization*, Vol. 36, No. 3, pp. 391-399, Nov. 2006.
22. M. Cardei, J. Wu, and M. Lu, Improving Network Lifetime using Sensors with Adjustable Sensing Ranges, *International Journal of Sensor Networks (IJSNet)*, Vol. 1, No. 1/2, pp. 41-49, 2006.

23. J. Wu, M. Cardei, F. Dai, and S. Yang, Extended Dominating Set and Its Applications in Ad Hoc Networks Using Cooperative Communication, *IEEE Transactions on Parallel and Distributed Systems*, Vol. 17, No. 8, Aug. 2006.
24. M. Cardei, J. Wu, and S. Yang, Topology Control in Ad hoc Wireless Networks using Cooperative Communication, *IEEE Transactions on Mobile Computing*, Vol. 5, No. 6, pp. 711-724, Jun. 2006.
25. M. Cardei, Energy-efficient Scheduling and Hybrid Communication Architecture for Underwater Littoral Surveillance, *Computer Communications Journal (Elsevier)*, Vol. 29, No. 17, pp. 3354-3365, 2006.
26. M. Cardei and J. Wu, Energy-Efficient Coverage Problems in Wireless Ad Hoc Sensor Networks, *Computer Communications Journal (Elsevier)*, Vol. 29, No. 4, pp. 413-420, Feb. 2006.
27. M. Cardei and D.-Z. Du, Improving Wireless Sensor Network Lifetime through Power Aware Organization, *ACM Wireless Networks*, Vol. 11, No. 3, pp. 333-340, May 2005.
28. M. X. Cheng, M. Cardei, J. Sun, X. Cheng, L. Wang, Y. Xu, and D.-Z. Du, Topology Control of Ad Hoc Wireless Networks for Energy Efficiency, *IEEE Transactions on Computers*, Vol. 53, No. 12, Dec. 2004.
29. I. Cardei, S. Varadarajan, A. Pavan, L. Graba, M. Cardei, and M. Min, Resource Management for Ad-hoc Wireless Networks with Cluster Organization, *Cluster Computing*, Vol. 7, No. 1, pp. 91-103, Jan. 2004.
30. H. Qiao, L. Kang, M. Cardei, and D.-Z. Du, Paired-domination of Trees, *Journal of Global Optimization*, Vol. 25, No. 1, pp. 43-54, Jan. 2003.
31. M. Cardei, D. MacCallum, X. Cheng, M. Min, X. Jia, D. Li, and D.-Z. Du, Wireless Sensor Networks with Energy Efficient Organization, *Journal of Interconnection Networks*, Vol. 3, No. 3-4, pp. 213-229, Dec. 2002.
32. J. Kim, M. Cardei, I. Cardei, and X. Jia, A Polynomial Time Approximation Scheme for the Grade of Service Steiner Minimum Tree Problem, *Journal of Global Optimization*, Vol. 24, No. 4, pp.439-450, Dec. 2002.
33. A. Pavan, R. Jha, L. Graba, S. Cooper, I. Cardei, M. Cardei, V. Gopal, S. Parthasarathy, and S. Bedros, Real-Time Adaptive Resource Management, *IEEE Computer*, Jul. 2001.

## Special Issue

1. J. Wu and M. Cardei (eds.), Theoretical and Algorithmic Aspects of Sensor, Ad Hoc Wireless, and Peer-to-Peer Networks, special issue in *Journal of Parallel and Distributed Computing (JPDC)*, Vol. 65, No. 2, Feb. 2005.

## Book & Book Chapters

1. C. Aranzazu-Suescun and M. Cardei, Data Gathering in Wireless Sensor Networks, *Encyclopedia of Wireless Networks*, Shen X., Lin X., Zhang K. (eds.), Springer 2019, DOI: [https://doi.org/10.1007/978-3-319-32903-1\\_257-1](https://doi.org/10.1007/978-3-319-32903-1_257-1).
2. A. Mihnea and M. Cardei, Multi-Channel Wireless Sensor Networks, *Recent Development in Wireless Sensor and Ad-hoc Networks*, S. Patnaik, X. Li, and Y.-M. Yang (eds.), Springer, 2015, ISBN: 978-81-322-2129-6.
3. M. Cardei, Coverage Problems in Sensor Networks, *Handbook of Combinatorial Optimization* (2nd Edition), P. M. Pardalos, D. Z. Du, and R. Graham (eds.), Springer, 2013, ISBN: 978-1-4419-7996-4.
4. A. Ambrose and M. Cardei, Sensor Networks in Healthcare, *Pervasive Communications Handbook*, S. Shah, M. Ilyas, and H. Mouftah (eds.), CRC Press, Nov. 2011, ISBN: 9781420051094.
5. M. I. Fonoage and M. Cardei, Low Rate Wireless Personal Area Networks using IEEE 802.15.4, *Encyclopedia of Wireless and Mobile Communications*, B. Furht (ed.), CRC Press, Taylor & Francis Group, 2010.
6. Y. Yang and M. Cardei, Sensor Scheduling and Redeployment Mechanisms in Wireless Sensor Networks, in *Biomedical and Environmental Sensing*, J. I. Agbinya et al (eds.), River Publishers Series in Information Science and Technology, 2009, ISBN: 978-87-92329-28-8.
7. A. Srinivasan, J. Teitelbaum, J. Wu, M. Cardei, and H. Liang, Reputation-and-Trust-Based Systems for Ad Hoc Networks, in *Algorithms and Protocols for Wireless, Mobile Ad Hoc Networks*, A. Boukerche (ed.), Wiley, 2008, ISBN: 978-0-470-38358-2.
8. M. Cardei and Y. Yang, Heterogeneous Wireless Sensor Networks, *Encyclopedia of Wireless and Mobile Communications*, B. Furht (ed.), CRC Press, Taylor & Francis Group, 2008, ISBN: 1420043269.
9. J. Ibriq, I. Mahgoub, M. Ilyas, and M. Cardei, Key Management Schemes in Wireless Sensor Networks, *Encyclopedia of Wireless and Mobile Communications*, B. Furht (ed.), CRC Press, Taylor & Francis Group, 2008, ISBN: 1420043269.

10. B. Wu, J. Wu, and M. Cardei, A Survey of Key Management in Mobile Ad Hoc Networks, *Handbook of Research on Wireless Security*, Y. Zhang, J. Zheng, and M. Ma (eds.), Idea Group Inc., Jan. 2008, ISBN: 978-1-59904-899-4.
11. M. O. Pervaiz, M. Cardei, and J. Wu, Security in Wireless Local Area Networks, in *Security in Distributed and Networking Systems*, Y. Xiao and Y. Pan (eds.), World Scientific Publishing Co., Computer and Network Security, Aug. 2007, ISBN: 978-981-270-807-6.
12. M. O. Pervaiz, M. Cardei, and J. Wu, Routing Security in Ad Hoc Wireless Networks, accepted to appear in *Network Security*, S. Huang, D. MacCallum, and D.-Z. Du (eds.), Springer, Mar. 2008, ISBN: 978-0-387-73820-8.
13. A. A. Humos, M. Cardei, B. Alhalabi, and S. Hsu, Medium Access Control Protocols for Wireless Sensor Networks, *Wireless Sensor Networks and Applications*, Y. Li, M. Thai, and W. Wu (eds.), Springer, Signals and Communication Technology, 2007, ISBN: 978-0-387-49591-0.
14. B. Wu, J. Chen, J. Wu, and M. Cardei, A Survey of Attacks and Countermeasures in Mobile Ad Hoc Networks, in *Wireless/Mobile Network Security*, Y. Xiao, X. Shen, and D. -Z. Du (eds.), Springer, Network Theory and Applications, Vol. 17, 2006, ISBN: 0-387-28040-5.
15. M. Cardei, I. Cardei, and D.-Z. Du (eds.), *Resource Management in Wireless Networking*, Springer, Network Theory and Applications, Vol. 16, 2005, ISBN: 0-387-23807-7.
16. M. Cardei and J. Wu, Coverage in Wireless Sensor Networks, in *Handbook of Sensor Networks*, M. Ilyas and I. Mahgoub (eds.), CRC Press, 2004, ISBN: 0-8493-1968-4.
17. M. Cardei, I. Cardei, and D.-Z. Du, Energy Efficient Approaches in Wireless Networking, in *Ad Hoc Wireless Networking*, X.Cheng, X. Huang and D.-Z. Du (eds.), Kluwer Academic Publishers, Network Theory and Applications, Vol. 14, 2004, ISBN: 1-4020-7712-2.