

BIBLIOGRAPHY OF L.M. LIEBROCK

JOURNAL PAPERS

1. D. Quist and L.M. Liebrock, "Reversing Compiled Executables for Malware Analysis via Visualization", *Information Visualization*, Eds: J.R. Goodall, G. Conti, and K.-L. Ma, Vol. 5210, pp. 36-43, DOI 10.1057/978-3-540-85933-8, 2011.
2. D. Quist, L. Liebrock, and J. Neil, "Improving Antivirus Accuracy with Hypervisor Assisted Analysis", *Journal of Computer Virology*, Volume 7, Issue 2, pp 121-131, DOI 10.1007/s11416-010-0142-4, 2011.
3. M. Schwartz, C. Hash, and L.M. Liebrock, "Term Distribution Visualizations with Focus+Context Overview and Usability Evaluation", *Multimedia Tools and Applications*, Ed: Borko Furht, DOI 10.1007/s11042-010-0479-1, February 2010.
4. V. Urias, C. Hash, L.M. Liebrock, "Consideration of Issues for Parallel Digital Forensics of RAID Systems", *Journal of Digital Forensics Practice*, V2, N4, pp. 196-208, 10.1080/15567280903140953, October, 2008.
5. M. Schwartz, and L.M. Liebrock, "A Term Distribution Visualization Approach to Digital Forensic String Search", *Lecture Notes in Computer Science*, Eds: J.R. Goodall, G. Conti, and K.-L. Ma, Vol. 5210, pp. 36-43, DOI 10.1007/978-3-540-85933-8_4, 2008.
6. L.M. Liebrock and S.P. Goudy, "Methodology for Modelling Hybrid Parallel Computation", *Concurrency and Computation: Practice and Experience*, <http://dx.doi.org/10.1002/cpe.1214>, 2007.
7. L.M. Liebrock, "Scholarship for Service: NMT's Undergraduate Program", *Distributed Systems Online*, Education Department, Invited by Editor Maria Ganzha, Vol. 8, No. 3, Art. No. 0703-03002, 2007.
8. L.M. Liebrock, "Scholarship for Service", *IEEE Distributed Systems Online*, Education Department, Invited by Editor Maria Ganzha, Vol. 7, No. 9, Art. No. 0609-09002, 2006.
9. L.M. Liebrock, Problem Solving with Well Posedness Analysis: Part 1, *Applied Mathematics and Computation*, Vol. 181/2, pp 1671-1682, 2006.
10. D.L. Hicks and L.M. Liebrock, "Conservative smoothing with B-splines stabilizes SPH material dynamics in both tension and compression", *Applied Mathematics and Computation*, V150, Issue 1, pp. 213-244, 2004.
11. L.M. Liebrock and D.L. Hicks, "Finite Interpolation Methods for Material Hyperdynamics Part 1.1, Compression Stability in Hydrocodes via Shape-Shifter Schemes", *Communications in Applied Analysis*, V4, N2, pp. 267-293, 2000.
12. D.L. Hicks and L.M. Liebrock, "Lanczos' generalized derivative: insights and applications", *Applied Mathematics and Computation* (112) 1, pp 63-73, 2000.
13. D.L. Hicks and L. M. Liebrock, SPH Hydrocodes can be Stabilized with Shape-Shifting. *Computers and Mathematics with Applications*, Vol. 38, Issues: 5-6, pp 1-16, 1999.
14. L.M. Liebrock and K. Kennedy, "Automatic Data Distribution for Composite Grid Applications", *Scientific Programming*, V6, N1, pp. 95-113, 1997.
15. L.M. Liebrock and K. Kennedy, Automatic Data Distribution of Small Meshes in Coupled Grid Applications, *Concurrency Practice and Experience*, V8, pp 581-615, 1996.

16. D.L. Hicks, L.M. Liebrock, and Y. Wen, "Eigenform Error Estimates for Computational Material Dynamics with Shocks. Part 1.1: Hooke's Law Materials", *Applied Mathematics and Computation*, V66, N2&3, pp. 181-216, 1994.
17. D.L. Hicks, K.L. Kuttler, L.M. Liebrock, and C.E. Southwell, "Answering von Neumann's Conjecture on the Convergence of Averages and Analyzing the von Neumann-Richtmyer Scheme via a Material Averaging Method", *Applied Mathematics and Computation*, V55, N2&3, pp. 265-295, 1993.
18. D.L. Hicks and L.M. Liebrock, "Parallel Algorithms for Implicit Material Dynamics Schemes", *Applied Mathematics and Computation*, V46, N3, pp. 179-209, 1991.
19. D.L. Hicks and L.M. Liebrock, "Parallel Algorithms for Hydrocodes", (invited paper), *Transactions of the American Nuclear Society*, V55, pp. 330-331, 1987.
20. J.F. McGrath, D.L. Hicks and L.M. Liebrock, "Parallel Algorithms for Computational Continuum Dynamics", *Applied Mathematics and Computation*, V20, N2, pp. 145-173, 1986.
21. D.L. Hicks, J.F. McGrath, and L.M. Liebrock, "Thermal-Hydraulics Algorithms for Parallel Processors", *Transactions of the American Nuclear Society*, Vol. 50, pp. 275-276, 1985.

EDITED CONFERENCE PROCEEDINGS

1. L.M. Liebrock, B. Panda, and R.L. Hutchinson, Guest Editors, Special Issue Guest Editorial: Computer Forensics Track of Symposium on Applied Computing, *Journal of Digital Forensics Practice*, 3:1, DOI: 10.1080/15567280903177856, 2010.
2. L.M. Liebrock, Editor, *Proceedings of the 2008 ACM Symposium on Applied Computing*, ACM Press, ISBN: 1-59593-753-7, 2008.
3. L.M. Liebrock, Editor, *Proceedings of the 2007 ACM Symposium on Applied Computing*, ACM Press, ISBN: 1-59593-480-4, 2007.
4. L.M. Liebrock, Editor, *Proceedings of the 2006 ACM Symposium on Applied Computing*, ACM Press, ISBN: 1-59593-108-2, 2006.
5. L.M. Liebrock, Editor, *Proceedings of the 2005 ACM Symposium on Applied Computing*, ACM Press, ISBN: 1-58113-964-0, 2005.
6. Hisham M. Haddad, Andrea Omicini, Roger L. Wainwright, and Lorie M. Liebrock, Editors, *Proceedings of the 2004 Annual Symposium on Applied Computing*, ACM Press, ISBN: 1-58113-812-1, 2004.

PEER REVIEWED CONFERENCE AND WORKSHOP PAPERS

1. A. Kent and L.M. Liebrock, "Secure Communication via Shared Knowledge and a Salted Hash in Ad-hoc Environments", *35th Annual Computer Software and Applications Conference*, 2011.
2. H. Wimberly and L.M. Liebrock, "Using Fingerprint Authentication to Reduce System Security: An Empirical Study", *IEEE Symposium on Security and Privacy*, 2011.
3. V. Echeverria, L.M. Liebrock and D. Shin, "Permission Management System: Permission as a Service in Cloud Computing", *2010 34th Annual IEEE Computer Software and Applications Conference Workshops*, 2010.
4. D.A. Quist and L.M. Liebrock, "Visualizing Compiled Executables for Malware Analysis", *VisSec 2009*.

5. D.A. Quist and L.M. Liebrock, "Reverse Engineering By Crayon: Game Changing Hypervisor Based Malware Analysis and Visualization", Black Hat USA 2009 Briefings and Training, 2009.
6. M. Schwartz, C. Hash, and L.M. Liebrock, "Term Distribution Visualizations with Focus+Context", Proceedings of the 2009 ACM Symposium on Applied Computing, ACM Press, ISBN: 978-1-60558-166-8, 2009.
7. M. Schwartz and L.M. Liebrock, "A Term Distribution Visualization Approach to Digital Forensic String Search", VizSec 2008.
8. Unnati Thakore, L.M. Liebrock, "File and Memory Security Analysis for Grid Systems" HPCC 2007: 273-284, 2007.
9. L.M. Liebrock, "Integration of Well Posedness Analysis in Software Engineering", Proceedings of the 2007 ACM Symposium on Applied Computing, ACM Press, ISBN: 1-59593-480-4, 2007.
10. L.M. Liebrock, N. Marrero, D.P. Burton, R. Prine, E. Cornelius, M. Shakamuri, V. Urias, "A Preliminary Design for Digital Forensics Analysis of Terabyte Size Data Sets", Proceedings of the 2007 ACM Symposium on Applied Computing, ACM Press, ISBN: 1-59593-480-4, 2007.
11. E.E. Eiland and L.M. Liebrock, "An Application of Information Theory to Intrusion Detection", Proceedings of the 2006 IEEE International Information Assurance Workshop, April 2006.
12. E.E. Eiland and L.M. Liebrock, "Optimizing Network Data Transmission", Proceedings of Third International Conference on Information Technology: New Generations, 10-12 April 2006, in Las Vegas, Nevada.
13. L.M. Liebrock, "Empirical Sensitivity Analysis for Computational Procedures", Proceedings of the ACM Tapia Conference, Albuquerque, NM, October 19-22, 2005.
14. Samuel Ashmore, Anthony Trujillo, Nathan Kempton, and Lorie Liebrock, "Performance UV Radiation, Computers Monitors, and You", Proceedings of the ITEA Modeling & Simulation Workshop, 13-16 Dec 2004, Las Cruces, New Mexico, 2004.
15. Karthikeyan Ramamoorthy, Wei Xu, Chandra Rudraraju, and Lorie Liebrock, "Performance Analysis of Wireless Routers", Proceedings of the ITEA Modeling & Simulation Workshop, 13-16 Dec 2004, Las Cruces, New Mexico, 2004.
16. Lorie M. Liebrock and Ramesh Naidu Ande, "Integrating VRML, JAVA, XML, and HTML in a Web-based Tool", Proceedings of the 2004 Summer Computer Simulation Conference, San Jose, California, 24-29 July 2004.
17. Sue Goudy, Lorie Liebrock, and Steve Schaffer. "Performance Analysis of a Hybrid Parallel Linear Algebra Kernel", Proceedings of the 5th International Conference on Linux Clusters, Austin, Texas, May 2004.
18. Lorie Liebrock, Yuan Ye, Ramesh Naidu Ande, and Paul Richard Chen Ming, "Distributing Data in Composite Grid Applications for Grid Computing", Proceedings of the 18th International Parallel and Distributed Processing Symposium, Santa Fe, New Mexico, 26-30 April 2004.
19. Aishwarya Kalyanasundarm, and Lorie Liebrock, "Vulnerability Scanning for Buffer Overflow", Proceedings of the International Conference on Information Technology (ITCC 2004), Las Vegas, Nevada, 5-7 April 2004.
20. Scott Miller, Shawn Smith, and Lorie Liebrock, "An Analysis of an Extension to Tomasulo's Algorithm to Utilize an Array of Reconfigurable Functional Units", Proceedings of the "Applications for a Transforming World." ITEA Modeling & Simulation Workshop, 8-11 Dec 2003 at Las Cruces, New Mexico, 2003.

21. Layla Forman, Mike Petty, Chris Patscheck, and Lorie Liebrock, "An Empirical Model of Radio Frequency Emissions Versus Computer Architecture", Proceedings of the "Applications for a Transforming World." ITEA Modeling & Simulation Workshop, 8-11 Dec 2003 at Las Cruces, New Mexico, 2003.
22. Sue Goudy, Lorie Liebrock, and Steve Schaffer, "SMG on SMP Clusters: Performance Issues", Proceeding of Eleventh Copper Mountain Conference on Multigrid, March 30 – April 4, 2003 at Copper Mountain, Colorado, 2003.
23. L.M. Liebrock, "Mapping Nuclear Reactor Simulations onto Homogeneous and Heterogeneous Systems", Mathematics and Computation, Reactor Physics and Environmental Analysis in Nuclear Applications, 27-30 Sept. 1999, Madrid, Spain, 1999.
24. D.L. Hicks and L.M. Liebrock, 'Shape-Shifter Fixes for the SPH Tension Instability with Symmetrization, Renormalization, and Conservative Corrections', LHR L-H1998-0629, 1998.
25. L.M. Liebrock and D.L. Hicks, 'Shape-Shifter Fixes for the SPH Compression Instability with Symmetrization and Renormalization', LHR L-H1997-0702, 1997.
26. L.M. Liebrock, "Parallelization and Automatic Data Distribution for Nuclear Reactor Simulations", Proceedings of the SIAM Conference on Parallel Processing for Scientific Computing, 1997.
27. L.M. Liebrock, "Parallelization and Automatic Data Distribution for Nuclear Reactor Simulations", OECD/CSNI Workshop on Transient Thermal-Hydraulic & Neutronic Codes Requirements, 43 pp., Invited paper, 1996.
28. L.M. Liebrock and K. Kennedy, "Parallelization of Linearized Applications in Fortran D", Proceedings of the International Parallel Processing Symposium 1994, pp. 51-60, 1994.
29. L.M. Liebrock and D.L. Hicks, "Producing and Porting Parallel Algorithms for Material Dynamics", Proceedings of the Fifth International Topical Meeting on Reactor Thermal Hydraulics, Volume VI, pp. 1599-1606, 1992.
30. J.A. Jackson, L.M. Liebrock, and L.R. Ziegler, "A Hybrid Hypercube Algorithm for the Symmetric Tridiagonal Eigenvalue Problem", Proceedings of the Third Conference on Hypercube Concurrent Computers and Applications, Vol. 2, pp. 1546-1547, 1988.
31. S.A. Von Laven and L.M. Liebrock, "Free-Electron-Laser Simulations on the MPP", Frontiers of Massively Parallel Scientific Computation, Ed. J. R. Fishcher, NASA Scientific and Technical Information Office, Conference Publication 2478, pp. 193-195, 1987.
32. J.F. McGrath, D.L. Hicks, and L.M. Liebrock, "Parallel Processing for Computational Continuum Dynamics", Parallel Processing using the Heterogeneous Element Processor, Ed. S. Lakshmivarahan, University of Oklahoma Press, pp. 77-96, 1985.

REVIEWS

1. L.M. Liebrock, Review of "Domain Decomposition Algorithms for Solving Parabolic Equations on Massively Parallel Computers; by Yu Zhuang and Xian-He Sun", Applied Mathematics and Computation, 2008.
2. L.M. Liebrock, Review of "New Horizons of Parallel and Distributed Computing; by Minyi Guo and Laurence Tianruo Yang. Springer, 2005. Type: Book", Computing Reviews, 2006.
3. L.M. Liebrock, Review of "Algorithms Sequential and Parallel; by Russ Miller and Laurence Boxer. Charles River Media, Inc., Hingham, MA, 2005. Type: Book", Computing Reviews, 2006.

4. L.M. Liebrock, Review of “Load balancing in SPMD applications: concepts and experiments; by Plastino A., Thomé V., Vianna D., Costa R., da Silveira Filho O. In High Performance Scientific and Engineering Computing, Kluwer Academic Publishers, Norwell, MA, 2004. Type: Book Chapter: 2004”, Computing Reviews, Apr. 2005.
5. L.M. Liebrock, Review of “Security issues in Grid Environment; by Wenjie L., Guochang G.; Services Computing: 510-514, 2004”, Computing Reviews, Mar. 2005.
6. L.M. Liebrock (2004), Review of “On Data Distributions in the Construction of Parallel Programs; by V. Niculescu; The Journal of Supercomputing 29(1): 5-25, 2004”, Computing Reviews, review number 27412, Oct. 2004.
7. L.M. Liebrock, Review of “Grid Security: Peer-to-Peer Computing; by M. Surridge and C. Upstill, Proceedings of the 3rd International Conference, Sept. 1-3 2003, 2,2003”, Computing Reviews, Computing Reviews, 0409-1060, 2004.
8. L.M. Liebrock, Review of “On Exploiting Task Duplication in Parallel Program Scheduling; by I. Ahmad and Y-K. Kwok, IEEE Trans. Parallel & Distrib. Systems, 9, 9, 1998, pp. 872-892.”, Computing Reviews, 9909-0706, 1999.
9. L.M. Liebrock, Review of “Massively Parallel Augmenting Path Algorithms for the Assignment Problem; by S. Storøy and T. Sørevik; Computing, 59, 1, 1997, pp. 1-16.”, Computing Reviews, 9809-0740, 1998.
10. L.M. Liebrock, Review of “Approximation Algorithms for Time Constrained Scheduling; by Klaus Jansen and Savine Ohring, Inf. Comput., 132, 2, 1997, pp 85-108.”, Computing Reviews, 9805-0329, 1998.
11. L.M. Liebrock, Review of “Parallel Programming with MPI; by Peter S. Pacheco.”, Computing Reviews, 9805-0280, 1998.
12. L.M. Liebrock, Review of “Programming Parallel Algorithms; by G.E. Blelloch; Commun. ACM, 39, 3, 1996, pp. 85-97”, Computing Reviews, 9702-0126, 1997.
13. L.M. Liebrock, Review of “Parallel Processing in Cellular Arrays; by Y.I. Fet; John Wiley & Sons, Inc., 1995, 196 pp.”, Computing Reviews, 9702-0067, 1997.
14. L.M. Liebrock, Review of “Using MPI: Portable Parallel Programming with the Message-Passing Interface; by William Gropp, Ewing Lusk, and Anthony Skjellum, MIT Press; 1994, 307 pp.”, Computing Reviews, 9609-0646, 1995.
15. D.L. Hicks and L.M. Liebrock, Review of “Algebraic numbers: an example of dynamic evaluation, D.Duval;J. Symb. Comput., V18, N5, pp. 429-445”, Computing Reviews, 9607-0506, 1996.
16. L.M. Liebrock, Review of “Oracle Computations in Parallel Numerical Linear Algebra by B. Codenotti and G. Resta; Theor. Comput. Sci., 127, 1, pp. 99-121.”, Computing Reviews, 9512-0971, 1995.
17. L.M. Liebrock, Review of “The Art of Parallel Programming; by Bruce P. Lester; Prentice Hall, 1993, 375 pp.”, Computing Reviews, 9504-0209, 1995.
18. L.M. Liebrock, Review of “Parallel Computational Geometry; by Selim G. Akl; Prentice Hall, Inc., 1993, 215 pp.”, Computing Reviews 9502-0061, 1995.
19. L.M. Liebrock, Review of “Parallel Biased Search for Combinatorial Optimization: Genetic Algorithms and TABU; by Roberto Battiti and Giampietro Tecchiolli; Microprocess. Microsyst., V16, N7, (Sept. 1992), pp. 351-367.”, Computing Reviews, 9407-0465, 1994.

20. D.L. Hicks and L.M. Liebrock, Review of “Algebraic Numbers: an Example of Dynamic Evaluation; by D. Duval; Journal of Symbolic Computation; V18, N5 (Nov. 1994), pp. 429-445.” Computing Reviews, 9607-0506, 1994.
21. D.L. Hicks and L.M. Liebrock, Review of “What Computing is All About; by Jan L.A. van de Snepscheut; Springer-Verlag New York, 1993, 478 pp.”, Computing Reviews, 9409-0596, 1994.
22. L.M. Liebrock, Review of “Data-Parallel Programming on MIMD Computers; Philip J. Hatcher and Michael J. Quinn; MIT Press, 1992, 231 pp.”, Computing Reviews, 9309-0635, 1993.
23. L.M. Liebrock, Review of “VLSI and Parallel Computation; Eds. Robert Suaya and Graham Birtwistle; Morgan-Kaufmann, 1990, 474 pp.”, Computing Reviews, 9305-0265, 1993.
24. L.M. Liebrock, Review of “Massively Distributed Computing and Factoring Large Integers; Robert D. Silverman; CACM, V34, N11, pp. 95-103”, Computing Reviews, 9211-0881, 1992.
25. D.L. Hicks and L.M. Liebrock, Review of “Parallel Algorithms in Computational Science; by D.W. Heermann, A.N. Burkitt; Springer-Verlag New York, Inc., 1991, 183 pp.”, Computing Reviews, 9204-0202, 1992.
26. D.L. Hicks and L.M. Liebrock, Review of “Product-form Solution Techniques for the Performance Analysis of Multiple-bus Multiprocessor Systems with Nonuniform Memory References; by G. Chiola, M. Marsan, G. Balbo; IEEE Transactions on Computing, V37, N5, pp 532-540”, Computing Reviews, 8911-0826, 1989.

OTHER PUBLISHED WORKS

1. L.M. Liebrock and D.L. Hicks, “Stably Smoothing SPH Material Dynamics”, Liebrock-Hicks Research Technical Report LHR-20011120, 2001.
2. L.M. Liebrock, “Using Problem Topology in Parallelization”, Ph.D. Dissertation, Rice University, National Science Foundation's Center for Research in Parallel Computation Report, CRPC-TR 94477-S, 159 pp., 1994.
3. L.M. Liebrock and K. Kennedy, “Automatic Data Distribution of Small Meshes in Coupled Grid Applications”, Rice University, National Science Foundation's Center for Research in Parallel Computation Report, CRPC-TR 94396, 25 pp., 1994.
4. K. Kennedy, L.M. Liebrock, and J. Saltz, “Automatic Data Distribution of Large Mesh Irregularly Coupled Regular Mesh Problems”, Rice University, National Science Foundation's Center for Research in Parallel Computation Report, CRPC-TR 94523-S, 25 pp., 1994.
5. L.M. Liebrock and K. Kennedy, “Automatic Data Distribution of Large Meshes in Coupled Grid Applications”, Rice University, National Science Foundation's Center for Research in Parallel Computation Report, CRPC-TR 94395, 23 pp., 1994.
6. L.M. Liebrock and K. Kennedy, “Modeling Parallel Computation”, Rice University, National Science Foundation's Center for Research in Parallel Computation Report, CRPC-TR 94394, 14 pp., 1994.
7. D.L. Hicks, K.W. Kennedy, and L.M. Liebrock, “Mathematical Models for the Speedup of Parallel Material Dynamics Codes”, Rice University, National Science Foundation's Center for Research in Parallel Computation Report, CRPC-TR 93343, 12 pp., 1993.
8. L.M. Liebrock and K. Kennedy, “Parallelization of Linearized Applications in Fortran D”, Rice University, National Science Foundation's Center for Research in Parallel Computation Report, CRPC-TR 93342-S, 18 pp., 1993.

9. L.M. Liebrock, D.L. Hicks, K.W. Kennedy, and J.D. Dongarra, "Using Problem and Algorithm Topology in Parallelization", Rice University, National Science Foundation's Center for Research in Parallel Computation Report CRPC-TR 91-166-S, 21 pp., 1991.
10. D.L. Hicks, J.F. McGrath, and L.M. Liebrock, "Dispersion Analysis of the von Neumann-Richtmyer Scheme", KMS Fusion Report, KMSF-U2070, 23 pp., 1989.
11. L.M. Liebrock, "Parallel Vector Bisection Algorithms on the FPS T-Series", Master's Thesis, Michigan Technological University, 99 pp., 1988.
12. L.M. Liebrock, J.F. McGrath and D.L. Hicks, "Experiments in Concurrent Computational Dynamics on the CRAY X-MP, ELXSI and HEP Parallel Processors with Recommendations for Parallel Architectures & Languages", KMS Fusion Report, KMSF-U1784, 103 pp., 1987.
13. D.L. Hicks, L.M. Liebrock, V. A. Mousseau, and G.A. Mortensen, "Parallelization of Hydrocodes on the INTEL Hypercube, Part 2", Idaho National Engineering Laboratories Report, EGG-SPAG-7818, 38 pp., 1987.
14. D.L. Hicks, L.M. Liebrock, V.A. Mousseau, and G.A. Mortensen, "Parallelization of Hydrocodes on the Intel Hypercube, Part 1", Idaho National Engineering Laboratories Report, EGG-SPAG-7682, 42 pp., 1987.
15. J.F. McGrath, D.L. Hicks, and L.M. Liebrock, "Parallel Algorithms for Computational Fluid Dynamics", (This is the final report of work done on a project supported by AFOSR under contract # F49620-84-6-0111 in the time interval 9/15/84 - 3/15/85), KMS Fusion Report, KMSF-U1601, 41 pp1., 1985.

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