

## Books, Journal Articles, Conference Papers and Book Chapters

Alexey Lastovetsky  
 School of Computer Science and Informatics  
 University College Dublin, Belfield Dublin 4, Ireland  
 E-mail: [Alexey.Lastovetsky@ucd.ie](mailto:Alexey.Lastovetsky@ucd.ie)

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### REFERENCES

1. A. Lastovetsky. Accuracy analysis of floating point computer arithmetic (textbook edition). MAI, Moscow, 1988.
2. A. Lastovetsky. Parallel Computing on Heterogeneous Networks. 423 pages, John Wiley & Sons, June 2003.
3. Lastovetsky and J. Dongarra. High Performance Heterogeneous Computing. John Wiley & Sons, 267 pages, July 2009.
4. F. Desprez, E. Fleury, A. Kalinov, and A. Lastovetsky, editors. Algorithms, Models and Tools for High Performance Computing on Heterogeneous Networks. Special Issue of Parallel and Distributed Computing Practices 5(4), Nova Science Publishers, December 2004.
5. A. Kalinov, A. Lastovetsky, and Y. Robert, editors. Heterogeneous Computing. Special Issue of Parallel Computing 31(7), pp. 649–812, Elsevier, 2005.
6. F. Desprez, E. Fleury, A. Kalinov, and A. Lastovetsky, editors. Algorithms and Tools for Parallel Computing on Heterogeneous Clusters. Nova Science Publishers, February 2007.
7. A. Lastovetsky, T. Kechadi, and J. Dongarra, editors. Recent Advances in Parallel Virtual Machine and Message Passing Interface. Lecture Notes in Computer Science, vol. 5205, Springer, 342 pp., September 2008.
8. A. Lastovetsky and T. Kechadi, editors. Recent Advances in Parallel Virtual Machine and Message Passing Interface. Special Issue of International Journal of High Performance Computing Applications 24(1), pp. 3–104, Sage, February 2010.
9. A. Lastovetsky, editor. Heterogeneity in Parallel and Distributed Computing. Special Issue of Journal of Parallel and Distributed Computing 73(12), pp. 1523–1717, Elsevier, December 2013.
10. A. Lastovetsky. An algebraic approach to schemes of structured programs // Programming and Computer Software 10(1), pp.22–28, 1984.
11. S. Gaissaryan and A. Lastovetsky. An algebraic model of von Neumann programming languages // Programming and Computer Software 10(6), pp.291–299, 1984.
12. S. Gaissaryan and A. Lastovetsky. Calculus of equivalences of abstract programs // Programming and Computer Software 11(5), pp.265–273, 1985.
13. S. Gaissaryan and A. Lastovetsky. A calculus of propositional properties of programs // Programming and Computer Software 16(3), pp.93–99, 1990.
14. O. Dubko, T. Dubko, and A. Lastovetsky. Functional portability of standardized C programs // Moscow University Computational Mathematics and Cybernetics 15(1), pp. 49–54, Moscow State University, 1993.
15. S. Gaissaryan and A. Lastovetsky. An ANSI C superset for vector and superscalar computers and its retargetable compiler // The Journal of C Language Translation 5(3), pp.183–198, 1994.
16. A. Lastovetsky and S. Gaissaryan. An algebraic approach to semantics of programming languages // Theoretical Computer Science 135(2), pp.267–288, Elsevier, 1994.

17. S. Gaissaryan, D. Khaletsky, A. Lastovetsky, and I. Ledovskih. ANSI C extension for vector and superscalar computers // *Programming and Computer Software* 21(1), pp.17–25, 1995.
18. A. Lastovetsky. mpC: A Multi-Paradigm Programming Language for Massively Parallel Computers // *ACM SIGPLAN Notices* 31(2), pp.13–20, ACM Press, 1996.
19. V. Ivannikov and A. Lastovetsky. Efficiently portable programming parallel architectures // *Fundamental and Applied Mathematics*, 4(3), pp.947–974, Moscow State University, 1998 (Russian).
20. D. Arapov, A. Kalinov, A. Lastovetsky, and I. Ledovskih. A Language Approach to High Performance Computing on Heterogeneous Networks // *Parallel and Distributed Computing Practices* 2(3), pp.87–96, Nova, 1999.
21. A. Lastovetsky, A. Kalinov, I. Ledovskih, D. Arapov, and M. Posypkin. A Language and Programming Environment for High-Performance Parallel Computing // *Programming and Computer Software* 26(4), pp.216–236, Springer, 2000.
22. A. Lastovetsky, D. Arapov, A. Kalinov, and I. Ledovskih. A Parallel Language and Its Programming System for Heterogeneous Networks // *Concurrency: Practice and Experience* 12(13), pp.1317–1343, Wiley, 2000.
23. A. Kalinov and A. Lastovetsky. Heterogeneous Distribution of Computations Solving Linear Algebra Problems on Networks of Heterogeneous Computers // *Journal of Parallel and Distributed Computing* 61(4), pp.520–535, Elsevier, 2001.
24. A. Kalinov, A. Lastovetsky, I. Ledovskih, and M. Posypkin. Compilation of Vector Statements of C[] Language for Architectures with Multilevel Memory Hierarchy // *Programming and Computer Software* 27(3), pp.111–122, Springer, 2001.
25. A. Lastovetsky. Adaptive Parallel Computing on Heterogeneous Networks with mpC // *Parallel Computing* 28(10), pp.1369–1407, Elsevier, 2002.
26. A. Kalinov, A. Lastovetsky, I. Ledovskih, and M. Posypkin. Effective Solving Scientific Problems on Heterogeneous Networks of Computers with mpC // *Journal of Computational Methods in Applied Sciences and Engineering*, Cambridge International Science Publishing, 2(1-2), pp.135–140, IOS Press, 2002.
27. A. Kalinov, A. Lastovetsky, I. Ledovskih, and M. Posypkin. Refined Description of the C[] // *Programming and Computer Software* 28(6), pp.333–341, Springer, 2002.
28. A. Lastovetsky. Parallel Computing on Heterogeneous Networks: Challenges and Responses // *Problems of Programming* 10(2-3), pp.251–260, 2004, ISSN 1727-4907.
29. A. Lastovetsky and R. Reddy. On Performance Analysis of Heterogeneous Parallel Algorithms // *Parallel Computing* 30(11), pp.1195–1216, Elsevier, 2004.
30. A. Lastovetsky. Parallel Testing of Distributed Software // *Information and Software Technology* 47(10), pp.657–662, Elsevier, 2005.
31. A. Lastovetsky and R. Reddy. Data Partitioning for Multiprocessors with Memory Heterogeneity and Memory Constraints // *Scientific Programming* 13(2), pp.93–112, IOS Press, 2005.
32. A. Lastovetsky and R. Reddy. HeteroMPI: Towards a Message-Passing Library for Heterogeneous Networks of Computers // *Journal of Parallel and Distributed Computing* 66(2), pp.197–220, Elsevier, 2006.
33. A. Lastovetsky and R. Reddy. Data Partitioning with a Functional Performance Model of Heterogeneous Processors // *International Journal of High Performance Computing Applications* 21(1), pp.76–90, Sage, 2007.
34. A. Lastovetsky and R. Reddy. Data Distribution for Dense Factorization on Computers with Memory Heterogeneity // *Parallel Computing* 33(12), pp. 757–779, Elsevier, 2007.

35. D. Valencia, A. Lastovetsky, M. O’Flynn, A. Plaza, J. Plaza. Parallel Processing of Remotely Sensed Hyperspectral Images on Heterogeneous Networks of Workstations Using HeteroMPI // *International Journal of High Performance Computing Applications* 22(4), pp. 386–407, Sage, 2008.
36. A. Lastovetsky and V. Rychkov. Accurate and Efficient Estimation of Parameters of Heterogeneous Communication Performance Models // *International Journal of High Performance Computing Applications* 23(2), pp. 123–139, Sage, 2009.
37. R. Reddy, A. Lastovetsky, and P. Alonso. HeteroPBLAS: A Set of Parallel Basic Linear Algebra Subprograms Optimized for Heterogeneous Computational Clusters // *Scalable Computing: Practice and Experience* 10(2), pp. 201–216, ISSN 1895-1767, June 2009.
38. A. Lastovetsky, V. Rychkov, and M. O’Flynn. Accurate Heterogeneous Communication Models and a Software Tool for their Efficient Estimation // *International Journal of High Performance Computing Applications* 24(1), pp. 34–48, Sage, 2010.
39. T. Brady, J. Dongarra, M. Guidolin, A. Lastovetsky, and K. Seymour. SmartGridRPC: The New RPC Model for High Performance Grid Computing // *Concurrency and Computation: Practice and Experience* 22(18), pp. 2467–2487, Wiley, 2010.
40. D. Clarke, A. Lastovetsky, and V. Rychkov. Dynamic Load Balancing of Parallel Computational Iterative Routines on Highly Heterogeneous HPC Platforms // *Parallel Processing Letters* 21(2), pp. 195–217, World Scientific, June 2011.
41. K. Dichev, F. Reid, and A. Lastovetsky. Efficient and reliable network tomography in heterogeneous networks using BitTorrent broadcasts and clustering algorithms // *Scientific Programming* 21(3-4), pp. 79–92, IOS Press, December 2013.
42. J.-N. Quintin, K. Hasanov, and A. Lastovetsky. Hierarchical Approach to Optimization of Parallel Matrix Multiplication on Large-Scale Platforms // *The Journal of Supercomputing*, 24 pp., Springer, 2014 (DOI 10.1007/s11227-014-1133-x, published online 4 March 2014).
43. D. Clarke, Z. Zhong, V. Rychkov, A. Lastovetsky. FuPerMod: A Software Tool for the Optimization of Data-Parallel Applications on Heterogeneous Platforms // *The Journal of Supercomputing* 69(1), pp. 61–69, Springer, July 2014.
44. J. Zhu, A. Lastovetsky, S. Ali, R. Riesen, K. Hasanov. Asymmetric Communication Models for Resource Constrained Hierarchical Ethernet Networks // *Concurrency and Computation: Practice and Experience* 26, 15 pp., 2014 (published online 30 JUL 2014, DOI: 10.1002/cpe.3343).
45. Z. Zhong, V. Rychkov, A. Lastovetsky. Data Partitioning on Multicore and Multi-GPU Platforms Using Functional Performance Models // *IEEE Transactions on Computers* 14 pp., 2014 (published online 14 December 2014).
46. A. Lastovetsky. Heterogeneous Parallel Computing: from Clusters of Workstations to Hierarchical Hybrid Platforms // *Supercomputing Frontiers and Innovations* 1(3), pp. 68-85, December 2014.
47. A. Lastovetsky and S. Gaissaryan. Language aspects of porting software // In *Portable Software*, Software Centre, Tver, 1991.
48. O. Dubko, T. Dubko, and A. Lastovetsky. Tool for functional porting of C programs // In *Informatics and Computing Systems*, Moscow State University, Moscow, 1993.
49. A. Lastovetsky. Preliminary report on the mpC language // *Applications of System Programming*, v.1, Russian Academy of Sciences, 1995.
50. A. Lastovetsky and I. Ledovskih. Analysis of structural equivalence of declarations in the C[] compiler // *Applications of System Programming*, v.1, Russian Academy of Sciences, 1995.
51. A. Lastovetsky and M. Posypkin. Analysis of DECchip 21064 and possible ways to speed up execution of programs // *Applications of System Programming*, v.2, Russian Academy of Sciences, 1996.
52. A. Lastovetsky and M. Posypkin. Implementation of vector operators for DECchip 21064 // *Applications of System Programming*, v.2, Russian Academy of Sciences, 1996.

53. A. Lastovetsky, D. Arapov, A. Kalinov, and I. Ledovskih. A Language Approach to High Performance Computing on Heterogeneous Networks // *Progress in Computer Research*, vol. 2, pp.215–226, Nova Science Publishers, 2001.
54. A. Lastovetsky and J. Twamley. Towards a Realistic Performance Model for Networks of Heterogeneous Computers // *In High Performance Computational Science and Engineering (IFIP TC5 Workshop, World Computer Congress, 2004, Toulouse, France)*, Eds M. Ng, A. Doncescu, L. Yang, T. Leng, Springer, pp.39–58, 2005, ISBN 0-387-24048-9.
55. J. Dongarra and A. Lastovetsky. An Overview of Heterogeneous High Performance and Grid Computing // *In Engineering the Grid: Status and Perspective*, Eds B. DiMartino, J. Dongarra, A. Hoisie, L. Yang, and H. Zima, American Scientific Publishers, pp.1–25, 2006.
56. T. Brady, O. Girko, and A. Lastovetsky. Smart RPC-based Computing in Grids and on Clouds // *In Large Scale Network-Centric Computing Systems (Wiley series on parallel and distributed computing)*, Eds H. Sarbazi-azad and A. Zomaya, Wiley, pp. 257–290, 2013.
57. K. Dichev and A. Lastovetsky. Optimization of collective communication for heterogeneous HPC platforms // *In High-Performance Computing on Complex Environments (Wiley series on parallel and distributed computing)*, Wiley, pp. 95–114, 2014.
58. D. Clarke, A. Ilic, A. Lastovetsky, V. Rychkov, L. Sousa, and Z. Zhong. Design and optimization of scientific applications for highly heterogeneous and hierarchical HPC platforms using functional computation performance models // *In High-Performance Computing on Complex Environments (Wiley series on parallel and distributed computing)*, Wiley, pp. 235–260, 2014.
59. A. Lastovetsky and S. Gaissaryan. A C-level programming language for massively parallel computers // *Proceedings of the 1993 International Conference on Software for Multiprocessors and Supercomputers: Theory, Practice, Experience (SMS TPE'93)*, Russian Academy of Sciences, February 1993, St.Petersburg, Russia.
60. S Katsеров, A Lastovetsky, S Gaissaryan, D Klialetsky, I Ledovskih. Retargetable compiler of ANSI C superset for vector and superscalar computers // *Proceedings of the 1994 International Conference on Software for Multiprocessors and Supercomputers: Theory, Practice, Experience (SMS TPE'94)*, Russian Academy of Sciences, October 1994, Moscow, Russia, pp.77–84.
61. D Arapov, A Kalinov, A Lastovetsky. Managing the computing space in the mpC compiler // *Proceedings of the Fourth International Conference on Parallel Architectures and Compilation Techniques (PACT'96)*, IEEE Computer Society Press, October 20–23, 1996, Boston, MA, pp. 150–155.
62. D Arapov, A Kalinov, A Lastovetsky. Resource management in the mpC programming environment // *Proceedings of the 30th Hawaii International Conference on System Sciences (HICSS'30)*, vol.1, IEEE Computer Society Press, January 7–10, 1997, Wailea, HI, pp.576–585.
63. D Arapov, V Ivannikov, A Kalinov, A Lastovetsky, I Ledovskih, T Lewis. Modular parallel programming in mpC for distributed memory machines // *Proceedings of the 2nd Aizu International Symposium on Parallel Algorithms/Architectures Synthesis (pAs'97)*, IEEE Computer Society Press, March 17–21, 1997, Aizu-Wakamatsu, Japan, pp.248–255.
64. D Arapov, A Kalinov, A Lastovetsky, I Ledovskih, T Lewis. A programming environment for heterogeneous distributed memory // *Proceedings of the 6th Heterogeneous Computing Workshop (HCW'97)*, IEEE Computer Society Press, April 1–5, 1997, Geneve, Switzerland, pp.32–45.
65. D Arapov, A Kalinov, A Lastovetsky, I Ledovskih. Experiments with mpC: efficient solving regular problems on heterogeneous networks of computers via irregularization // *Proceedings of the Fifth International Symposium on Solving Irregularly Structured Problems in Parallel (IRREGULAR'98)*, Lecture Notes in Computer Science 1457, August 1998, Berkley, CA, USA, pp.332–343.
66. D Arapov, V Ivannikov, A Kalinov, A Lastovetsky, and I Ledovskih. Managing processes with network objects and their translation // *Proceedings of the EUROMICRO'98 International*

- Conference, vol.2, IEEE Computer Society Press, August 25–27, 1998, Vasteras, Sweden, pp.1037–1044.
67. B Chetverushkin, N Churbanova, A Lastovetsky, and M Trapeznikova. Parallel simulation of oil extraction on heterogeneous networks of computers // Proceedings of the 1998 Conference on Simulation Methods and Applications (CSMA'98), Society for Computer Simulation, November 1–3, 1998, Orlando, Florida, pp.53–59.
  68. A. Kalinov and A. Lastovetsky. Heterogeneous Distribution of Computations While Solving Linear Algebra Problems on Networks of Heterogeneous Computers // Proceedings of the 7th International Conference on High Performance Computing and Networking Europe (HPCN'99), Lecture Notes in Computer Science 1593, Springer-Verlag, April 12–14, 1999, Amsterdam, The Netherlands, pp.191–200.
  69. A. Kalinov and A. Lastovetsky. mpC + ScaLAPACK = Efficient Solving Linear Algebra Problems on Heterogeneous Networks (with) // Proceedings of the 5th International Euro-Par Conference, Lecture Notes in Computer Science 1685, Toulouse, France, August 31 – September 3, 1999, pp.1024–1031.
  70. A. Lastovetsky. Using mpC to Improve Performance of CORBA-Based Distributed Applications on Heterogeneous Networks // Proceedings of the 2001 International Conference on Parallel and Distributed Processing Techniques and Algorithms (PDPTA'2001), vol.3, CSREA Press, Las Vegas, Nevada, June 24–26, 2001, pp.1471–1476.
  71. A. Lastovetsky and R. Reddy. HMPI: Towards a Message-Passing Library for Heterogeneous Networks of Computers // Proceedings of the 17th International Parallel and Distributed Processing Symposium (IPDPS 2003), 22–26 April 2003, Nice, France, CD-ROM/Abstracts Proceedings, IEEE Computer Society 2003.
  72. A. Lastovetsky and R. Reddy. An Approach to Assessment of Heterogeneous Parallel Algorithms // Proceedings of the 7th International Conference on Parallel Computing Technologies (PaCT 2003), Nizhni Novgorod, Russia, Lecture Notes in Computer Science 2763, pp. 117–129, 2003.
  73. A. Lastovetsky and R. Reddy. Classification of Partitioning Problems for Networks of Heterogeneous Computers // Proceedings of the 5th International Conference on Parallel Processing and Applied Mathematics (PPAM 2003), Czestochowa, Poland, Lecture Notes in Computer Science 3019, pp.921–929, 2003.
  74. A. Lastovetsky and R. Reddy. Data Partitioning with a Realistic Performance Model of Networks of Heterogeneous Computers // Proceedings of the 18th International Parallel and Distributed Processing Symposium (IPDPS 2004), 26–30 April 2004, Santa Fe, New Mexico, USA, CD-ROM/Abstracts Proceedings, IEEE Computer Society 2004.
  75. A. Lastovetsky and R. Reddy. Data Partitioning with a Realistic Performance Model of Networks of Heterogeneous Computers with Task Size Limits // Proceedings of the Third International Symposium on Parallel and Distributed Computing/Third International Workshop on Algorithms, Models and Tools for Parallel Computing on Heterogeneous Networks (ISPDC/HeteroPar'04), IEEE Computer Society Press, pp.133-140, 5–7 July 2004, Cork, Ireland, 2004.
  76. A. Lastovetsky and J. Twamley. Towards a Realistic Performance Model for Networks of Heterogeneous Computers // The 2004 IFIP International Symposium on High Performance Computational Science and Engineering (HPCSE-04), 27 August 2004, Toulouse, France.
  77. Z. Peng and A/ Lastovetsky. Event Logging: Portable and Efficient Checkpointing in Heterogeneous Environments with Non-FIFO Communication Platforms // Proceedings of the 19th International Parallel and Distributed Processing Symposium (IPDPS 2005), 4–8 April 2005, Denver, Colorado, USA, CD-ROM/Abstracts Proceedings, IEEE Computer Society 2005.
  78. A. Lastovetsky. Modelling Performance of Processors for High Performance Computing on Heterogeneous Networks // Proceedings of the 14th International Conference on Computational

- Mechanics and Modern Applied Software Systems, 25–31 May 2005, Alushta, Crimea, Ukraine, 2005.
79. A. Kalinov, M. Posypkin, A. Lastovetsky, and I. Ledovskikh. The Concept of Replication of Data and Expressions as a Means to Increase Reliability of Parallel Programs // Proceedings of the 7th Russian Conference on Scientific Service in the Internet: Distributed Computing Technologies, 19-24 September 2005, Novorossiysk, Russia, 2005.
  80. A. Lastovetsky and R. Reddy. A Variable Group Block Distribution Strategy for Dense Factorizations on Networks of Heterogeneous Computers // Proceedings of the 6th International Conference on Parallel Processing and Applied Mathematics (PPAM 2005), 11–14 September, Poznan, Poland, Lecture Notes in Computer Science 3911, pp.1074–1081, Springer, 2006.
  81. R. Higgins and A. Lastovetsky. Scheduling for Heterogeneous Networks of Computers with Persistent Fluctuation of Load // Proceedings of the 13th International Conference on Parallel Computing (ParCo 2005), 13–16 September 2005, Malaga, Spain, pp. 171–178, John von Neumann Institute for Computing Series, vol. 33, Central Institute for Applied Mathematics, Jülich, Germany, 2005, ISBN 3-00-017352-8.
  82. A. Lastovetsky, R. Reddy, and R. Higgins. Building the Functional Performance Model of a Processor // Proceedings of the 21st Annual ACM Symposium on Applied Computing (SAC'06), ACM Press, pp.746–753, Dijon, France, April 23–27, 2006.
  83. T. Brady, E. Konstantinov, and A. Lastovetsky. SmartNetSolve: High Level Programming System for High Performance Grid Computing // Proceedings of the 20th International Parallel and Distributed Processing Symposium (IPDPS 2006), 25–29 April 2006, Rhodes Island, Greece, CD-ROM/Abstracts Proceedings, IEEE Computer Society, 2006.
  84. A. Lastovetsky, X. Zuo, and P. Zhao. A Non-Intrusive and Incremental Approach to Enabling Direct Communications in RPC-Based Grid Programming Systems // Proceedings of the 6th International Conference on Computational Science (ICCS 2006), 28–31 May 2006, The University of Reading, UK, Lecture Notes in Computer Science 3993, pp.1008–1011, Springer, 2006.
  85. A. Lastovetsky, I. Mkwawa, and M. O'Flynn. An Accurate Communication Model of a Heterogeneous Cluster Based on a Switch-Enabled Ethernet Network // Proceedings of the 12th International Conference on Parallel and Distributed Systems – Volume 2 (ICPADS 2006), 12–15 July 2006, Minneapolis, Minnesota, USA, pp.15–20, IEEE Computer Society Press, 2006.
  86. B. Becker and A. Lastovetsky. Matrix Multiplication on Two Interconnected Processors // Proceedings of the 8th IEEE International Conference on Cluster Computing (Cluster 2006), 25–28 September 2006, Barcelona, Spain, CD-ROM/Abstracts Proceedings, IEEE Computer Society, 2006.
  87. D. Valencia, A. Lastovetsky, and A. Plaza. Design and Implementation of a Parallel Heterogeneous Algorithm for Hyperspectral Image Analysis Using HeteroMPI // Proceedings of the 5th International Symposium on Parallel and Distributed Computing (ISPDC 2006), 6–9 July 2006, Timisoara, Romania, pp.301–308, IEEE Computer Society, 2006.
  88. R. Reddy and A. Lastovetsky. HeteroMPI + ScaLAPACK: Towards a Dense ScaLAPACK on Heterogeneous Networks of Computers // Proceedings of the 13th IEEE International Conference on High Performance Computing (HiPC 2006), 18–21 December 2006, Bangalore, India, Lecture Notes in Computer Science 4297, pp. 242–252, Springer, 2006.
  89. P. Alonso, A. Lastovetsky, and A. Vidal. A Parallel Algorithm for Solution of the Deconvolution Problem on Heterogeneous Networks // Proceedings of the 8th IEEE International Conference on Cluster Computing (Cluster 2006), 25–28 September 2006, Barcelona, Spain, CD-ROM/Abstracts Proceedings, IEEE Computer Society, 2006.
  90. A. Lastovetsky. Scientific Programming for Heterogeneous Systems – Bridging the Gap between Algorithms and Applications // Proceedings of the 5th International Symposium on Parallel

- Computing in Electrical Engineering (PARELEC 2006), 13–17 September 2006, Bialystok, Poland, pp. 3–8, IEEE Computer Society, 2006.
91. X. Zuo and A. Lastovetsky. Experiments with a Software Component Enabling NetSolve with Direct Communications in a Non-Intrusive and Incremental Way // Proceedings of the 21st International Parallel and Distributed Processing Symposium (IPDPS 2007), 26–30 March 2007, Long Beach, California, USA, CD-ROM/Abstracts Proceedings, IEEE Computer Society, 2007.
  92. A. Lastovetsky and M. O’Flynn. A Performance Model of Many-to-One Collective Communications for Parallel Computing // Proceedings of the 21st International Parallel and Distributed Processing Symposium (IPDPS 2007), 26–30 March 2007, Long Beach, California, USA, CD-ROM/Abstracts Proceedings, IEEE Computer Society, 2007.
  93. A. Lastovetsky, M. O’Flynn, V. Rychkov. Modelling Performance of Collective Communications for Parallel Computing // Proceedings of the 15th International Conference on Computational Mechanics and Modern Applied Software Systems (CMMASS 2007), 25–31 May 2007, Alushta, Ukraine, 2007.
  94. A. Lastovetsky. On Grid-based Matrix Partitioning for Heterogeneous Processors // Proceedings of the 6th International Symposium on Parallel and Distributed Computing (ISPDC 2007), 5–8 July 2007, Hagenberg, Austria, pp. 383–390, IEEE Computer Society, 2007.
  95. B. Becker and A. Lastovetsky. Towards Data Partitioning for Parallel Computing on Three Interconnected Clusters // Proceedings of the 6th International Symposium on Parallel and Distributed Computing (ISPDC 2007), 5–8 July 2007, Hagenberg, Austria, pp. 285–292, IEEE Computer Society, 2007.
  96. A. Lastovetsky and R. Reddy. A Novel Algorithm of Optimal Matrix Partitioning for Parallel Dense Factorization on Heterogeneous Processors // Proceedings of the 9th International Conference on Parallel Computing Technologies (PaCT 2007), 3–7 September 2007, Pereslavl-Zalessky, Russia, Lecture Notes in Computer Science 4671, pp. 261–275, Springer, 2007.
  97. A. Lastovetsky, M. O’Flynn, and V. Rychkov. Optimization of Collective Communications in HeteroMPI // Proceedings of the 14th European PVM/MPI User’s Group Meeting (EuroPVM/MPI 2007), 30 September – 3 October 2007, Paris, France, Lecture Notes in Computer Science 4757, pp. 135–143, Springer, 2007.
  98. A. Lastovetsky and V. Rychkov. Building the Communication Performance Model of a Heterogeneous Cluster Based on a Switched Network // Proceedings of the 2007 IEEE International Conference on Cluster Computing (Cluster 2007), 17–20 September 2007, Austin, Texas, pp. 568–575, IEEE Computer Society, 2007.
  99. A. Lastovetsky, M. O’Flynn, and V. Rychkov. MPIBlib: Benchmarking MPI Communications for Parallel Computing on Homogeneous and Heterogeneous Clusters // Proceedings of the 15th European PVM/MPI User’s Group Meeting (EuroPVM/MPI 2008), 7–10 September 2008, Dublin, Ireland, Lecture Notes in Computer Science 5205, pp. 227–238, Springer, 2008.
  100. A. Lastovetsky, M. O’Flynn, and V. Rychkov. A software tool for accurate estimation of parameters of heterogeneous communication models // Proceedings of the 15th European PVM/MPI User’s Group Meeting (EuroPVM/MPI 2008), 7–10 September 2008, Dublin, Ireland, Lecture Notes in Computer Science 5205, pp. 43–54, Springer, 2008.
  101. D. Valencia, A. Plaza, V. Rychkov, and A. Lastovetsky. Efficient collective communication paradigms for hyperspectral imaging algorithms using HeteroMPI // Proceedings of the 15th European PVM/MPI User’s Group Meeting (EuroPVM/MPI 2008), 7–10 September 2008, Dublin, Ireland, Lecture Notes in Computer Science 5205, pp. 326–331, Springer, 2008.
  102. T. Brady, M. Guidolin, and A. Lastovetsky. Experiments with SmartGridSolve: Achieving Higher Performance by Improving the GridRPC Model // Proceedings of the 9th IEEE/ACM International

- Conference on Grid Computing (Grid 2008), pp. 49–56, 29 September – 1 October 2008, Tsukuba, Japan, IEEE Computer Society, 2008.
103. M. Guidolin and A. Lastovetsky. Algorithm Definition Language: a Task Graph Builder for SmartGridSolve // Proceedings of the 9th IEEE/ACM International Conference on Grid Computing (Grid 2008), pp. 322–327, 29 September – 1 October 2008, Tsukuba, Japan, IEEE Computer Society, 2008.
  104. R. Reddy, A. Lastovetsky, and P. Alonso. Scalable Dense Factorizations for Heterogeneous Computational Clusters // Proceedings of the 7th International Symposium on Parallel and Distributed Computing (ISPDC 2008), 1–5 July 2008, Krakow, Poland, pp. 49–56, IEEE Computer Society, 2008.
  105. R. Reddy, A. Lastovetsky, and P. Alonso. Heterogeneous PBLAS: Optimization of PBLAS for Heterogeneous Computational Clusters // Proceedings of the 7th International Symposium on Parallel and Distributed Computing (ISPDC 2008), 1–5 July 2008, Krakow, Poland, pp. 73–80, IEEE Computer Society, 2008.
  106. R. Higgins and A. Lastovetsky. Managing the Construction and Use of Functional Performance Models in a Grid Environment // Proceedings of the 23rd International Parallel and Distributed Processing Symposium (IPDPS 2009), 25–29 May 2009, Rome, Italy, CD-ROM/Abstracts Proceedings, IEEE Computer Society, 2009.
  107. M. Guidolin and A. Lastovetsky. Grid-enabled Hydropad: a Scientific Application for Benchmarking GridRPC-based Programming Systems // Proceedings of the 23rd International Parallel and Distributed Processing Symposium (IPDPS 2009), 25–29 May 2009, Rome, Italy, CD-ROM/Abstracts Proceedings, IEEE Computer Society, 2009.
  108. A. Lastovetsky, M. O’Flynn, and V. Rychkov. Revisiting Communication Performance Models for Computational Clusters // Proceedings of the 23rd International Parallel and Distributed Processing Symposium (IPDPS 2009), 25–29 May 2009, Rome, Italy, CD-ROM/Abstracts Proceedings, IEEE Computer Society, 2009.
  109. R. Reddy, A. Lastovetsky, and P. Alonso. Parallel Solvers for Dense Linear Systems for Heterogeneous Computational Clusters // Proceedings of the 23rd International Parallel and Distributed Processing Symposium (IPDPS 2009), 25–29 May 2009, Rome, Italy, CD-ROM/Abstracts Proceedings, IEEE Computer Society, 2009.
  110. A. Lastovetsky. Model-based Optimization of MPI Collective Operations for Computational Clusters (Invited Talk) // Proceedings of the 16th European PVM/MPI User’s Group Meeting (EuroPVM/MPI 2009), 7–10 September 2009, Espoo, Finland, Lecture Notes in Computer Science 5759, pp. 4–5, Springer, 2009.
  111. A. Lastovetsky and R. Reddy. Two-dimensional Matrix Partitioning for Parallel Computing on Heterogeneous Processors Based on their Functional Performance Models // Proceedings of the 7th International Workshop on Algorithms, Models and Tools for Parallel Computing on Heterogeneous Platforms (HeteroPar 2009), 25 August 2009, Delft, The Netherlands, Lecture Notes in Computer Science 6043, pp. 112–121, Springer, 2010.
  112. A. Lastovetsky and R. Reddy. Distributed Data Partitioning for Heterogeneous Processors Based on Partial Estimation of their Functional Performance Models // Proceedings of the 7th International Workshop on Algorithms, Models and Tools for Parallel Computing on Heterogeneous Platforms (HeteroPar 2009), 25 August 2009, Delft, The Netherlands, Lecture Notes in Computer Science 6043, pp. 91–101, Springer, 2010.
  113. P. Alonso, R. Reddy, and A. Lastovetsky. Experimental Study of Six Different Implementations of Parallel Matrix Multiplication on Heterogeneous Computational Clusters of Multicore Processors // Proceedings of the 18th Euromicro International Conference on Parallel, Distributed and Network-



- Based Computing (PDP 2010), 17-19 February 2010, Pisa, Italy, pp. 263–270, IEEE Computer Society, 2010.
114. M. Guidolin, T. Brady, and A. Lastovetsky. How Algorithm Definition Language (ADL) Improves the Performance of SmartGridSolve Applications // Proceedings of the 7th High-Performance Grid Computing Workshop, 19 April 2010, Atlanta, Georgia, USA, IPDPS CD-ROM/Abstracts Proceedings, IEEE Computer Society, 2010.
  115. K. Dichev, V. Rychkov, and A. Lastovetsky. Two algorithms of irregular scatter/gather operations for heterogeneous platforms // Proceedings of the 17th European MPI User's Group Meeting (EuroMPI 2010), 12–15 September 2010, Stuttgart, Germany, Lecture Notes in Computer Science 6305, pp. 289–293, Springer, 2010.
  116. D. Clarke, A. Lastovetsky, and V. Rychkov. Dynamic Load Balancing of Parallel Computational Iterative Routines on Platforms with Memory Heterogeneity // Proceedings of the 8th International Workshop on Algorithms, Models and Tools for Parallel Computing on Heterogeneous Platforms (HeteroPar 2010), 30 August 2010, Ischia - Naples, Italy, Lecture Notes in Computer Science 6586, pp. 41–50, Springer, 2011.
  117. B. Becker and A. Lastovetsky. Max-Plus Algebra and Discrete Event Simulation on Parallel Hierarchical Heterogeneous Platforms // Proceedings of the 8th International Workshop on Algorithms, Models and Tools for Parallel Computing on Heterogeneous Platforms (HeteroPar 2010), 30 August 2010, Ischia - Naples, Italy, Lecture Notes in Computer Science 6586, pp. 63–70, Springer, 2011.
  118. K. Dichev, V. Rychkov, and A. Lastovetsky. Improvement of the Bandwidth of Cross-Site MPI Communication Using Optical Fiber // Proceedings of the 18th European MPI User's Group Meeting (EuroMPI 2011), 19–23 September 2011, Santorini, Greece, Lecture Notes in Computer Science 6960, pp. 315–317, Springer, 2011.
  119. Z. Zhong, V. Rychkov, and A. Lastovetsky. Data Partitioning on Heterogeneous Multicore Platforms // Proceedings of the 2011 IEEE International Conference on Cluster Computing (Cluster 2011), 26–30 September 2011, Austin, Texas, pp. 580–584, IEEE Computer Society, 2011.
  120. V. Rychkov, D. Clarke, and A. Lastovetsky. Using Multidimensional Solvers for Optimal Data Partitioning on Dedicated Heterogeneous HPC Platforms // Proceedings of the 11th International Conference on Parallel Computing Technologies (PaCT 2011), 19–23 September 2011, Kazan, Russia, Lecture Notes in Computer Science 6873, pp. 332–346, Springer, 2011.
  121. D. Clarke, A. Lastovetsky, and V. Rychkov. Column-Based Matrix Partitioning for Parallel Matrix Multiplication on Heterogeneous Processors Based on Functional Performance Models // 9th International Workshop on Algorithms, Models and Tools for Parallel Computing on Heterogeneous Platforms (HeteroPar 2011), 29 August 2011, Bordeaux, France, Lecture Notes in Computer Science 7155, pp. 450–459, Springer, 2012.
  122. A. DeFlumere, A. Lastovetsky, and B. Becker. Partitioning for Parallel Matrix Multiplication with Heterogeneous Processors: The Optimal Solution // 21st International Heterogeneity in Computing Workshop (HCW'2012), 21 May 2012, Shanghai, China, IPDPSW CD-ROM/Abstracts Proceedings, IEEE Computer Society, 2012.
  123. O. Girko and A. Lastovetsky (2012). Using Static Code Analysis to Improve Performance of GridRPC Applications // 9th High-Performance Grid Computing Workshop (HPGC 2012), 21 May 2012, Shanghai, China, IPDPSW CD-ROM/Abstracts Proceedings, IEEE Computer Society, 2012.
  124. D. Clarke, A. Ilic, A. Lastovetsky, and L. Sousa. Hierarchical Partitioning Algorithm for Scientific Computing on Highly Heterogeneous CPU + GPU Clusters // 18th International European Conference on Parallel and Distributed Computing (Euro-Par 2012), 27-31 August 2012, Rhodes Island, Greece, Lecture Notes in Computer Science 7155, pp. 450–459, Springer, 2012.

125. K. Dichev and A. Lastovetsky. MPI vs BitTorrent : Switching Between Large-Message Broadcast Algorithms in the Presence of Bottleneck Links // 10th International Workshop on Algorithms, Models and Tools for Parallel Computing on Heterogeneous Platforms (HeteroPar'2012), Lecture Notes in Computer Science 7640, pp. 185–195, Rhodes Island, Greece, August 27, 2012.
126. Z. Zhong, V. Rychkov, and A. Lastovetsky. Data Partitioning on Heterogeneous Multicore and Multi-GPU Systems Using Functional Performance Models of Data-Parallel Applications // 2012 IEEE International Conference on Cluster Computing (Cluster 2012), 24–28 September 2012, Beijing, China, pp. 191–199, IEEE Computer Society, 2012.
127. K. Dichev, F. Reid, and A. Lastovetsky. Efficient and reliable network tomography in heterogeneous networks using BitTorrent broadcasts and clustering algorithms // 2012 ACM/IEEE International Conference for High Performance Computing, Networking, Storage and Analysis (SC 2012), 10–16 November 2012, Salt Lake City, Utah, ACM, 2012.
128. D. Clarke, Z. Zhong, V. Rychkov, and A. Lastovetsky. FuPerMod: a Framework for Optimal Data Partitioning for Parallel Scientific Applications on Dedicated Heterogeneous HPC Platforms // 12th International Conference on Parallel Computing Technologies (PaCT-2013), 30 September - 4 October 2013, St. Petersburg, Russia, Lecture Notes in Computer Science 7979, pp. 182-196, Springer, 2013.
129. J.-N. Quintin, K. Hasanov, and A. Lastovetsky. Hierarchical Parallel Matrix Multiplication on Large-Scale Distributed Memory Platforms // 6th International Workshop on Parallel Programming Models and Systems Software for High-End Computing (P2S2 2013), 1 October 2013, Lyon, France, IEEE Computer Society, 2013.
130. J. Zhu, A. Lastovetsky, S. Ali, and R. Riesen. Communication Models for Resource Constrained Hierarchical Ethernet Networks // 11th International Workshop on Algorithms, Models and Tools for Parallel Computing on Heterogeneous Platforms (HeteroPar'2013), 26 August 2013, Aachen, Germany, Lecture Notes in Computer Science 8374, pp. 256–269, Springer, 2014.
131. T. Malik, V. Rychkov, A. Lastovetsky, and J.-N. Quintin. Topology-aware Optimization of Communications for Parallel Matrix Multiplication on Hierarchical Heterogeneous HPC Platforms // 23rd International Heterogeneity in Computing Workshop (HCW 2014), 19 May 2014, Phoenix, Arizona, USA, IEEE Computer Society, 2014.
132. A. DeFlumere and A. Lastovetsky. Searching for the Optimal Data Partitioning Shape for Parallel Matrix Matrix Multiplication on 3 Heterogeneous Processors // 23rd International Heterogeneity in Computing Workshop (HCW 2014), 19 May 2014, Phoenix, Arizona, USA, IEEE Computer Society, 2014.
133. J. Carretero, J. Garcia-Blas, D. Singh, F. Isaila, T. Fahringer, R. Prodan, G. Bosilca, A. Lastovetsky, C. Symeonidou, H. Perez-Sanchez, and J. Cecilia. Optimizations to enhance sustainability of MPI applications. // In Proceedings of the 21st European MPI Users' Group Meeting (EuroMPI/ASIA '14), ACM, 2014.
134. A. DeFlumere and A. Lastovetsky. Optimal Data Partitioning Shape for Matrix Multiplication on Three Fully Connected Heterogeneous Processors // 12th International Workshop on Algorithms, Models and Tools for Parallel Computing on Heterogeneous Platforms (HeteroPar 2014), 25 August 2014, Porto, Portugal, Lecture Notes in Computer Science 8805, pp. 201–214, Springer, 2015.
135. K. Hasanov, J.-N. Quintin, A. Lastovetsky. High-Level Topology-Oblivious Optimization of MPI Broadcast Algorithms on Extreme-Scale Platforms // 1st Workshop on Techniques and Applications for Sustainable Ultrascale Computing Systems (TASUS 2014), 26 August 2014, Porto, Portugal, Lecture Notes in Computer Science 8806, pp. 413–425, Springer, 2015.

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