

LIVIU IFTODE

Department of Computer Science
Rutgers University
110 Frelinghuysen Road
Piscataway, NJ 08854

E-mail: iftode@cs.rutgers.edu
Telephone: (732) 445 2001 x2361
Fax: (732) 445 0537
URL: <http://www.cs.rutgers.edu/~iftode>

Research Interests

Distributed Systems, Operating Systems, Pervasive Computing, Mobile and Vehicular Computing and Networking.

Education

Ph.D. Computer Science

Princeton University, 1998

Dissertation: *Home-based Shared Virtual Memory*, advisor: Professor Kai Li

M.A. Computer Science

Princeton University, 1993

Diploma with Highest Honor, Electrical Engineering and Computer Science

Technical University of Bucharest, Romania, 1984

Academic, Research, and Industrial Experience

2009-Present	Professor Rutgers University , Department of Computer Science
2003-2009	Associate Professor Rutgers University , Department of Computer Science
2002-2003	Assistant Professor University of Maryland , Department of Computer Science
1997-2002	Assistant Professor Rutgers University , Department of Computer Science
1991-1997	Graduate Student Research Assistant Princeton University , Department of Computer Science
1990-1991	Teaching Assistant Technical University of Bucharest, Romania , Department of Computer Science
1984-1990	Software Engineer, Head of the System U Development Team Research Institute for Computer Technology, Bucharest, Romania

Awards, Honors, Invited Addresses, and Fellowships

1. Visiting Professor, Institut National de Sciences Appliquees, Rennes, France, June 2010.
2. Invited speaker, The International Symposium "IT Specialist of the Future", Keio University, Tokyo, Japan, November 2009.
3. Outstanding Student Paper Award, The 24th Annual Computer Security Applications Conference (ACSAC), 2008.
4. Medal of the University of Helsinki, 2007
5. Invited speaker, The 12th International Conference on Reliable Software Technologies, Geneva, June 2007.
6. Visiting Professor, Universite Pierre et Marie Curie, LIP6, Paris, France, June 2005.
7. NSF CAREER Award, 2002
8. Invited Speaker, The 14th Symposium on Computer Architecture and High Performance Computing (SBAC-PAD), Brazil, October 2002.
9. ACM Service Recognition Award for contribution to ICS 2002.
10. Best Paper Award, The 13th Symposium on Computer Architecture and High-Performance Computing (SBAC-PAD), Brazil, September 2001.

Publications (available at <http://www.cs.rutgers.edu/~iftode/papers.html>)

Journal Publications

1. U. Ramachandran, K. Hong, **L. Iftode**, R. Jain, R. Kumar, K. Rothermel, J. Shin, and R. Sivakumar. Large-Scale Situation Awareness with Camera Networks and Multimodal Sensing. *IEEE Proceedings Centennial Year Special Issue "Frontiers of Audiovisual Communications: New Convergences of Broadband Communications, Computing and Rich Media"*, June 2012. To appear.
2. A. Baliga, V. Ganapathy and **L. Iftode**. Detecting Kernel-Level Rootkits using Data Structure Invariants. *IEEE Transactions on Dependable and Secure Computing*, Vol 8 No 5, September/October 2011, pp 670-684.
3. G. Xu, C. Borcea and **L. Iftode**. A Policy Enforcing Mechanism for Trusted Ad-Hoc Networks. *IEEE Transactions on Dependable and Secure Computing*, Vol 8 No 3, May/June 2011, pp 321-336.
4. A. Baliga, **L. Iftode** and X. Chen. Automated Defense from Rootkit Attacks. *Computers and Security*, Elsevier, Volume 27, Issue 7-8, December 2008, pp. 323-334.
5. M. Dikaiakos, A. Florides, T. Nadeem and **L. Iftode**. Location-aware Services over Vehicular Ad-Hoc Networks using Car-to-Car Communication. *IEEE Journal on Selected Areas in Communications*, Vol 15 No. 8, October 2007, pp. 1590-1602.
6. O. Riva, T. Nadeem, C. Borcea and **L. Iftode**. Context-aware Migratory Services in Ad-Hoc Networks. *IEEE Transactions on Mobile Computing*, Vol 6 No. 12, December 2007, pp. 1313-1328.

7. V. Pathak and **L. Iftode**. Byzantine Fault Tolerant Public Key Authentication in Peer-to-Peer Systems. *Computer Networks, Special issue on Management in Peer-to-Peer Systems: Trust, Reputation and Security*, Vo. 50/4, Elsevier, March 2006, pp. 580-597.
8. F. Sultan, A. Bohra, P. Gallard, I Neamtiu, S. Smaldone, Y. Pan and **L. Iftode**. Recovering Internet Services from Operating System Failures. *IEEE Internet Computing*, March/April 2005, pp. 24-34.
9. T. Nadeem, S. Dashtinezhad, C. Liao and **L. Iftode**.. TrafficView: Traffic Data Dissemination Using Car-to-Car Communication. *ACM Sigmobile Mobile Computing and Communications Review, Special Issue on Mobile Data Management*, Vol 8, Issue 3, July 2004, pp 6-19.
10. P.Kang, C. Borcea, G. Xu, A. Saxena, U.Kremer and **L. Iftode**. Smart Messages: A Distributed Computing Platform for Networks of Embedded Systems. *Computing Journal, Special Issue on Mobile and Pervasive Computing* , British Computer Society, 47(4), Oxford University Press, January 2004, pp. 475-494.
11. F. Sultan, T. Nguyen and **L. Iftode**. Lazy Garbage Collection of Recovery State for Scalable Fault-Tolerant Distributed Shared Memory. *IEEE Transactions on Parallel and Distributed Systems*, Vol. 13, No. 7, July 2002, pp. 673-686.
12. **L. Iftode** and J.P Singh. Shared Virtual Memory: Progress and Challenges. *Proceedings of the IEEE*, Vol. 87, No. 3, pp. 498-508, March 1999.
13. **L. Iftode**, J.P. Singh and K. Li. Scope Consistency: A Bridge between Release Consistency and Entry Consistency. *Theory of Computing Systems*, 31, 1998, pp. 451-473.
14. R. Caceres and **L. Iftode**. Improving the Performance of Reliable Transport Protocols in Mobile Computing Environments. *IEEE Journal on Selected Areas in Communications*, Vol. 13(5), June 1995, pp. 850-857.

Book Chapters

15. A. Baliga, P. Kamat, V. Ganapathy and **L. Iftode**. Identifying Systemic Threats to Kernel Data: Attacks and Defense Techniques. In *Advanced Operating Systems and Kernel Applications*. Y. Wiseman and S. Jiang (editors). Information Science Reference, 2009.
16. V. Cristea, V. Gradinescu, C. Gorgorin, R. Diaconescu and **L. Iftode**. Simulation of VANET Applications. In *Automotive Informatics and Communicative Systems*. H. Guo (editor), Information Science Reference, 2009.
17. N. Ravi and **L. Iftode**. Outdoor Distributed Computing with Split Smart Messages. In *Reliable Systems on Unreliable Networked Platforms*. Kordon, Fabrice and Sztipanovits Janos (editors), Lecture Notes in Computer Science, Vol, 4322. Springer Verlag, 2007, pp. 161-183.
18. Cooperative Computing in Sensor Networks. **Liviu Iftode**, Cristian Borcea, and Porlin Kang. In *Handbook of Sensor Networks: Compact Wireless and Wired Sensing Systems*. M. Ilyas (editor) The CRC Press, 2004, pp. 26-1 - 26-18.

19. A Scalability Study of Shared Virtual Memory Systems. Y. Zhou, **L. Iftode** and K. Li. In *Scalable Input/Output: Achieving System Balance*. D. Reed (editor). The MIT Press, Cambridge, Massachusetts, 2003, pp. 255-277.

20. A. Bilas, **L. Iftode**, R. Samanta and J.P. Singh. Supporting a coherent address space across SMP nodes: An application-driven investigation. In *IMA Volumes in Mathematics and its Applications (Algorithms for Parallel Processing)*, Vol 105, Springer-Verlag, New York, 1998, pp 19-61.

21. R. Caceres and **L. Iftode**. Improving the Performance of Reliable Transport Protocols in Mobile Computing Environments. In *Mobile Computing*. T. Imielinski and H. Korth (editors), Kluwer Academic Publishers, Boston, 1996, pp. 207-228.

Conference Publications

22. P Shankar, W. Huang, P. Castro, B. Nath and **L. Iftode**. Crowds replace Experts: Building Better Location-based Services using Mobile Social Network Interactions. Proceedings of the *10th Annual IEEE International Conference on Pervasive Computing and Communications (PerCom)*, March 2012. To appear.

23. L. Han, B. Nath, **L. Iftode** and S. Muthukrishnan. Social Butterfly: Social Caches for Distributed Social Networks. Proceedings of the *3rd IEEE International Conference on Social Computing (SocialCom)*, October 2011.

24. K. Hong, S. Smaldone, D. Lillethun, **L. Iftode** and U. Ramachandran. Target Container: A Target-Centric Parallel Programming Abstraction for Video-Based Surveillance. Proceedings of the *5th ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC)*, August 2011.

25. J. Bickford, H. A. Lagar-Cavilla, A. Varshavsky, V. Ganapathy, and **L. Iftode**. Security versus Energy Tradeoffs in Host-based Mobile Malware Detection. Proceedings of the *9th International Conference on Mobile Systems, Applications and Services (Mobisys)*, June/July 2011.

26. M. Gupte, P. Shankar, J. Li, S. Muthukrishnan and **L. Iftode**. Finding Hierarchy in Directed Online Social Networks. Proceedings of the *20th International World Wide Web Conference (WWW)*, March 2011.

27. L. Han, S. Smaldone, P. Shankar, J. Boyce and **L. Iftode**. Ad-Hoc Voice-Based Group Communication. Proceedings of the *8th Annual IEEE International Conference on Pervasive Computing and Communications (PerCom)*, Mannheim, Germany, March 2010.

28. P. Shankar, V. Ganapathy and **L. Iftode**. Privately Querying Location-based Services with SybilQuery. Proceedings of the *11th International Conference on Ubiquitous Computing (Ubicomp)*, Orlando, FL, September 2009.

29. S. Smaldone, B. Gilbert, N. Bila, **L. Iftode**, E. Lara and M. Satyanarayanan. Leveraging Smart Phones to Reduce Mobility Footprints. Proceedings of the *7th Annual Conference on Mobile Systems, Applications and Services (MobiSys)*, Krakow, Poland, June 2009.

30. S. Smaldone, V. Ganapathy and **L. Iftode**. Working Set-based Access Control for Network File Systems. Proceedings of the *ACM Symposium on Access Control Models and Techniques (SACMAT)*, Stresa, Italy, June 2009.
31. A. Baliga, V. Ganapathy and **L. Iftode**. Automatic Inference and Enforcement of Kernel Data Structure Invariants. **Best Student Paper Award**. Proceedings of the *Annual Computer Security Applications Conference (ACSAC)*, Anaheim, CA, December 2008.
32. A. Birgisson, M. Dhawan, U. Erlingsson, V. Ganapathy and **L. Iftode**. Enforcing Authorization Policies using Transactional Memory Introspection. Proceedings of the *15th ACM Conference on Computer and Communication Security (CCS)*, Alexandria, October 2008 (to appear).
33. P. Shankar, T. Nadeem, J. Rosca and **L. Iftode**. Context-Aware Rate Adaptation for Vehicular Networks. Proceedings of the *16th IEEE International Conference on Network Protocols (ICNP)*, Orlando, October 2008.
34. V. Pathak, D. Yao and **L. Iftode**. Securing Location Aware Services over VANET using Geographical Secure Path Routing. Proceedings of the *2008 IEEE International Conference on Vehicular Electronics and Safety (ICVES)*, Columbus, Ohio, September 2008.
35. **L. Iftode**, S. Smaldone, M. Gerla and J. Misener. Active Highways (Position Paper). *Proceedings of the IEEE Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC)*, Intelligent Transportation Special Session, Nice, France, September 2008 (to appear).
36. V. Pathak, D. Yao and **L. Iftode**. Improving Email Trustworthiness through Social-Group Key Authentication. *Proceedings of the 5th Conference on Email and Anti-Spam*, Mountain View, August 2008 (to appear).
37. N. Ravi, J. Scott and **L. Iftode**. Context-aware Battery Management for Mobile Phones. *Proceedings of the 6th Annual IEEE International Conference on Pervasive Computing and Communications (PerCom)*, Hong-Kong, March 2008., pp 224-233.
38. C. Borcea, A. Gupta, A. Kalra, Q. Jones and **L. Iftode**. The MobiSoc Middleware For Mobile Social Computing: Challenges, Design and Early Experiences. *Proceedings of the First International Conference on Mobile Wireless Middleware, Operating Systems and Applications (MobilWare)*, Innsbruck, Austria, China, February 2008.
39. N Ravi, S. Smaldone, **L. Iftode** and M. Gerla. Lane Reservation for Highways (Position Paper). *Proceedings of the 10th International IEEE Conference on Intelligent Transportation Systems (ITSC)*, Seattle, September 2007.
40. G Xu, C. Borcea and **L. Iftode**. Trusted Application-Centric Ad-Hoc Networks. *Proceedings of the 4th IEEE International Conference on Mobile Ad-Hoc and Sensor Systems (MASS'07)*, Pisa, Italy, October 2007.
41. S. Smaldone, A. Bohra and **L. Iftode**. Firewall: A Firewall for Network File Systems. *Proceedings of the 3rd IEEE International Symposium on Dependable, Autonomic and Secure Computing (DASC'07)*, September 2007.

42. A. Bohra, S. Smaldone and **L. Iftode**. FRAC: Implementing Role-Based Access Control for Network File Systems. *Proceedings of the 6th IEEE International Symposium on Network Computing and Applications (NCA'07)*, Baltimore, July 2007, pp. 95-104.
43. A. Bohra and **L. Iftode**. Improving Network Processing Concurrency using TCPServers. *Proceedings of the 6th IEEE International Symposium on Network Computing and Applications (NCA'07)*, Baltimore, July 2007, pp. 213-222
44. A. Baliga, P. Kamat and **L. Iftode**. Lurking in the shadows: Identifying Systemic Threats to Kernel Data (Short Paper). In *Proceedings of the 2007 IEEE Symposium on Security and Privacy*, Oakland, May 2007, pp. 246-251.
45. V. Gradinescu, C. Gorgorin, R. Diaconescu, V. Cristea and **L. Iftode**. Adaptive Traffic Lights Using Car-to-Car Communication. In *Proceedings of the 65th IEEE Vehicular Technology Conference*, Dublin, Ireland, April 2007, pp. 21-25.
46. G. Gorgorin, V. Gradinescu, R. Diaconescu, V. Cristea and **L. Iftode**. An Integrated Vehicular and Network Simulator for Vehicular Ad-Hoc Networks. In *Proceedings of the 20th European Simulation and Modeling Conference*, Toulouse, France, October 2006.
417. G. Xu, C. Borcea and **L. Iftode**. Satem: Trusted Service Code Execution across Transactions. In *Proceedings of the 25th Symposium on Reliable Distributed Systems (SRDS)*, Leeds, UK, October 2006, pp. 321-336.
48. T. Nadeem, P. Shankar and **L. Iftode**. A Comparative Study of Data Dissemination Models for VANETs. In *Proceedings of the 3rd Annual International Conference on Mobile and Ubiquitous Systems (Mobiquitous)*, San Jose, July 2006.
49. N. Ravi, M. Gruteser and **L. Iftode**. Non-Inference: An Information Flow Control Model for Location-Based Services. In *Proceedings of the 3rd Annual International Conference on Mobile and Ubiquitous Systems (Mobiquitous)*, San Jose, July 2006.
50. Y. Ni, U. Kremer, A. Stere and **L. Iftode**. Programming Ad Hoc Networks of Mobile and Resource-Constrained Devices. To appear in the *Proceedings of the ACM SIGPLAN 2005 Conference on Programming Language Design and Implementation (PLDI)*, Chicago, June 2005, pp. 249-260.
51. N. Ravi, P. Stern, N. Desai and **L. Iftode**. Accessing Ubiquitous Services using Smart Phones. In *Proceedings of the 3rd IEEE International Conference on Pervasive Computing and Communications (PerCom)*, Hawaii, March 2005, pp. 383-393.
52. P. Zhou, T. Nadeem, P. Kang, C. Borcea and **L. Iftode**. EZCab: A Cab Booking Application Using Short-Range Wireless Communication. In *the Proceedings of the 3rd IEEE International Conference on Pervasive Computing and Communications (PerCom)*, Hawaii, March 2005, pp. 27-38.
53. G. Xu and **L. Iftode**. Locality Driven Key Management Architecture for Mobile Ad-Hoc Networks. In *Proceedings of the 1st IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS 2004)*, Fort Lauderdale, October 2004.

54. N. Ravi, C. Borcea, P. Kang and **L. Iftode**. Portable Smart Message Architecture for Ubiquitous Java-Enabled Devices. In *Proceedings of the First Annual International Conference on Mobile and Ubiquitous Systems Networking and Services (MobiQuitous 2004)*, Boston, August 2004, pp. 412-421.
55. A. Bohra, I. Neamtiu, P. Gallard, F. Sultan and **L. Iftode**. Remote Repair of Operating System State Using Backdoors. In *the Proceedings of the 2004 International Conference on Autonomic Computing*, New York, May 2004, pp. 256-263.
56. S. Dashtinezhad, T. Nadeem, B. Dorohonceanu, C. Borcea, P. Kang and **L. Iftode**. TrafficView: A Driver Assistant Device for Traffic Monitoring based on Car-to-Car Communication. In *the Proceedings of the IEEE Semiannual Vehicular Technology*, Milan, May 17-19, 2004.
57. C. Borcea, C. Intanagonwiwat, P. Kang, U. Kremer and **L. Iftode**. Spatial Programming using Smart Messages: Design and Implementation. In *the Proceedings of the International Conference on Distributed Computing Systems (ICDCS)*, Tokyo, Japan, March 2004, pp. 690-699.
58. S. Dashtinezhad, T. Nadeem, C. Liao and **L. Iftode**. TrafficView: A Scalable Traffic Monitoring System. *Proceedings of the 2004 IEEE International Conference on Mobile Data Management*, Berkeley, January 19-22, 2004, pp. 13-26.
59. F. Sultan, A. Bohra and **L. Iftode**. Service Continuations: An Operating System Mechanism for Dynamic Migration of Internet Service Sessions. In *the Proceedings of the 22th Symposium on Reliable Distributed Systems, SRDS 2003*, Florence, Italy, October 2003, pp. 177-188.
60. C. Borcea, C. Intanagonwiwat, A. Saxena, and **L. Iftode**. Self-Routing in Pervasive Computing Environments using Smart Messages. In *the Proceedings of The First IEEE International Conference on Pervasive Computing and Communication (PerCom 2003)*, Dallas, March 2003, pp. 87-98.
61. C. Borcea, D. Iyer, P. Kang, A. Saxena and **L. Iftode**. Cooperative Computing for Distributed Embedded Systems. *Proceedings of the International Conference on Distributed Computing Systems (ICDCS)*, Vienna, Austria, July 2002, pp. 227-236.
62. F. Sultan, K. Srinivasan. D. Iyer and **L. Iftode**. Migratory TCP: Highly Available Internet Services using Connection Migration. *Systems (ICDCS)*, July 2002. Short paper in the *Proceedings of the International Conference on Distributed Computing Systems (ICDCS)*, Vienna, Austria, July 2002, pp. 469-470.
63. E. V. Carrera, S. Rao, **L. Iftode** and R. Bianchini. User-Level Communication in Cluster-Based Servers. *Proceedings of the High-Performance Computer Architecture Symposium (HPCA)*, Boston, February 2002, pp. 275-285.
64. L. Whately, R. Pinto, M. Rangarajan, **L. Iftode**, R. Bianchini, and C. L. Amorim. Adaptive Techniques for Home-Based Software DSMs. *Proceedings of the 13th Symposium on Computer Architecture and High-Performance Computing (SBAC-PAD)*, Brazil, September 2001. **Best paper award.**

65. F. Sultan, T. D. Nguyen and **L. Iftode**. Scalable, Fault Tolerant Distributed Shared Memory. *Proceedings of Supercomputing 2000 Conference*, Dallas, November 2000.
66. M. Rangarajan and **L. Iftode**. Software DSM over VIA: Implementation and Performance. *Proceedings of The Fourth Annual Linux Conference*, Atlanta, October 2000.
67. **L. Iftode**, M Blumrich, C. Dubnicki, D. Oppenheimer, J.P. Singh and K. Li: Shared Virtual Memory with Automatic Update Support. *Proceedings of the International Conference on Supercomputing (IC S)*, Rhodes, Greece, June 1999, pp. 175-183.
68. C. Liao, D. Jiang, **L. Iftode**, M. Martonosi and D.W. Clark. Monitoring Shared Virtual Memory Performance on a Myrinet-based PC Cluster. *Proceedings of the International Conference on Supercomputing (ICS)*, July 1998, pp. 251-258.
69. A. Bilas, **L. Iftode** and J.P. Singh. Evaluation of Hardware Support for Next Generation Shared Virtual Memory Clusters. *Proceedings of the International Conference on Supercomputing (ICS)*, Melbourne, Australia, July 1998, pp. 274-281.
70. M.A. Blumrich, R.D. Alpert, Y. Chen, D.W. Clark, S.N. Damianakis, C. Dubnicki, E. W. Felten, **L. Iftode**, K. Li, M. Martonosi and R.A. Shillner. Design Choices in the SHRIMP System: An Empirical Study. *Proceedings of the 25th Annual International Symposium on Computer Architecture (ISCA)*, Barcelona, Spain, June 1998, pp. 330-341.
71. R. Samanta, A. Bilas, **L. Iftode** and J.P. Singh. Home-based SVM Protocols for SMP clusters: Design and Performance. *Proceedings of the 4th International Symposium on High-Performance Computer Architecture (HPCA)*, Las Vegas, February 1988, pp. 113-124.
72. Y. Zhou, **L. Iftode**, J.P. Singh and K. Li, B. R. Toonen, I. Schoinas, M.D. Hill and D.A. Wood. Relaxed Consistency and Coherence Granularity in DSM Systems: A Performance Evaluation. *Proceedings of the 6th ACM Symposium on Principles and Practice of Parallel Programming (PPoPP)*, Las Vegas, June 1997, pp. 193-205.
73. Y. Zhou, **L. Iftode** and K. Li. Performance Evaluation of Two Home-based Lazy Release Consistency Protocols for Shared Virtual Memory Systems. *Proceedings of the Second Symposium on Operating Systems Design and Implementation (OSDI)*, Seattle, October 1996, pp. 75-88.
74. **L. Iftode**, J.P. Singh and K. Li. Scope Consistency: A Bridge between Release Consistency and Entry Consistency. *Proceedings of the 8th Annual Symposium on Parallel Algorithms and Architectures (SPAA)*, Padua, Italy, June 1996, pp. 277-287.
75. **L. Iftode**, J.P. Singh and K. Li. Understanding Application Performance on Shared Virtual Memory. *Proceedings of the 23rd Annual International Symposium on Computer Architecture (ISCA)*, Philadelphia, May 1996, pp. 122-133.
76. E.W. Felten, R.D. Alpert, A. Bilas, M. A. Blumrich, D.W. Clark, S. Damianakis, C. Dubnicki, **L. Iftode** and K. Li. Early Experience with Message Passing on the SHRIMP Multicomputer. *Proceedings of the 23rd Annual International Symposium on Computer Architecture (ISCA)*, Philadelphia, May 1996, pp. 296-307.

77. C. Dubnicki, **L. Iftode**, E.W. Felten and K. Li. Software Support for Virtual Memory-Mapped Communication. *Proceedings of the 10th International Parallel Processing Symposium (IPPS)*, Honolulu, April 1996, pp. 372-381.

78. **L. Iftode**, C. Dubnicki, E. W. Felten and K. Li. Improving Release-Consistent Shared Virtual Memory using Automatic Update. *Proceedings of the 2nd International Symposium on High-Performance Computer Architecture (HPCA)*, San Jose, February 1996, pp. 14-25.

79. R. Caceres and **L. Iftode**. The Effects of Mobility on Reliable Transport Protocols. *Proceedings of the 14th International Conference on Distributed Computing Systems (ICDCS)*, Poznan, Poland, June 1995, pp. 12-19.

80. **L. Iftode**, K. Li and K. Petersen. Memory Servers for Multicomputers. *Proceedings of IEEE COMPCON'93*, San Francisco, February 1993, pp. 535-544.

Workshop Publications

81. C. Dobre, C. Fratila and **L. Iftode**. An Approach to Evaluating Usability of VANET Applications. *Proceedings of the 1st IEEE Workshop on Design, Modeling and Evaluation of Cyber Physical Systems (CyPhy'11)*, July 2011.

82. V. Pathak, S. Smaldone and **L. Iftode**. Social Farm: Making Social Networks Work for Profit. *Proceedings of the 1st International Workshop on Social Media Engagement (SoME)*, March 28-29, 2011. In conjunction with WWW'11.

83. S. Smaldone, C. Tonde, V. Ananthanarayanan, A. Elgammal and **L. Iftode**. The Cyber-Physical Bike: A Step Towards Safer Green Transportation. *Proceedings of the 12th Workshop on Mobile Computing Systems and Applications (HotMobile)*, March 2011.

84. M. Satyanarayanan, S. Smaldone, B. Gilbert, J. Harkes and **L. Iftode**. Bringing the Cloud Down to Earth: Transient PCs Everywhere. *Proceedings of the International Workshop on Mobile Computing and Clouds (MobiCloud)*, Santa Clara, CA, October 2010.

85. J. Bickford, R. O'Hare, A. Baliga, V. Ganapathy and **L. Iftode**. Rootkits on Smart Phones: Attacks, Implications and Opportunities. *Proceedings of the 11th International Workshop on Mobile Computing Systems and Applications (HotMobile)*, Annapolis, MD, February 2010.

86. M. Gupte, M.T. Hajiaghayi, L. Han, **L. Iftode**, P. Shankar and R. M. Ursu. News Posting by Strategic Users in a Social Network. *Proceedings of the 5th Workshop on Internet and Network Economics (WINE)*, Rome, Italy, December 2009.

87. A. Babic, H. Xiong, D. Yao and **L. Iftode**. Building Robust Authentication Systems with Activity-Based Personal Questions. *Proceedings of the ACM Workshop on Assurable and Ussable Security Configuration* (co-located with CCS), Chicago, IL, November 2009.

88. R. Kumar, J. Shin, **L. Iftode** and U. Ramachandran. Mobile Virtual Sensors: A Scalable Programming and Execution Framework for Smart Surveillance (Position Paper). *Proceedings of the 5th Workshop on Embedded Networked Sensors (Hot EmNets 2008)*, June 2008.

89. S. Smaldone, L. Han, P. Shankar and **L. Iftode**. RoadSpeak: Enabling Voice Chat on Roadways using Vehicular Social Networks. *Proceedings of the First International Workshop on Social Network Systems (SocialNets'08, in conjunction with EuroSys)*, April , 2008.
90. A. Baliga, J. Kilian and **L. Iftode**. A Web Based Covert File System. *Proceedings of the 11th Workshop on Hot Topics in Operating Systems (HotOS XI)*, San Diego, May 2007.
91. F. Kordon, J.P. Voron and **L. Iftode**. Rapid Prototyping of Intrusion Detection Systems. *IEEE International Workshop on Rapid System Prototyping*, 2007, pp. 106-112.
92. F. Picconi, N. Ravi, M. Gruteser and **L. Iftode**. Probabilistic Validation of Aggregated Data in Vehicular Ad-Hoc Networks. In *Proceedings of the 3rd ACM International Workshop on Vehicular Ad-Hoc Networks (VANET)*, September 2006., pp. 76-85.
93. N. Ravi, P. Shankar, A. Frankel, A. Elgammal and **L. Iftode**, Indoor Localization using Camera Phones. In *Proceedings of the 7th Workshop on Mobile Computing Systems and Applications, WMCSA/HotMobile* , April 2006.
94. M. Dikaiakos, S. Iqbal, T. Nadeem and **L. Iftode**. VITP: An Information Transfer Protocol for Vehicular Computing. In *Proceedings of the 2nd ACM International Workshop on Vehicular Ad-Hoc Networks (VANET)* , September 2005, pp. 30-39.
95. **L. Iftode**, C. Borcea, N. Ravi, P. Kang and P. Zhou. Smart Phone: An Embedded System for Universal Interactions. In *Proceedings of the 10th IEEE Workshop on Future Trends of Distributed Computing Systems (FTDCS 2004)* , May 2004, pp. 88-94.
96. M. Rangarajan and **L. Iftode**. Building a User-Level Direct-Access File System over InfiniBand. *Proceedings of the 4th Annual Workshop on System-Area Networks (SAN-4)*, February 2004.
97. Y. Ni, U. Kremer and **L. Iftode**. Spatial Views: Space-Aware Programming for Networks of Embedded Systems. *Proceedings of the 16th International Workshop on Parallel Computing (LCPC'03)*, October 2003, pp. 258-272.
98. F. Sultan, A. Bohra, I Neamtii and **L. Iftode**. Backdoor: Nonintrusive Remote Healing using Remote Memory Communication. In *Proceedings of the First Workshop on Algorithms and Architectures for Self-Managing Systems* , June 2003.
99. **L. Iftode**, C. Borcea, A. Kochut, C. Intanagonwivat and U. Kremer. Programming Computers Embedded in the Physical World. In *Proceedings of the 9th IEEE Workshop on Future Trends of Distributed Computing Systems (FTDCS 2003)*, May 2003, pp. 78-85.
100. G. Xu, C. Borcea and **L. Iftode**. Towards a Security Architecture for Smart Messages: Challenges, Solutions and Open Issues. *Proceedings of the 1st International Workshop on Mobile Distributed Computing (MDC'03)*, May 2003, pp. 454-460.
101. E.V. Carrera, M. Rangarajan, R. Bianchini and **L. Iftode**. Impact of Next-Generation I/O Architectures on the Design and Performance of Network Servers. *Proceedings of the 1st Workshop on Novel Uses of System Area Networks*, February 2002.

102. P. Stanley-Marbell, C. Borcea, K. Nagaraja and **L. Iftode**. Smart Messages: A System Architecture for Large Networks of Embedded Systems. Position Summary, *Proceedings of 8th Workshop on Hot Topics in Operating Systems (HotOS-VIII)*, May 2001. Also Rutgers University Technical Report DCS-TR-430, January 2001.
103. F. Sultan, K. Srinivasan and **L. Iftode**. Transport Layer Support for Highly-Available Network Services. Position Summary, *Proceedings of 8th Workshop on Hot Topics in Operating Systems (HotOS-VIII)*, May 2001. Also Rutgers University Technical Report DCS-TR-429, January 2001.
104. S.H. Phatak, V. Esakki, R. Badrinath and **L. Iftode**. Web&: An Architecture for Non-Interactive Web. *Proceedings of the Second IEEE Workshop on Internet Applications (WIAPP'01)*, July 2001.
105. P. Stanley-Marbell and **L. Iftode**. Scylla: A Smart Virtual Machine for Mobile Embedded Systems. *Proceedings of the Third IEEE Workshop on Mobile Computing Systems and Applications*, Monterey, December 2000.
106. M. Rangarajan, S. Divakaran, T. Nguyen and **L. Iftode**. Multi-threaded Home-based LRC Distributed Shared Memory. *Proceedings of the 8th Workshop on Scalable Shared Memory Multiprocessors*, May 1999.
107. F. Sultan, T. Nguyen and **L. Iftode**. Fault-Tolerant HLRC Distributed Shared Memory. *Proceedings of the 8th Workshop on Scalable Shared Memory Multiprocessors*, May 1999.
108. Z. Jarai, A. Virmani and **L. Iftode**. Towards a Cost-Effective Parallel Data Mining Approach. *Workshop on High-Performance Data Mining*, March 1998.

Patents

Method and System for Execution Monitor-based Trusted Computing. G. Xu and **L. Iftode**. US Patent #7930733, 2011.

Grant Awards

- 2011-2014* Closing the loop between traffic/pollution sensing and vehicle route control using traffic lights and navigators. NSF CNS. **PI** with Co-PI Nadri Nath (\$790,000). Large collaborative research with UCLA.
- 2011-2014* Exploring Malware Detection on Mobile Platforms. NSF Cyber Trust. **PI** with Co-PI Vinod Ganapathy (\$466,000)
- 2008-2011* Advanced Techniques to Detect Kernel-Level Rootkits. NSF Cyber Trust. **Co-PI** with PI Vinod Ganapathy. (\$400,000).
- 2005-2008* Exploring the Design and Implementation of Vehicular Networked Systems. NSF CNS, **PI**. Collaborative Research with NJIT, PI Cristian Borcea. (\$300,000+\$225,000).

- 2005-2006 Highly-Available Cluster Architecture based on Remote Healing. Phenix Associated Team. INRIA International Bilateral Grant, **Co-PI**. INRIA/IRISA, PI Dr. Christine Morin, INRIA/IRISA, France. (Euro \$50,000)
- 2002-2007 A Split Operating System Architecture for Servers with Memory-to-Memory Communication. NSF CAREER, **PI**. (\$330,000).
- 2001-2006 Cooperative Computing for Distributed Embedded Systems. NSF ITR, **PI**, with Co-PIs Uli Kremer and Michael Hsiao. (\$1,500,000)
- 2000-2002 System Support for Scalable, Fault Tolerant Computing and Services on PC Clusters. NSF Research Instrumentation Grant, **Co-PI**, with PI Thu Nguyen, Co-PIs Ricardo Bianchini and Rich Martin (\$216,775).
- 1999-2000 High Performance Fault-Tolerant Distributed Shared Memory for Linux-based PC Clusters. USENIX Grant, **PI**. (\$44,000).

Student Advising (more information at <http://discolab.rutgers.edu>)

- *Post-Doctoral Advising* (1): Dr. Chalermek Intanagonwiwat (2002-2003).
- *Graduated Ph.D. Students* (9): Cristian Borcea (2004, Assistant Professor, New Jersey Institute of Technology), Florin Sultan (2004, NEC Research Labs), Aniruddha Bohra (2007, NEC Research Labs), Nishkam Ravi (2007, Intel), Gang Xu (2008, AT&T), Vivek Pathak (2008), Arati Baliga (2008), Steven Smaldone (2011), Pravin Shankar (2011).
- *Graduated Master's Students with Thesis* (3): Kalpana Banerjee (2002), Kiran Srinivasan (2001), Vancheswar Ananthanarayanan (2011).
- *Current Ph.D. Students* (1): Lu Han.
- *Undergraduate Research Advising* (10): Niket Desai and Peter Stern (Summer 2004), Yan Nuriyev (Fall 2004, Spring 2005), Andrew Frankel (Summer 2005), Tzvi Chumash (Fall 2006), James Boyce (Fall 2007), David Buchman and Paul Capitini (Summer 2008), Jeffrey Bickford and Ryan O'Hare (Fall 2008 and Spring 2009).
- *Foreign Visiting Students* (16): Pascal Gallard (INRIA, France, 2003), Oriana Riva (University of Helsinki, Finland, 2004), Raluca Diaconescu, Cristian Gorgoran and Victor Gradinescu (Technical University of Bucharest, Romania, 2005), Jean-Baptiste Voron , Xavier Renault and Fabio Picconi (University Paris 6, France, 2006), Carlos Villavieja Prados (Technical University of Catalunya, Barcelona, Spain, 2006), Benoit Boissinot (Ecole Normale Supérieure, Lyon, France, 2006), Amit Arora (IIT Bombay, India, 2007), Antonio Giovannelli (University of Bologna, Italy, 2007), Yuki Kinebuchi and Hiroaki Kimura (Waseda University, Japan, 2008), Jean-Baptiste Voron (University Paris 6, France, 2009), Lei Sun (Waseda University, 2009), Yuki Kinebuchi (Waseda University, 2010).
- *Foreign Ph.D. and M.S. Student Co-Advising and Dissertation Committees* (6): Pascal Gallard (Ph.D. Committee, INRIA, France, 2004), Louis Rilling (Ph.D. Committee, INRIA, France, 2005), Benoit Boissinot (M.S. Thesis, ENS Lyon, France, co-advisor

with Dr. Christine Morin, 2006), Jean-Baptiste Voron (Ph.D. student, University Paris 6, co-advisor with Prof. Fabrice Kordon, 2009), Tancred Lindholm (Ph.D. Defense Opponent, TKK, Finland, 2009), Kevin Collins (Ph.D. Committee, DCU, Ireland, 2009).

Teaching

- *Operating Systems Design* (undergraduate course)
- *Operating Systems* (graduate course)
- *Distributed Systems* (graduate course)
- *Graduate Seminars* (9) : Computer Systems (Princeton University, with Professor Kai Li, 2006), Vehicular Computing and Networking (2005), Self-Healing Systems (2004), Recent Topics in OS Research (2003, 1999, 1997), Network-Centric Systems (2002), Pervasive and P2P Computing (2001), Distributed Embedded Systems (2000).
- *Graduate Light Seminars* (3): Mobile Personal Computing (2007), Who's Who in Computer Systems Research (2006), Distributed Systems (2006).

Professional Service

- *IEEE TCOS Vice-Chair*: IEEE Technical Committee on Operating Systems, 2002-2010
- *Member of the Steering Committee*: International Symposium on Vehicular Computing Systems (ISVCS), 2008

Editorship

- *Member of the Editorial Board*: Wireless Networks, Springer, 2010 -present
- *Member of the Editorial Board*: IEEE Pervasive Computing, 2002-2010
- *Member of the Editorial Board*: IEEE Distributed Systems Online, 2001-2007
- *Guest Co-Editor*, IEEE Internet Computing, Special Issue on Infrastructure for Online Social Networking Systems, May 2012.
- *Guest Co-Editor*, IEEE Pervasive Computing, Special Issue on Intelligent Transportation, October 2006.
- *Guest Co-Editor*, IEEE Pervasive Computing, Special Issue on Smart Phones, April 2005
- *Guest Co-Editor*, Elsevier Journal on Pervasive and Mobile Computing, The Inaugural Issue, 2005

Reviewing

- *Chair of the Search Committee*: IEEE Distributed Systems Online Editor-in-Chief, 2007
- *External Reviewer: Professorship* in Computer Science, University of Helsinki, Finland, 2006.

Panel Moderator

- "The Bright Future of Network-Connected Vehicles", International Conference on Mobile and Ubiquitous Systems (MobiQuitous), 2007.
- "When Will Vehicular Computing Become Pervasive?", The 1st International Workshop on Pervasive Transportation Systems (PerTrans), 2007.

Program Committees

- 2012 11th IFIP Annual Mediterranean Ad Hoc Networking Workshop (Med-Hoc Net), Cyprus.
- 2012 ACM SIGCOMM Workshop on Mobile Cloud Computing (MCC), Helsinki, Finland.
- 2011 The 5th International Conference on Communication System Software and Middleware (COMSWARE), Verona, Italy. **Program Co-Chair.**
- 2011 The 10th IFIP Annual Mediterranean Ad Hoc Networking Workshop (Med-Hoc Net), Sicily, Italy. **Program Co-Chair.**
- 2011 The 31st International Conference on Distributed Computing Systems (ICDCS), Minneapolis, MN
- 2010 The 7th ACM International Workshop on Vehicular Inter-Networking (VANET), Chicago, IL
- 2010 3rd International Conference on Mobile Wireless Middleware, Operating Systems and Applications (MobilWare), Chicago, IL.
- 2009 2nd International Conference on Mobile Wireless Middleware, Operating Systems and Applications (MobilWare), Berlin, Germany.
- 2009 International Conference on Distributed Computing Systems (ICDCS), Montreal, Canada.
- 2008 International Conference on Mobile and Ubiquitous Systems (MobiQuitous), Dublin, Ireland, **Program Chair**
- 2008 International Conference on Distributed Computing Systems (ICDCS), Beijing, China.
- 2008 USENIX Technical Conference (USENIX), Boston, MA
- 2008 ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming (PPoPP), Salt Lake City, UT
- 2008 International Conference on Mobile Wireless Middleware, Operating Systems and Applications (MobilWare), Innsbruck, Austria
- 2008 IEEE International Symposium on Wireless Vehicular Communications (WiVeC), Calgary, Canada
- 2008 International Workshop on Mobile Vehicular Networks (MoVeNet), Atlanta, GA
- 2007 IEEE International Symposium on Wireless Vehicular Communications (WiVeC), Baltimore, MD
- 2007 International Conference on Mobile and Ubiquitous Systems (MobiQuitous), Philadelphia, PA
- 2007 International Conference on Mobile Data Management (MDM), Mannheim, Germany
- 2007 IEEE International Conference on Pervasive Computing and Communications (PerCom), White Plains, NY
- 2007 European Conference on Parallel and Distributed Computing (Euro-Par), Rennes, France, **Topic Chair**
- 2006 IEEE International Symposium on High-Performance Distributed Computing (HPDC), Paris, France
- 2006 IEEE Vehicular Technology Conference (VTC), Melbourne, Australia
- 2005 International Conference on Parallel Processing (ICPP), Oslo, Norway
- 2005 IEEE International Conference on Pervasive Computing and Communications (PerCom), Kauai, Hawaii

- 2005 International Conference on Distributed Computing Systems (ICDCS), Columbus, OH
- 2004 IEEE International Conference on Pervasive Computing and Communications (PerCom), Orlando, FL, **Vice Program Chair**
- 2004 International Conference on Parallel Processing (ICPP), Montreal, Canada
- 2004 IEEE/ACS International Conference on Pervasive Services (ICPS), Beirut, Lebanon
- 2004 IEEE Global Telecommunication Conference (Globecom), Dallas, TX
- 2003 International Symposium on Computer Architecture (ISCA), San Diego, CA
- 2003 ACM International Conference on Supercomputing (ICS), San Francisco, CA
- 2003 International Conference on Distributed Computing Systems (ICDCS), Providence, RI
- 2003 International Conference on Pervasive Computing and Communications (PerCom), Dallas, TX
- 2003 Network-I/O Convergence: Experience, Lessons, Implications Workshop (NICELI)
- 2003 International Workshop on Future Trends of Distributed Computing Systems (FTDCS), San Juan, Puerto Rico
- 2003 International Workshop on Mobile Distributed Computing (MDC)
- 2002 Symposium on Computer Architecture and High-Performance Computing (SBAC-PAD), Brazil
- 2002 ACM International Conference on Supercomputing (ICS), New York, **Tutorial Chair.**
- 2001 ACM International Conference on Supercomputing (ICS), Sorrento, Italy
- 2001 International Workshop on Distributed Shared Memory on Clusters (DSM)
- 2000 USENIX Technical Conference (USENIX), San Diego, CA
- 2000 ACM International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS), Santa Clara, CA
- 2000 Workshop on Communication, Architecture and Applications for Network-based Parallel Computing (CANPC)
- 1999 IEEE International Parallel Processing Symposium (IPPS), Minneapolis, MN
- 1999 Workshop on Communication, Architecture and Applications for Network-based Parallel Computing (CANPC)
- 1998 International Conference on Parallel Processing (ICPP)

Workshop Co-Organizer

- 2008 International Workshop on Delay/Disruption-Tolerant Mobile Networks (DTMN), Beijing, China
- 2008 The 3rd Helsinki-Rutgers Ph.D. Student Workshop on Spontaneous Networking (HRW), Rutgers
- 2007 Rutgers CCC Workshop on Pervasive Computing Research, Rutgers
- 2007 Workshop on Software Engineering for Pervasive Computing Applications, Systems and Environments (SEPCASE), Minneapolis
- 2007 Workshop on Pervasive Transportation Systems (PerTrans), Philadelphia
- 2007 The 2nd Helsinki-Rutgers Ph.D. Student Workshop on Spontaneous Networking (HRW), Helsinki, Finland
- 2006 The 2nd Phenix Team Workshop on Global Computing Systems, Rennes, France

- 2006 The 1st Helsinki-Rutgers Ph.D. Student Workshop on Spontaneous Networking (HRW), Rutgers
- 2006 The 1st Rutgers- University Pierre & Marie Curie Workshop (RPMC) ,Paris, France
- 2005 The 1st Phenix Team Workshop on Self-Healing and Fault Tolerant Systems, Rennes, France
- 2002 The 2nd Workshop on Caching, Coherence and Consistency (WC3)
- 2001 The 1st Workshop on Caching, Coherence and Consistency (WC3)
- 1999 The 2nd International Workshop on Software DSM (WSDSM)
- 1998 The 1st International Workshop on Software DSM (WSDSM)

Professional Membership:

- *Senior Member of IEEE, Member of ACM.*

Departmental Service

- *Graduate Program Director, 2007-2009.*