

Biographical Sketch: Professor Stephan Olariu

Summary

Professor Olariu has held many different roles and responsibilities as a member of numerous organizations and teams. Much of his experience has been with the design and implementation of robust protocols for wireless networks and in particular sensor networks and their applications. He is applying mathematical modeling and analytical frameworks to the resolution of problems ranging from securing communications, to predicting the behavior of complex systems, to evaluating performance of wireless networks. His research interests are in the area of complex systems enabled by large-scale deployments of sensors and more specifically in securing systems of systems.

Professor Olariu is a world-renowned technologist in the areas of wireless networks, mobile multimedia systems, parallel and distributed systems, parallel and distributed architectures and networks. He was invited and visited more than 120 universities and research institutes around the world lecturing on topics ranging from wireless networks and mobile computing, to biology-inspired algorithms and applications, to telemedicine, to wireless location systems, and security. He is the Director of the Sensor Networks Research Group at Old Dominion University.

He has coauthored/edited four books: *Solutions to Parallel and Distributed Computing Problems: Lessons from Biological Sciences* (with A. Zomaya and F. Ercal), Wiley and Sons, New York, 2001, ISBN 0471353523, *Numerical Simulations and Case Studies*, (with S. Salleh, A. Zomaya and B. Sanugi), Wiley and Sons, New York, 2005, ISBN 0-471-69461-4, *Handbook of Bio-inspired Algorithms and Applications*, (with A. Zomaya), ISBN 1-584-88475-4, *Wireless Sensor Networks and Applications*, Cambridge University Press, to appear 2006, with four more books in preparation. He has also published 200+ articles in archival journals and 200+ papers in conference proceedings.

Professor Olariu is an Associate Editor of *Networks* and *IEEE Transactions on Parallel and Distributed Systems* and serves on the editorial board of *Journal of Parallel and Distributed Computing*, *Journal of Ad hoc and Sensor Networks*, and *Parallel, Emergent and Distributed Systems*

Research Interests

My current research interests are in the area of wireless communications and more specifically wireless sensor networks with applications to information security. Promises of ubiquitous control of the physical environment by sensor networks open avenues for new applications that will redefine the way we live and work. Due to the small size and low cost of sensor devices, visionaries promise systems enabled by deployment of massive numbers of sensors working in concert. Recent sensor network research has concentrated on developing techniques for performing relatively simple tasks with minimal energy expense, assuming some form of centralized control. Unfortunately, centralized control does not scale to massive size networks and execution of simple tasks in sparse networks will not lead to the sophisticated applications predicted.

Quite recently, Professor Olariu has proposed a new way of looking at sensor networks motivated by lessons learned from the way biological ecosystems are organized. We demonstrate that in such a model, fully distributed synchronization can be performed in a scalable fashion in massively deployed sensor networks, where individual nodes operate based on local information, making local decisions that are aggregated across the network to achieve a globally-meaningful effect.

Professional Degrees

McGill University, Montreal	Computer Science	BS, 1982
McGill University, Montreal	Computer Science	MSc, 1983
McGill University, Montreal	Computer Science	PhD, 1986

Appointments

Professor, Dept of Computer Science, Old Dominion University, 1997 – present;
Associate Professor, Dept of Computer Science, Old Dominion University, 1992 – 1997;
Assistant Professor, Dept of Computer Science, Old Dominion University, 1986 –1992;
Visiting Professor, Department of Informatics, University of Paris 13, June 2005 – August 2005;
Visiting Professor, CNR, Pisa, Italy, May 2004 – August 2004;
Visiting Professor, Humboldt University, Berlin, Germany, July 2003 – December 2003;
Visiting Professor, University La Sapienza Rome, Italy, August 1997 - December 1997;
Visiting Professor, Universite de Bordeaux, France, August 1993 – December 1993.

Publications

Selected refereed publications (2001-2006)

Books:

1. S. Olariu, *Wireless Sensor Networks and Applications*, Cambridge University Press, 2006.
2. S. Olariu and A. Y. Zomaya, Eds., *Handbook of Bioinspired Algorithms and Applications*, CRC Press, Boca Raton, Florida, 2005.
3. S. Salleh, A. Y. Zomaya, S. Olariu and B. Sanugi, *Numerical Simulations and Case Studies Using C++.NET*, Wiley and Sons, 2005.
4. S. Y. Zomaya, F. Ercal and S. Olariu, Eds., *Solutions to Parallel and Distributed Computing Problems: Lessons from Biological Sciences*, Wiley and Sons, 2001.

Book Chapters:

1. L. Wang and S. Olariu, Hybrid Routing Protocols for Mobile Ad-hoc Networks, in Z. H. Du, I. Cardei and M. Cardei (Eds.), *Resource Management in Wireless Networks*, Springer Verlag, 2006, ISBN: 0-387-23807-7.
2. L. Wang and S. Olariu, Towards a General-Purpose Virtual Infrastructure for Mobile Ad-hoc Networks, in Y. Xiao and Y. Pan (Eds.), *Ad Hoc and Sensor Networks*, Nova Science Publishers, 2006, ISBN: 1-59454-396-8.
3. M. Eltoweissy, S. Olariu, A. Wadaa, and L. Wilson, Security in Wireless Sensor Networks, in H. Bidgoli (Ed.), *Handbook of Information Security*, John Wiley and Sons, 2006, ISBN: 0-471-64833-7.
4. D. Gracanin, M. Eltoweissy, S. Olariu, and A. Wadaa, Dependability Support in Wireless Sensor Networks, in H. Diab and A.Y. Zomaya, Eds, *Dependable Systems*, John Wiley and Sons, 2006, ISBN: 0-471-67422-2.
5. S. Olariu, K. Maly, E.C. Foudriat, S. M. Yamany and T. Luckenbach, A Dependable Architecture for Telemedicine in Support of Disaster Relief, in H. Diab and A.Y. Zomaya, Eds, *Dependable Systems*, John Wiley and Sons, 2006, ISBN: 0-471-67422-2.
6. S. Olariu, Q. Xu, A. Wadaa and I. Stojmonovic, A Virtual Infrastructure for Wireless Sensor Networks, in I. Stojmenovic, Ed., *Handbook of Sensor Networks*, Wiley and Sons, 2005, 107-140.

7. M. El-Kadi Rizvi and S. Olariu, QoS Provisioning in Multi-Class Multimedia Wireless Networks, in A. Boukerche, Ed., *Handbook of Algorithms for Mobile and Wireless Networking and Computing*, CRC Press, Boca Raton, 2005.
8. S. Olariu, QoS provisioning Strategies in LEO Satellites, in M. Cheng, Y. Li, and D.-Z. Du (Eds.), *Combinatorial Optimization in Communication Networks*, Kluwer Academic Publishers, Dordrecht, The Netherlands, 2005.
9. A. Wadaa, K. Jones, S. Olariu, L. Wilson and M. Eltoweissy, A Scalable Solution for Securing Wireless Sensor Networks, J. Wu, (Ed.), *Handbook on Theoretical and Algorithmic Aspects of Sensor, Ad Hoc Wireless, and Peer-to-Peer Networks*, CRC Press, Boca Raton, 2005.
10. K. H. Jones, K. N. Lodding, A. Wadaa, S. Olariu, L. Wilson, M. Eltoweissy, Biomimetic Models for Sensor Networks - Towards a Social Sensor Network, S. Olariu and A. Y. Zomaya, Eds., *Handbook of Bio-Inspired Algorithmic and Applications*, CRC Press, Boca Raton, 2005.
11. S. Olariu and A. Y. Zomaya, An Overview of Mobile Communications and Computing, in A. E Abdallah (Ed), Springer Verlag, LNCS Volume 2947, State of the Art Series, Berlin Heidelberg, 2005.
12. A. Markhasin, S. Olariu, and P. Todorova, QoS-Oriented MAC Protocols for Future Mobil Applications, in M. Khosrow-Pour, (Ed.), *Encyclopedia of Information Science and Technology*, Idea Publishing Group, Hershey, PA, 2005, 2373-2377.
13. L. Wang and S. Olariu, Hybrid Routing Protocols for Mobile Ad-hoc Networks, in Z. H. Du, I. Cardei and M. Cardei (Eds.), *Resource Management in Wireless Networks*, Springer Verlag, 2005.
14. L. Wang and S. Olariu, Towards a General-Purpose Virtual Infrastructure for Mobile Ad-hoc Networks, in Y. Xiao and Y. Pan (Eds.), *Ad Hoc and Sensor Networks*, Nova Science Publishers, 2005.
15. M. Eltoweissy, S. Olariu, A. Wadaa, and L. Wilson, Security in Wireless Sensor Networks, in H. Bidgoli (Ed.), *Handbook of Information Security*, John Wiley and Sons, 2006.
16. D. Gracanin, M. Eltoweissy, S. Olariu, and A. Wadaa, Dependability Support in Wireless Sensor Networks, in *Dependable Computing Systems: Paradigms, Performance Issues, and Applications*, (H. B. Diab and A. Y. Zomaya, eds.), ch. 23, John Wiley and Sons, 2005.
17. S. Olariu, K. Maly, E.C. Foudriat, S. M. Yamany and T. Luckenbach, A Dependable Architecture for Telemedicine in Support of Disaster Relief, in H. Diab and A.Y. Zomaya, Eds, *Dependable Systems*, John Wiley and Sons, 2005.
18. A. Markhasin, S. Olariu, and P. Todorova, Distributed QoS-Aware All-IP/ATM Architecture for Future Global Mobile Commerce Applications, in Shi Nansi, Editor, *Mobile Commerce Applications*, Idea Publishing Group, Hershey, PA, 2004.
19. M. Moharrum, S. Olariu, and H. Abdel-Wahab, Retrieval of Multimedia Data on the Web: An Architectural
20. K. Nakano and S. Olariu, Leader Election Protocols for Radio Networks, in I. Stojmenovic Ed. *Handbook of Wireless Networks and Mobile Computing*, John Wiley and Sons, New York, 2002, 219-242.
21. K. Nakano and S. Olariu, Randomized Initialization Protocols for Radio Networks, in I. Stojmenovic Ed., *Handbook of Wireless networks and Mobile Computing*, John Wiley and Sons, New York, 2002, 195-218.

Papers:

1. S. Olariu and I. Stojmenovic, Design Guidelines for Maximizing Lifetime and Avoiding Energy Holes in Sensor Networks with Uniform Distribution and Uniform Reporting, *Proc. IEEE INFOCOM*, Barcelona, Spain, April 2006.
2. D. G. Corneil, E. Koehler, S. Olariu and L. Stewart, On Subfamilies of AT-Free Graphs, *SIAM Journal on Discrete Mathematics*, **20**(1), (2006), 241-253
3. M. Younis, W. Youssef, M. Eltoweissy and S. Olariu, Safety- and QoS-Aware Management of Heterogeneous Sensor Networks, *Journal of Interconnection Networks*, Special Issue on Heterogenous Wireless Ad Hoc Networks, **7**, (2006), 179-193.
4. S. Olariu, K. Maly, E.C. Foudriat, C. M. Overstreet, S. M. Yamany and T. Luckenbach, Telemedicine for Disaster Relief: A Novel Architecture, *Journal of Mobile Multimedia*, **1**, (2006), 285--306.
5. S. Olariu and J. Nickerson, Integration: Reaching consensus in low-diameter wireless networks, *Proc. IEEE MILCOM*, Washington, DC, October 2006.

6. S. Rizvi, M. Rizvi and S. Olariu, RADAR -- A Novel Admission Control and Handoff Management Scheme for Multimedia LEO Satellite Networks, *Proc. IEEE MILCOM*, Washington, DC, October 2006.
7. M. Eltoweissy, A. Wadaa, S. Olariu and L. Wilson, Group Key Management Scheme for Large-Scale Sensor Networks, *Journal of Ad Hoc Networks*, **3**, (2005), 668-688.
8. S. Olariu and Q. Xu, A Simple and Robust Virtual Infrastructure for Massively Deployed Wireless Sensor networks, *Computer Communications*, **28**, (2005), 1505-1516.
9. S. Olariu, M. Eltoweissy, A. Wadaa, Q. Xu, A. Y. Zomaya, Protecting the Communication Structure in Sensor Networks, *International Journal of Distributed Sensor Networks*, **1**, (2005), 187-204.
10. Wadaa, S. Olariu, L. Wilson, M. Eltoweissy, and K. Jones, Training a Sensor Network, *Journal of Mobile Networks and Applications*, **10**, (2005), 151-167.
11. L. Wang and S. Olariu, Cluster Maintenance in Mobile Ad-hoc Networks, *Cluster Computing*, **8**, (2005), 111-118.
12. S. Olariu, R. Shirhatti and A. Zomaya, OSCAR - An Opportunistic Call Admission Protocol for LEO Satellite Networks, *Ad Hoc and Sensor Wireless Networks*, **1**, (2005), 255-275.
13. J. Nickerson and S. Olariu, A Measure for Integration and its Application to Sensor Networks, *Proc. 15-th Annual Workshop on Information Technologies and Systems*, (WITS'05), Las Vegas, Nevada, December 2005.
14. Q. Xu, R. Ishak, S. Olariu, and S. Salleh, On Asynchronous Training in Wireless Sensor Networks, *Proc. 3-rd International Conference on Advances in Mobile Multimedia*, (MoMM2005), Kuala Lumpur, Malaysia, September 2005.
15. R. Ishak, S. Salleh, S. Olariu, and M. I. Abd-Aziz, SPLAI: A Sensor Network Model for Two-Dimensional Finite Element Problem, *Proc. 3-rd International Conference on Advances in Mobile Multimedia*, (MoMM2005), Kuala Lumpur, Malaysia, September 2005.
16. S. Olariu and J. Nickerson, Protecting with Sensor Networks: Perimeters and Axes, *Proc. IEEE MILCOM*, Philadelphia, PA, October 2005.
17. K. H. Jones, K. N. Lodding, S. Olariu, L. Wilson, and C. Xin, Biology-Inspired Distributed Consensus in Massively-Deployed Sensor Networks, *Proc. 4-th International Conference on AD-HOC Networks*, Cancun, Mexico, October 2005.
18. K. H. Jones, K. N. Lodding, S. Olariu, L. Wilson, and C. Xin, Energy Usage in Biomimetic Models for Massively-Deployed Sensor Networks, *Proc. 1st IEEE Workshop on Mobile Ad-hoc and Ubiquitous Sensor Networks*, Nanjin, China, November 2005.
19. K. H. Jones, K. N. Lodding, S. Olariu, L. Wilson, and C. Xin, Sensor Networks for Situation management: A Biomimetic Model, *Proc. IEEE MILCOM*, Philadelphia, PA, October 2005.
20. K. Naik, D. S. L. Wei, and S. Olariu, Channel Assignment in Cellular Networks with Synchronous Base Stations, *Proc. 2nd ACM Workshop on Performance Evaluation of Wireless Ad Hoc, Sensor, and Ubiquitous Networks*, Montreal, Canada, October 2005.
21. S. Olariu and I. Stojmenovic, Design Guidelines for Avoiding Energy Holes in Sensor Networks, *Proc. 1st International Workshop on Sensor networks and Systems for Pervasive Computing*, (PerSens'2005), Kauai, Hawaii, March 8-12, 2005.
22. M. Rizvi and S. Olariu, A Multimedia Session-Aware QoS Provisioning Scheme for Cellular Networks, *Proc. IEEE Multimedia on Mobile Devices*, San Jose, California, January 2005.
23. S. Olariu, Q. Xu and A. Zomaya, An Energy-Efficient Self-Organization Protocol for Wireless Sensor Networks, *Proc. International Conference on Intelligent Sensors and Sensor Networks*, Melbourne, Australia, December 2004.
24. M. Eltoweissy, S. Olariu, and A. Wadaa, gWiSe: Group Key Management Protocol for Wireless Sensor Networks, *Proc. IEEE International Computer Engineering Conference*, (ICENCO'04), Cairo, Egypt, December 2004.
25. S. Olariu, A. Wadaa, L. Wilson, Q. Xu, M. Eltoweissy, and K. Jones, Providing Holistic Security in Sensor Networks, *Proc. Workshop on Challenges of Mobility*, Toulouse, France, August 2004.
26. A. Wadaa, S. Olariu, L. Wilson, M. Eltoweissy and K. Jones, On Providing Anonymity in Wireless Sensor Networks, *Proc. 10th International Conference on Parallel and Distributed Systems*, (ICPADS-2004), Newport Beach, California, July 2004.
27. S. Olariu, K. Maly, E. Foudriat, and S. Yamani, Wireless Support for Telemedicine in Disaster Management, Workshop on QoS and Dynamic Systems, *Proc. 10th International Conference on Parallel and Distributed Systems*, (ICPADS-2004), Newport Beach, California, July 2004.

28. I.-H. Bae, S.-J. Oh, and S. Olariu, A Fuzzy Logic Based Location Management Method for Mobile Networks, *Software Engineering Research and Applications*, LNCS 3026, Springer-Verlag, Berlin, Heidelberg, June 2004.
29. S. Olariu, A. Wadaa, L. Wilson, M. Eltoweissy, and K. Jones, Traffic Anonymity in Wireless Sensor Networks, *Proc. IEEE Workshop on Energy-Efficient Wireless Computing and Networking*, (EWCN), Phoenix, Arizona, April 2004.
30. D. Gracanin, M. Eltoweissy, S. Olariu, A. Wadaa, On Modeling Wireless Sensor Networks, *Proc. International Workshop on Wireless, Mobile and Ad Hoc Networks*, (WMAN)}, Santa Fe, April 2004.
31. S. Olariu, A. Wadaa, L. Wilson, and M. Eltoweissy, Wireless Sensor Networks: Leveraging the Virtual Infrastructure, *IEEE Network*, **18**, (2004), 51-56.
32. L. Wang and S. Olariu, A Two-Zone Hybrid Routing Protocol for Mobile Ad Hoc Networks, *IEEE Transactions on Parallel and Distributed Systems*, **15**, (2004), 1105-1116.
33. S. Olariu and P. Todorova, QoS on LEO Satellites: A Resource Reservation Framework for Mobile Commerce, *IEEE Potential*, August/September 2004, 11--18
34. L. Wang and S. Olariu, A Unifying Look at Clustering in Mobile Ad Hoc Networks, *Wireless Communications and Mobile Computing*, **4**, (2004), 623-637.
35. D. Gracanin, M. Eltoweissy, S. Olariu, A. Wadaa, On Modeling Wireless Sensor Networks, *International Workshop on Wireless, Mobile and Ad Hoc Networks* (WMAN'04), Santa Fe, New Mexico, April 2004.
36. S.-J. Oh, S.-K. Chun, I.-H. Bae, and S. Olariu, An Adaptive Distributed Location Management Algorithm for Mobile Networks, *International Journal of Computer and Information Science*, **4**, (2004), 264-273.
37. A. Bertossi, S. Olariu, C. Pinotti, and S.-Q. Zheng, Classifying Matrices Separating Rows and Columns, *IEEE Transactions on Parallel and Distributed Systems*, **15**, (2004), 654-665.
38. S. Campbell, M. Kumar, and S. Olariu, The Hierarchical Cliques Interconnection Network, *Journal of Parallel and Distributed Computing*, **64**, (2004), 16-28.
39. Wadaa, S. Olariu, L. Wilson, and M. Eltoweissy, Scalable key management for secure communications in wireless sensor networks, *Proc. Workshop on Wireless Ad-hoc Networking*, Tokyo, March 2004.
40. K. Jones, A. Wadaa, S. Olariu, L. Wilson, and M. Eltoweissy, Towards a new paradigm for securing wireless sensor networks, *Proc. New Security Paradigms Workshop* (NSPW'04), Ascona, Switzerland, August 2003.
41. E. Foudriat, K. Maly, S. Olariu and P. Todorova, Media Access Using Dynamic Bandwidth System to Improve Satellite Network Uplink Performance, *Wireless Communications and Mobile Computing*, **3**, (2003), 225-238.
42. K. Nakano, S. Olariu, and A. Y. Zomaya, A Time-Optimal Solution for the Path Cover Problem on Cographs, *Theoretical Computer Science*, **290**, (2003), 1541-1556.
43. S. Olariu, S. A. Rizvi, R. Shirhatti, and P. Todorova, Q-Win -- A New Admission and Handoff Management Scheme for Multimedia LEO Satellite Networks, *Telecommunication Systems*, **22**, (2003), 151-168.
44. M. Haydock, S. Olariu, and A. Y. Zomaya, Some Observations on Using Meta-Heuristics for Efficient Location Management in Mobile Computing Networks, *Journal of Parallel and Distributed Computing*, **63**, (2003), 33-44.
45. K. Maly, S. Olariu, N. S. V. Rao, and L. Zhang, Fairness in DQDB Revisited: A New Solution, *Computer Systems*, **18**, (2003), 63-70.
46. Malla, M. El-Kadi, S. Olariu, and P. Todorova, A fair resource allocation protocol for multimedia wireless networks, *IEEE Transactions on Parallel and Distributed Systems*, **14**, (2003), 63-71.
47. K. Nakano and S. Olariu, Uniform leader election for ad hoc networks, *IEEE Transactions on Parallel and Distributed Systems*, **13**, 2002, 516--526.
48. A. Malla, M. El-Kadi, S. Olariu, and P. Todorova, A Fair Resource Allocation Protocol for Multimedia Wireless Networks, *IEEE Transactions on Parallel and Distributed Systems*, **14**, (2003), 63-71.
49. S. Olariu and P. Todorova, Resource Management in LEO Satellite Networks, *IEEE Potential*, **22**, (2003), 6-12.
50. R. Lin, K. Nakano, S. Olariu, and A. Y. Zomaya, A Parallel Prefix Sums Architecture with Domino Logic, *IEEE Transactions on Parallel and Distributed Systems*, **14**, (2003), 922-931.
51. J. Wu and S. Olariu, On Cost-Optimal Merge of Two Intransitive Sorted Sequences, *International Journal of Foundations of Computer Science*, **14**, (2003), 99-106.

52. A. Y. Zomaya, M. Haydock, and S. Olariu, Some Observations on Efficient Location Management in Mobile Computing Networks, *Journal of Parallel and Distributed Computing*, **63**, (2003), 33-44.
53. R. Lin and S. Olariu, Fast Inner-Product Computation on Short Buses, *VLSI Design*, 14, (2002), 337-347.
54. K. Nakano, S. Olariu, A. Zomaya, Energy-Efficient Routing in the Broadcast Communication Model, *IEEE Transactions on Parallel and Distributed Systems*, **13**, (2002), 1201-1210.
55. K. Nakano and S. Olariu, Uniform Leader Election for Radio Networks, *IEEE Transactions on Parallel and Distributed Systems*, **13**, (2002), 516-526.
56. S. Olariu, M. C. Pinotti, and L. Wilson, Greedy Algorithms for Tracking Mobile Users in Special Mobility Graphs, *Discrete Applied Mathematics*, **121**, (2002), 215-227.
57. S. M. Yamani and S. Olariu, Wireless Interactive Medicine (WIRM): The Next Generation of Wireless Telemedicine and Remote Medical Training Applications, *Proc. CCT'2003*, Orlando, Florida, Septembrie 2003.
58. I.-H. Bae and S. Olariu, Design and Evaluation of a Fuzzy Logic-based Location Management Method for Wireless Mobile Networks, *Proc. 4th International Workshop of Mobile Computing*, Rostock, Germany, June 2003.
59. H. N. Nguyen, S. Olariu, and P. Todorova, A Two-Cell Lookahead Call Admission and Handoff Management Scheme for Multimedia LEO Satellite Networks, *Proc. HICSS'36*, January 2003, Big Island of Hawaii.
60. H. N. Nguyen, S. Olariu, and P. Todorova, A Lightweight Call Admission and Handoff Management Scheme for Multimedia LEO Satellite Networks, *Proc. Fifth European Workshop on Mobile/Personal Satcoms (EMPS 2002)*, Baveno, Italy, 25-16 September 2002, 61--68.
61. I.-H. Bae and S. Olariu, Design and Evaluation of a Pointer Forwarding Scheme for Fault-Tolerant Location Management in PCS Networks, *Proc. International Conference on Security and Management, (SAM'02)*, Las Vegas, Nevada, June 2002, 471--478.
62. S. Olariu, A. Yates and A. Y. Zomaya, Fault-Tolerant Recursive Least Squares Computations on a Mesh Connected Parallel Processor, *Journal of Parallel and Distributed Computing*, **62**, (2002), 1142-1167.
63. R. Karpin, S. Olariu, and A. Y. Zomaya, The Single Row Routing Problem Revisited: Solutions Based on Genetic Algorithms, *VLSI Design*, **4**, (2002), 123-141.
64. K. Nakano, S. Olariu, and A. Y. Zomaya, Energy-Efficient Routing in the Broadcast Communication Model, *IEEE Transactions on Parallel and Distributed Systems*, **13**, (2002), 1201-1210.
65. P. Todorova, S. Olariu, and H. N. Nguyen, A Selective Look-Ahead Bandwidth Allocation Scheme for
66. Reliable Handoff in Multimedia LEO Satellite Networks, *Proc. 2nd European Conference on Universal Multiservice, (ECUMN'02)*, Colmar, France, April 2002.
67. E. C. Foudriat, K. Maly, S. Olariu, and Y. Li, An Access Protocol for Use with a Wide Range of Network Environments, *Proc. 2nd European Conference on Universal Multiservice (ECUMN'02)*, Colmar, France, April 2002.
68. H. N. Nguyen, S. Olariu, and P. Todorova, A Novel Mobility Model and Resource Allocation Strategy for Multimedia LEO Satellite Networks, *Proc. IEEE WCNC*, Orlando, Florida, March 2002.
69. M. El-Kadi, S. Olariu, P. Todorova, Predictive Resource Allocation in Multimedia Satellite Networks, *Proc. IEEE Globecom'2001*, San Antonio, Texas, November 2001.
70. K. Nakano, S. Olariu, A. Zomaya, Energy-Efficient Permutation Routing Protocols in Radio Networks, *IEEE Transactions on Parallel and Distributed Systems*, **12**, (2001), 544-558.

Ten best papers

1. S. Olariu and I. Stojmenovic, Design Guidelines for Maximizing Lifetime and Avoiding Energy Holes in Sensor Networks with Uniform Distribution and Uniform Reporting, *Proc. IEEE INFOCOM*, Barcelona, Spain, April 2006.
2. L. Wang and S. Olariu, A Two-Zone Hybrid Routing Protocol for Mobile Ad Hoc Networks, *IEEE Transactions on Parallel and Distributed Systems*, **12**, (2004), 1105-1116.
3. A. Malla, M. El-Kadi, S. Olariu, and P. Todorova, A Fair Resource Allocation Protocol for Multimedia Wireless Networks, *IEEE Transactions on Parallel and Distributed Systems*, **14**, (2003), 63-71.

4. M. El-Kadi, S. Olariu, H. Abdel-Wahab, A Rate-Based Borrowing Scheme for QoS Provisioning in Multimedia Wireless Networks, *IEEE Transactions on Parallel and Distributed Systems*, **13**, (2002), 156-166.
5. K. Nakano and S. Olariu, Uniform Leader Election for Radio Networks, *IEEE Transactions on Parallel and Distributed Systems*, **13**, (2002), 516-526.
6. K. Nakano and S. Olariu, Energy-Efficient Initialization Protocols for Radio Networks with no Collision Detection, *IEEE Transactions on Parallel and Distributed Systems*, **11**, (2000), 851-863.
7. S. Olariu, C. Pinotti, and S.-Q. Zheng, An Optimal Hardware-Algorithm for Sorting Using a Fixed-Size Parallel Sorting Device, *IEEE Transactions on Computers*, **49**, (2000), 1310-1325.
8. D. G. Corneil, S. Olariu, and L. Stewart, Linear Time Algorithms for Dominating Pairs in Asteroidal Triple-Free Graphs, *SIAM Journal on Computing*, **28**, (1999), 1284--1297.
9. T. Hayashi, K. Nakano, and S. Olariu, Efficient List Ranking on the Reconfigurable Mesh, with Application, *Theory of Computing Systems*, **31**, (1998), 593-611.
10. D. G. Corneil, S. Olariu, and L. Stewart, Asteroidal Triple-Free Graphs, *SIAM Journal on Discrete Mathematics*, **10**, (1997), 399-430.

Students

- A. Dr. Qingwen Xu, PhD December 2005, Researcher, IBM, Beijing, China
- B. Dr. Ashraf Wadaa, Ph D. January 2005, Intel Corporation, Portland, Oregon.
- C. Dr. Lan Wang, PhD. January 2005, Software Analyst, Goldman-Sachs, New York
- D. Dr. Mona Elkadi, PhD, December 2004, Assistant Professor, Norfolk State University, Norfolk, Virginia
- E. Dr. Venkatavasu Bokka, Ph.D. December 1998, ATT Bell Labs, Holmdel, New Jersey
- F. Dr. Himabindu Gurla, Ph.D. August 1996, Hewlett-Packard Research Laboratory, Bangalore, India
- G. Dr. Jingyuan Zhang, Ph.D. December 1994, Associate Professor, University of Alabama, Tuscaloosa, Alabama
- H. Dr. Peter Looges, PhD December 1994, Senior Software Analyst, EDO Corporation, Norfolk, Virginia
- I. Dr. Zhaofang Wen, Ph.D. May 1993, Senior Researcher, Sandia National Labs, Albuquerque, New Mexico
- J. Dr. Dharmavani Bhagavathy, PhD May 1992, Professor, Fairleigh-Dickinson University, Teaneck, New Jersey
- K. Dr. Beverley Jamison, PhD, May 1992, Professor, Marymount University, Fairfax, Virginia.