

2012

- **Towards I/O Analysis of HPC Systems and a Generic Architecture to Collect Access Patterns** ([Marc Wiedemann](#), Julian M. Kunkel, [Michaela Zimmer](#), [Prof. Dr. Thomas Ludwig](#), Michael Resch, Thomas Bönisch, Xuan Wang, Andriy Chut, Alvaro Aguilera, Wolfgang E. Nagel, Michael Kluge, Holger Mickler), *In Computer Science - Research and Development*, Springer (Hamburg, Berlin, Heidelberg), ISC 2012, Executive Committee, CCH–Congress Center Hamburg, Germany, 2012
- **Tracing and Visualization of Energy-Related Metrics** ([Timo Minartz](#), Julian M. Kunkel, [Prof. Dr. Thomas Ludwig](#)), *In 26th IEEE Intern A Study on Data Deduplication in HPC Storage Systems ational Parallel & Distributed Processing Symposium Workshops*, IEEE Computer Society, HPPAC 2012, Shanghai, China, 2012
- **Visualization of MPI(-IO) Datatypes** ([Julian Kunkel](#), [Prof. Dr. Thomas Ludwig](#)), *In Applications, Tools and Techniques on the Road to Exascale Computing*, Advances in Parallel Computing (22), pp. 473–480, (Editors: Koen De Bosschere, Erik H. D'Hollander, Gerhard R. Joubert, David Padua, Frans Peters), IOS Press (Amsterdam, Berlin, Tokyo, Washington DC), ParCo 2011, University of Ghent, ELIS Department, Ghent, Belgium, ISBN: 978-1-61499-040-6, ISSN: 0927-5452, 2012
- **eeClust: Energy-Efficient Cluster Computing** ([Timo Minartz](#), Daniel Molka, Michael Knobloch, Stephan Krempel, [Prof. Dr. Thomas Ludwig](#), Wolfgang E. Nagel, Bernd Mohr, Hugo Falter), *In Competence in High Performance Computing 2010*, pp. 111–124, Springer Berlin Heidelberg (Heidelberg), CiHPC 2010, Schwetzingen, Germany, ISBN: 978-3-642-24025-6, 2012
- **Scientific Computing: Performance and Efficiency in Climate Models** (Sandra Schröder, [Michael Kuhn](#), [Nathanael Hübbe](#), [Julian Kunkel](#), [Timo Minartz](#), [Petra Nerge](#), Florens Wasserfall, [Prof. Dr. Thomas Ludwig](#)), *In Proceedings of the Work in Progress Session, 20th Euromicro International Conference on Parallel, Distributed and Network-Based Processing*, SEA-Publications (31), (Editors: Erwin Grosspietsch, Konrad Klöckner), Institute for Systems Engineering and Automation (Johannes Kepler University Linz), PDP 2012, Munich Network Management Team, Garching, Germany, ISBN: 978-3-902457-31-8, 2012
- **Evaluating the Influence of File System Interfaces and Semantics on I/O Throughput in High Performance Computing** (Christina Janssen, [Michael Kuhn](#), [Prof. Dr. Thomas Ludwig](#)), *In Proceedings of the Work in Progress Session, 20th Euromicro International Conference on Parallel, Distributed and Network-Based Processing*, SEA-Publications (31), (Editors: Erwin Grosspietsch, Konrad Klöckner), Institute for Systems Engineering and Automation (Johannes Kepler University Linz), PDP 2012, Munich Network Management Team, Garching, Germany, ISBN: 978-3-902457-31-8, 2012
- **Tool Environments to Measure Power Consumption and Computational Performance** ([Timo Minartz](#), Daniel Molka, [Julian Kunkel](#), Michael Knobloch, [Michael Kuhn](#), [Prof. Dr. Thomas Ludwig](#)), *In Handbook of Energy-Aware and Green Computing*

(Ishfaq Ahmad, Sanjay Ranka), Chapters: 31, pp. 709–743, Chapman and Hall/CRC Press Taylor and Francis Group (6000 Broken Sound Parkway NW, Boca Raton, FL 33487), ISBN: 978-1-4398-5040-4, 2012

- **IOPm – Modeling the I/O Path with a Functional Representation of Parallel File System and Hardware Architecture** ([Julian Kunkel](#), [Prof. Dr. Thomas Ludwig](#)), *In 20th Euromicro International Conference on Parallel, Distributed and Network-Based Processing*, pp. 554–561, (Editors: Rainer Stotzka, Michael Schiffers, Yiannis Cotronis), IEEE Computer Society (Los Alamitos, Washington, Tokyo), PDP 2012, Munich Network Management Team, Garching, Germany, ISBN: 978-0-7695-4633-9, ISSN: 1066-6192, 2012
- **Simulation-Aided Performance Evaluation of Server-Side Input/Output Optimizations** ([Michael Kuhn](#), [Julian Kunkel](#), [Prof. Dr. Thomas Ludwig](#)), *In 20th Euromicro International Conference on Parallel, Distributed and Network-Based Processing*, pp. 562–566, (Editors: Rainer Stotzka, Michael Schiffers, Yiannis Cotronis), IEEE Computer Society (Los Alamitos, Washington, Tokyo), PDP 2012, Munich Network Management Team, Garching, Germany, ISBN: 978-0-7695-4633-9, ISSN: 1066-6192, 2012
- **Simulating Application and System Interaction with PIOsimHD** ([Julian Kunkel](#), [Prof. Dr. Thomas Ludwig](#)), *In Proceedings of the Work in Progress Session, 20th Euromicro International Conference on Parallel, Distributed and Network-Based Processing*, SEA-Publications (31), (Editors: Erwin Grosspietsch, Konrad Klöckner), Institute for Systems Engineering and Automation (Johannes Kepler University Linz), PDP 2012, Munich Network Management Team, Garching, Germany, ISBN: 978-3-902457-31-8, 2012
- **Optimizations for Two-Phase Collective I/O** ([Michael Kuhn](#), [Julian Kunkel](#), Yuichi Tsujita, Hidetaka Muguruma, [Prof. Dr. Thomas Ludwig](#)), *In Applications, Tools and Techniques on the Road to Exascale Computing*, Advances in Parallel Computing (22), pp. 455–462, (Editors: Koen De Bosschere, Erik H. D'Hollander, Gerhard R. Joubert, David Padua, Frans Peters), IOS Press (Amsterdam, Berlin, Tokyo, Washington DC), ParCo 2011, University of Ghent, ELIS Department, Ghent, Belgium, ISBN: 978-1-61499-040-6, ISSN: 0927-5452, 2012

2011

- **Poster: eeClust - Energy-Efficient Cluster Computing** (Michael Knobloch, [Timo Minartz](#), Daniel Molka, Stephan Krempel, [Prof. Dr. Thomas Ludwig](#), Bernd Mohr), Seattle, USA, Supercomputing Conference, 2011-11-15
- **Towards an Energy-Aware Scientific I/O Interface – Stretching the ADIOS Interface to Foster Performance Analysis and Energy Awareness** ([Julian Kunkel](#), [Timo Minartz](#), [Michael Kuhn](#), [Prof. Dr. Thomas Ludwig](#)), *In Computer Science - Research and Development*, Series: 1, (Editors: [Prof. Dr. Thomas Ludwig](#)), Springer (Berlin / Heidelberg, Germany), 2011

- **Performance Characteristics of Global High-Resolution Ocean (MPIOM) and Atmosphere (ECHAM6) Models on Large-Scale Multicore Cluster** (Panagiotis Adamidis, Irina Fast, [Prof. Dr. Thomas Ludwig](#)), *In Parallel Computing Technologies - 11th International Conference, PaCT 2011, Kazan, Russia, September 19-23, 2011. Proceedings*, Lecture Notes in Computer Science (6873), pp. 390–403, (Editors: Victor Malyskin), Springer, PaCT, Kazan, Russia, ISBN: 978-3-642-23177-3, 2011
- **Managing Hardware Power Saving Modes for High Performance Computing** ([Timo Minartz](#), Michael Knobloch, [Prof. Dr. Thomas Ludwig](#), Bernd Mohr), *In Green Computing Conference and Workshops (IGCC), 2011 International*, pp. 1–8, IGCC, Orlando, Florida, USA, ISBN: 978-1-4577-1222-7, 2011

2010

- **Classification of Network Computers Based on Distribution of ICMP-echo Round-trip Times** ([Julian Kunkel](#), Jan C. Neddermeyer, [Prof. Dr. Thomas Ludwig](#)), Research Papers (1), Staats- und Universitätsbibliothek Hamburg (Carl von Ossietzky, Von-Melle-Park 3, 20146 Hamburg), 2010-09-28
- *Poster: Benchmarking Application I/O in the Community* ([Julian Kunkel](#), [Olga Mordvinova](#), Dennis Runz, [Michael Kuhn](#), [Prof. Dr. Thomas Ludwig](#)), Hamburg, Germany, International Supercomputing Conference, 2010-06-01
- *Poster: Simulation of Cluster Power Consumption and Energy-to-Solution* ([Timo Minartz](#), [Julian Kunkel](#), [Prof. Dr. Thomas Ludwig](#)), Passau, Germany, International Conference on Energy-Efficient Computing and Networking, 2010-04-14
- **From experimental setup to bioinformatics: an RNAi screening platform to identify host factors involved in HIV-1 replication** (Kathleen Börner, Johannes Hermle, Christoph Sommer, Nigel P. Brown, Bettina Knapp, Bärbel Glass, [Julian Kunkel](#), Gloria Torralba, Jürgen Reymann, Nina Beil, Jürgen Beneke, Rainer Pepperkok, Reinhard Schneider, [Prof. Dr. Thomas Ludwig](#), Michael Hausmann, Fred Hamprecht, Holger Erfle, Lars Kaderali, Hans-Georg Kräusslich, Maik J. Lehmann), *In Biotechnology Journal*, Series: 5-1, pp. 39–49, WILEY-VCH (Weinheim, Germany), ISSN: 1860-7314, 2010-01
- **I/O Benchmarking of Data Intensive Applications** ([Olga Mordvinova](#), [Prof. Dr. Thomas Ludwig](#), Christian Bartholomä), *In Problems in Programming*, Series: 2-3, pp. 107–115, National Academy of Sciences of Ukraine, ISSN: 1727-4907, 2010
- **I/O Performance Evaluation with Parabench – Programmable I/O Benchmark** ([Olga Mordvinova](#), Dennis Runz, [Julian Kunkel](#), [Prof. Dr. Thomas Ludwig](#)), *In Procedia Computer Science*, Series: 1-1, pp. 2119–2128, Elsevier B.V (Amsterdam, Netherlands), ISSN: 1877-0509, 2010
- **Simulation of power consumption of energy efficient cluster hardware** ([Timo Minartz](#), [Julian Kunkel](#), [Prof. Dr. Thomas Ludwig](#)), *In Computer Science - Research and*

Development, Series: 3, pp. 165–175, (Editors: [Prof. Dr. Thomas Ludwig](#)), Springer (Berlin / Heidelberg, Germany), ISSN: 1865-2034, 2010

- **Collecting Energy Consumption of Scientific Data** ([Julian Kunkel](#), [Olga Mordvinova](#), [Michael Kuhn](#), [Prof. Dr. Thomas Ludwig](#)), *In Computer Science - Research and Development*, Series: 3, pp. 1–9, (Editors: [Prof. Dr. Thomas Ludwig](#)), Springer (Berlin / Heidelberg, Germany), ISSN: 1865-2034, 2010

2009

- **Tracing Internal Communication in MPI and MPI-I/O** ([Julian Kunkel](#), Yuichi Tsujita, [Olga Mordvinova](#), [Prof. Dr. Thomas Ludwig](#)), *In International Conference on Parallel and Distributed Computing, Applications and Technologies, PDCAT*, pp. 280–286, IEEE Computer Society (Washington, DC, USA), PDCAT-09, Hiroshima University, Higashi Hiroshima, Japan, ISBN: 978-0-7695-3914-0, 2009-12-29
- **USB Flash Drives as an Energy Efficiency Storage Alternative** ([Olga Mordvinova](#), [Julian Kunkel](#), Christian Baun, [Prof. Dr. Thomas Ludwig](#), Marcel Kunze), *In Proceedings of the 10th IEEE/ACM International Conference on Grid Computing*, pp. 175–182, IEEE Computer Society (Washington, DC, USA), GRID-09, IEEE/ACM, Banff, Alberta, Canada, ISBN: 978-1-4244-5148-7, 2009-10
- **Small-file Access in Parallel File Systems** (Philip Carns, Sam Lang, Robert Ross, Murali Vilayannur, [Julian Kunkel](#), [Prof. Dr. Thomas Ludwig](#)), *In IPDPS '09: Proceedings of the 2009 IEEE International Symposium on Parallel and Distributed Processing*, pp. 1–11, IEEE Computer Society (Washington, DC, USA), IPDPS-09, University of Rome, Rome, Italy, ISBN: 978-1-4244-3751-1, 2009
- **A Strategy for Cost Efficient Distributed Data Storage for In-memory OLAP** ([Olga Mordvinova](#), Oleksandr Shepil, [Prof. Dr. Thomas Ludwig](#), Andrew Ross), *In Proceedings of the IADIS International Conference Applied Computing 2009* (1), pp. 109–117, IADIS Press (Algarve, Portugal), IADIS-09, International Association for Development of the Information Society, Rome, Italy, ISBN: 978-972-8924-97-3, 2009
- **Using Non-blocking I/O Operations in High Performance Computing to Reduce Execution Times** (David Buettner, [Julian Kunkel](#), [Prof. Dr. Thomas Ludwig](#)), *In Proceedings of the 16th European PVM/MPI Users' Group Meeting on Recent Advances in Parallel Virtual Machine and Message Passing Interface*, pp. 134–142, Springer-Verlag (Berlin, Heidelberg), EuroPVM/MPI-09, CSC - IT, Espoo, Finland, ISBN: 978-3-642-03769-6, 2009
- **Dynamic file system semantics to enable metadata optimizations in PVFS** ([Michael Kuhn](#), [Julian Kunkel](#), [Prof. Dr. Thomas Ludwig](#)), *In Concurrency and Computation: Practice and Experience*, Series: 21-14, pp. 1775–1788, John Wiley and Sons Ltd. (Chichester, UK), ISSN: 1532-0626, 2009

- *Poster: Data Storage and Processing for High Throughput RNAi Screening* ([Julian Kunkel](#), [Prof. Dr. Thomas Ludwig](#), M. Hemberger, G. Torralba, E. Schmitt, M. Hausmann, V. Lindenstruth, N. Brown, R. Schneider), Heidelberg, Germany, German Symposium on Systems Biology 2009, 2009

2008

- **Directory-Based Metadata Optimizations for Small Files in PVFS** ([Michael Kuhn](#), [Julian Kunkel](#), [Prof. Dr. Thomas Ludwig](#)), *In Euro-Par '08: Proceedings of the 14th international Euro-Par conference on Parallel Processing*, pp. 90–99, Springer-Verlag (Berlin, Heidelberg), Euro-Par-08, University of Las Palmas de Gran Canaria, Las Palmas de Gran Canaria, Spain, ISBN: 978-3-540-85450-0, 2008 – **Awards: Best Paper**
- **Bottleneck Detection in Parallel File Systems with Trace-Based Performance Monitoring** ([Julian Kunkel](#), [Prof. Dr. Thomas Ludwig](#)), *In Euro-Par '08: Proceedings of the 14th international Euro-Par conference on Parallel Processing*, pp. 212–221, Springer-Verlag (Berlin, Heidelberg), Euro-Par-08, University of Las Palmas de Gran Canaria, Las Palmas de Gran Canaria, Spain, ISBN: 978-3-540-85450-0, 2008



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6. [Publications as Editor](#)

(Web links may be outdated!)

↑ **Books and Book Chapters**

1. Roland Wismüller, Thomas Ludwig, Wolfgang Karl and Arndt Bode.
Thomas Ludwig and Barton Miller, editors.
Monitoring Concepts for Parallel Systems - An Evolution towards Interoperable Tool Environments.
On-Line Monitoring Systems and Computer Tool Interoperability.
Pages 1-21.
Nova Science Publishers, 2003.
2. Thomas Ludwig and Barton Miller, editors.
On-Line Monitoring Systems and Computer Tool Interoperability.
ISBN 1-59033-888-X.
Nova Science Publishers, New York, USA, 2003.
[\[abstract\]](#)
3. Arndt Bode, Wolfgang Karl, Thomas Ludwig and Roland Wismüller.
Monitoring Technologies for Parallel On-Line Tools.
SFB 342 Final Colloquium: Methods and Tools for the Efficient Use of Parallel Systems.
Pages 1-29.
Technische Universität München, Munich, August 2000.
[\[paper\]](#) [\[abstract\]](#)
4. T. Ludwig, R. Wismüller, V. Sunderam and A. Bode.
A. Bode, editor.
OMIS - On-Line Monitoring Interface Specification (Version 2.0).

- Volume 9 of Research Report Series, Lehrstuhl für Rechnertechnik und Rechnerorganisation, (LRR-TUM), Technische Universität München.
ISBN 3-8265-3035-7.
Shaker, Aachen, Germany, 1997.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
5. T. Ludwig and R. Wismler.
A. Bode, T. Ludwig, V. Sunderam and R. Wismler, editors.
The Tool-set Environment.
Workshop on PVM, MPI, Tools, and Applications.
Pages 28-32.
Technische Universität München, November 1995.
 6. G. Stellner, S. Lamberts, T. Ludwig and A. Bode.
NXLIB Users' Guide (V1.0).
Developing Multicomputer Applications on Networks of Workstations Using NXLib.
V1.0.
Technische Universität München, Munich, Germany, December 1993.
 7. G. Stellner, S. Lamberts, A. Bode and T. Ludwig.
Design and Implementation of NXLib.
Developing Multicomputer Applications on Networks of Workstations Using NXLib.
V1.0.
Technische Universität München, Munich, Germany, December 1993.
 8. S. Lamberts, G. Stellner, A. Bode and T. Ludwig.
Paragon Parallel Programming Environment on Sun Workstations.
Sun User Group Proceedings.
Pages 87-98.
Sun Microsystems, December 1993.
 9. T. Ludwig.
A. Bode and M. Dal Cin, editors.
Load Management on Multiprocessor Systems.
Parallel Computer Architectures - Theory, Hardware, Software, Applications.
Pages 87-101.
Springer, Berlin, 1993.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
 10. T. Ludwig.
Automatische Lastverwaltung für Parallelrechner.
Volume 94 of Reihe Informatik.
BI-Wissenschaftsverlag, Mannheim, Germany, 1993.
 11. T. Bemmerl, A. Bode and T. Ludwig.
Igor Jaceniak, editor.
Parallelisierung komplexer Anwendungen auf dem iPSC/2, iPSC/860 mit Hilfe der Werkzeugumgebung TOPSYS.
KEpSy '91 - Konzepte und Einsatz paralleler Systeme, Forum in Schloss Birlinghoven, Sankt Augustin.
Gesellschaft für Mathematik und Datenverarbeitung mbH, St. Augustin, Germany, 1991.

12. T. Ludwig.
MMK User's Reference Manual.
MMK - Multiprocessor Multitasking Kernel (User's Guide and User's Reference Manual).
Technische Universität München, Munich, Germany, December 1990.
13. T. Ludwig.
MMK User's Guide.
MMK - Multiprocessor Multitasking Kernel (User's Guide and User's Reference Manual).
Technische Universität München, Munich, Germany, December 1990.

↑ Theses

1. T. Ludwig.
Methoden zur effizienten Entwicklung paralleler Werkzeuge.
Technische Universität München, April 1998.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
2. T. Ludwig.
Lastverwaltungsverfahren für Mehrprozessorsysteme mit verteiltem Speicher.
Technische Universität München, Munich, Germany, December 1992.
[\[paper\]](#) [\[abstract\]](#)

↑ Articles

1. Peter Bastian and Thomas Ludwig.
Helics - ein Rechner der Superklasse.
Ruperto Carola - Forschungsmagazin der Universität Heidelberg.
Number 3, pages 4-7.
ISSN 0035-998 X.
Universitätsverlag Winter, 2004.
2. Julian Kunkel, Thomas Ludwig and Hipolito Vasquez.
Weit verteilt - Dateisystem für parallele Systeme: PVFS, Version 2 .
iX - Magazin für professionelle Informationstechnik.
Number 6, pages 110-113.
Heise Verlag, June 2004.

3. Stefan Friedel and Thomas Ludwig.
Kartenkontrolle - Job-Management in Rechnerclustern.
iX - Magazin für professionelle Informationstechnik.
Number 11, pages 62-66.
Heise Verlag, November 2004.
4. Wolfgang Ludwig, others, Thomas Ludwig and others.
ARB: A Software Environment for Sequence Data.
Nucleic Acids Research.
Volume 4, number 32, pages 1363-1371.
2004.
5. Alexandros Stamatakis and Thomas Ludwig.
The AxML Program Family for Phylogenetic Tree Inference.
Concurrency and Computation: Practice and Experience (CCPE).
Number 16, pages 975-988.
2004.
6. Alexandros Stamatakis and Thomas Ludwig.
The AxML Program Family for Maximum Likelihood-Based Phylogenetic Tree Inference.
Concurrency and Computation: Practice and Experience.
2003.
7. Günther Rackl, Thomas Ludwig, Markus Lindermeier and Alexandros Stamatakis.
Efficiently Building On-Line Tools for Distributed Heterogeneous Computing.
Scientific Programming.
Volume 1, number 10, pages 67-74.
2002.
8. Thomas Ludwig, Markus Lindermeier and Alexandros Stamatakis.
Tool Environments in CORBA-based Medical High-Performance Computing.
Future Generation Computing Systems.
Volume 6, number 18, pages 841-847.
2002.
9. R. Wismüller, T. Ludwig, W. Karl and A. Bode.
Monitoring Concepts for Parallel Systems - An Evolution towards Interoperable Tool Environments.
Parallel and Distributed Computing Practices.
Volume 4, number 3.
2002.
[\[paper\]](#) [\[abstract\]](#)
10. Roland Wismüller and Thomas Ludwig.
Interoperable Run-Time Tools for Distributed Systems - A Case Study.
The Journal of Supercomputing.
Volume 17, number 3, pages 277-289.
Kluwer Academic Publishers, November 2000.
[\[www\]](#)
11. F. Munz, T. Ludwig, S. Ziegler, P. Bartenstein, M. Schwaiger and A. Bode.
Performance Assessment of Parallel Spectral Analysis: Towards a Practical Performance Model for Parallel

Medical Applications.

Future Generation Computing Systems.
Volume 16, pages 553-562.
2000.

12. G. Rackl, F. de Stefani, F. Höran, A. Pasquarelli and T. Ludwig.
Airport Simulation using CORBA and DIS.
Future Generation Computer Systems.
Volume 16, number 5, pages 465-472.
May 2000.
[\[paper\]](#)
13. J. Eichler, J. Jöger and T. Ludwig.
Spielverderber - Solitaire mit dem Computer lösen.
c't.
Number 7, pages 218-225.
1999.
14. T. Ludwig, R. Wisnüller, M. Oberhuber and A. Bode.
An Open Interface for the On-Line Monitoring of Parallel and Distributed Programs.
International Journal of Supercomputer Applications and High Performance Computing.
Volume 11, number 2.
1997.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
15. T. Bemmerl, T. Ludwig and S. Tritscher.
Multiprozessor-Betriebssysteme für Systeme mit verteiltem Speicher.
Design & Elektronik.
Number 21, pages 110-126.
October 1990.



Reviewed Conference Papers

1. Thomas Ludwig, Stephan Krempel, Michael Kuhn, Julian Kunkel and Christian Lohse.
Analysis of the MPI-IO Optimization Levels with the PIOviz Jumpshot Enhancement.
European PVM/MPI Users' Group Meeting, Paris, France, September/October 2007.
Pages 213-222.
Springer, Berlin, September 2007.
2. Domnic Savio and Thomas Ludwig.
Smart Carpet: A Footstep Tracking Interface.
21st International Conference on Advanced Information Networking and Applications Workshops/Symposia.
Volume 2, pages 754-760.
IEEE Computer Society, Niagara Falls, Ontario, Canada, May 2007.

3. Julian Kunkel and Thomas Ludwig.
Pasqua d'Ambra and Mario Rosario Guarracino, editors.
Performance Evaluation of the PVFS2 Architecture.
Proceedings of the 15th Euromicro Conference on Parallel,
Distributed and Network-based Processing.
Pages 509--516.
IEEE Compute Society, Naples, Italy, February 2007.
4. Thomas Ludwig, Stephan Krempel, Julian Kunkel, Frank Panse
and Dulip Withanage.
Tracing the MPI-IO Calls' Disk Accesses.
European PVM/MPI User's Group Meeting, Bonn, Germany,
September 2006.
Pages 322-330.
Springer, Berlin, September 2006.
5. Hipolito Vasquez Lucas and Thomas Ludwig.
Hint Controlled Distribution with Parallel File Systems.
European PVM/MPI Users' Group Meeting, Sorrento, Italy,
September 2005.
Pages 110-118.
ISBN 3-540-29009-5, ISSN 0302-9743.
Springer, Berlin, September 2005.
6. Alexandros Stamatakis, Thomas Ludwig and Harald Meier.
Siegfried Wagner, Werner Hanke, Arndt Bode and Franz Durst,
editors.
**A Fast Program for Phylogenetic Tree Inference with
Maximum Likelihood.**
High Performance Computing in Science and Engineering.
Pages 273-283.
Springer Verlag, Munich, Germany, March 2004.
7. Alexandros Stamatakis, Thomas Ludwig and Harald Meier.
**A Fast Program for Maximum Likelihood-based Inference
of Large Phylogenetic Trees.**
Proceedings of 19th ACM Symposium on Applied Computing
(SAC2004).
Pages 197-201.
Nicosia, Cyprus, March 2004.
8. Alexandros Stamatakis, Thomas Ludwig and Harald Meier.
**Computing Large Phylogenies with Statistical Methods:
Problems and Solutions.**
Proceedings of 4th International Conference on Bioinformatics
and Genome Regulation and Structure (BGRS2004).
Pages 229-233.
Novosibirsk, Russia, July 2004.
9. Alexandros Stamatakis, Thomas Ludwig and Harald Meier.
**Parallel Inference of a 10.000-taxon Phylogeny with
Maximum Likelihood.**
Proceedings of 10th International Euro-Par Conference (Euro-Par
2004).
Volume 3149, pages 997-1004.
Springer Verlag, September 2004.
10. Thomas Ludwig.
Research Trends in High Performance Parallel

Input/Output for Cluster Environments.

Proceedings of the 4th International Scientific and Practical Conference on Programming UkrPROG 2004.

Pages 274-281.

ISSN 1727-4907.

National Academy of Sciences of Ukraine, Kiev, Ukraine, 2004.

[\[paper\]](#) [\[abstract\]](#)

11. Alexandros Stamatakis, Harald Meier and Thomas Ludwig.
New Fast and Accurate Heuristics for Inference of Large Phylogenetic Trees.
Proceedings of 18th IEEE/ACM International Parallel and Distributed Processing Symposium (IPDPS2004), High Performance Computational Biology Workshop.
Santa Fe, New Mexico, USA, 2004.
[\[abstract\]](#)
12. Alexandros Stamatakis, Markus Lindermeier, Michael Ott, Thomas Ludwig, Harald Meier.
Victor Malyskin, editor.
DAxML: A Program for Distributed Computation of Phylogenetic Trees Based on Load Managed CORBA.
Proceedings of the Conference on Parallel Computing Technologies (PaCT2003).
Volume 2763 of Lecture Notes in Computer Science, pages 538-548.
Springer, Nizhni Novgorod, Russia, 2003.
13. Alexandros Stamatakis and Thomas Ludwig.
Phylogenetic Tree Inference on PC Architectures with AxML/PaxML.
Proceedings of the International Parallel and Distributed Processing Symposium (IPDPS'03).
Nice, France, 2003.
14. Alexandros Stamatakis, Thomas Ludwig, Harald Meier and Marty J. Wolf.
Accelerating Parallel Maximum Likelihood-based Phylogenetic Tree Calculations using Subtree Equality Vectors.
Proceedings of the Supercomputing Conference 2002.
Baltimore, Maryland, USA, 2002.
[\[paper\]](#) [\[abstract\]](#)
15. Alexandros Stamatakis, Thomas Ludwig, Harald Meier and Marty J. Wolf.
AxML: A Fast Program for Sequential and Parallel Phylogenetic Tree Computations based on the Maximum Likelihood Method.
Proceedings of 1. IEEE Bioinformatics Conference (CSB2002).
Pages 21-28.
Stanford University, Palo Alto, California, USA, 2002.
[\[paper\]](#) [\[abstract\]](#)
16. Günther Rackl, Thomas Ludwig, Markus Lindermeier and Alexandros Stamatakis.
Efficiently Building On-Line Tools for Distributed Heterogeneous Environments.

- Proceedings of the International Workshop on Performance-Oriented Application Development for Distributed Architectures (PADDA 2001).
Munich, Germany, 2001.
17. A. Krause and T. Ludwig.
EveMan - a Mobile Time and Space Organisation System for the Palm Computing Platform.
APC'2001.
Volume 1067 of Lecture Notes in Computer Science.
Springer Verlag, October 2001.
[\[paper\]](#) [\[abstract\]](#)
 18. T. Ludwig, M. Lindermeier, A. Stamatakis and G. Rackl.
Tool Environments in CORBA-based Medical High Performance Computing.
Proceedings of 6th International Conference on Parallel Computing Technologies (PaCT2001).
Volume 1067 of Lecture Notes in Computer Science, pages 447-455.
Springer Verlag, September 2001.
[\[paper\]](#) [\[abstract\]](#)
 19. Günther Rackl and Thomas Ludwig.
A Methodology for Efficiently Developing On-Line Tools for Heterogeneous Middleware.
Proceedings of the HICSS-34 Conference.
January 2001.
[\[paper\]](#) [\[abstract\]](#)
 20. LNCS .
A. Bode, T. Ludwig, W. Karl and R. Wisniewski, editors.
Euro-Par 2000 - Parallel Processing, 6th International Euro-Par Conference, Munich, August/September 2000.
Number 1900 of Lecture Notes in Computer Science.
Springer, Berlin, August 2000.
 21. F. Munz, T. Ludwig, A. Bode, S. Ziegler and M. Schwaiger.
A. Horsch and T. Lehmann, editors.
Effiziente Scheduling-Algorithmen für datenparallele Anwendungen der funktionellen medizinischen Bildgebung auf NOWs.
Bildverarbeitung für die Medizin 2000: Algorithmen - Systeme - Anwendungen.
Informatik aktuell, pages 403-407.
Springer, 2000.
 22. M. May, F. Munz and T. Ludwig.
A. Horsch and T. Lehmann, editors.
CORBA-basierte verteilte Berechnung medizinischer Bilddaten.
Bildverarbeitung für die Medizin 2000: Algorithmen - Systeme - Anwendungen.
Informatik aktuell, pages 213-217.
Springer, 2000.
[\[paper\]](#) [\[abstract\]](#)
 23. J. Trinitis, V. Sunderam, T. Ludwig and R. Wisniewski.
M Bubak, H. Afsarmanesh, R. Williams and B. Hertzberger,

editors.

Interoperability Support in Distributed On-line Monitoring Systems.

Proceedings of High Performance Computing and Networking - 8th International Conference, HPCN Europe 2000, Amsterdam, The Netherlands.

Volume 1823 of Lecture Notes in Computer Science, pages 261-269.

Springer, Berlin, April 2000.

[\[paper\]](#) [\[abstract\]](#)

24. I. Zoraja, G. Rackl and T. Ludwig.

N. Rozic, D. Begusic, I. Pavelin and B. Burmaz, editors.

Towards Monitoring in Parallel and Distributed Environments.

Proceedings of the International Conference on Software in Telecommunications and Computer Networks (SoftCom'99). Pages 133-141.

Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture University of Split, October 1999.

25. T. Ludwig, J. Trinitis and R. Wismler.

Synergetic Tool Environments.

PaCT'99.

Volume 1067 of Lecture Notes in Computer Science.

Springer Verlag, Brüssel, Belgien, September 1999.

[\[paper\]](#) [\[abstract\]](#)

26. F. Munz, T. Ludwig, S. Ziegler, P. Bartenstein, M. Schwaiger and A. Bode.

Kinetic Analysis of Functional Images: The Case for a Practical Approach to Performance Prediction.

Proceedings of ISHPC'99, Kyoto.

Volume 1067 of Lecture Notes in Computer Science.

Springer Verlag, Brüssel, Belgien, June 1999.

[\[paper\]](#) [\[abstract\]](#)

27. R. Wismler and T. Ludwig.

Interoperable Run Time Tools for Distributed Systems - A Case Study.

PDPTA'99.

Volume 1067 of Lecture Notes in Computer Science.

Springer Verlag, Brüssel, Belgien, July 1999.

[\[paper\]](#) [\[abstract\]](#)

28. G. Rackl, F. de Stefani, F. Horan, A. Pasquarelli and T. Ludwig. P. Croll and H. El-Rewini, editors.

Distributed Airport Simulation using CORBA and DIS.

Proceedings of the International Symposium on Software Engineering for Parallel and Distributed Systems.

Pages 166-173.

IEEE Computer Society, Los Alamitos, CA, May 1999.

[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)

29. F. Munz, T. Ludwig, S. Ziegler, P. Bartenstein, M. Schwaiger and A. Bode.

P. Sloat, M. Bubak, A. Hoekstra and B. Hertzberger, editors.

Performance Assessment of Parallel Spectral Analysis:

Towards a Practical Performance Model for Parallel Medical Applications.

Proceedings of High-Performance Computing and Networking - 7th International Conference, HPCN Europe 1999, Amsterdam, The Netherlands.

Volume 1593 of Lecture Notes in Computer Science, pages 430-439.

Springer, Berlin, Germany, April 1999.

[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)

30. G. Rackl, F. de Stefani, F. Heran, A. Pasquarelli and T. Ludwig. P. Sloat, M. Bubak, A. Hoekstra and B. Hertzberger, editors.
Airport Simulation using CORBA and DIS.
 Proceedings of High-Performance Computing and Networking - 7th International Conference, HPCN Europe 1999, Amsterdam, The Netherlands.
 Volume 1593 of Lecture Notes in Computer Science, pages 70-79.
 Springer, Berlin, Germany, April 1999.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
31. R. Wismler, J. Trinitis and T. Ludwig. David Pritchard and Jeff Reeve, editors.
A Universal Infrastructure for the Run-time Monitoring of Parallel and Distributed Applications.
 Euro-Par'98 - Parallel Processing.
 Number 1470 of Lecture Notes in Computer Science, pages 173-180.
 Springer, Berlin, September 1998.
[\[paper\]](#) [\[abstract\]](#)
32. C. Röder, T. Ludwig and A. Bode. David Pritchard and Jeff Reeve, editors.
Configurable Load Measurement in Heterogeneous Workstation Clusters.
 Euro-Par'98 - Parallel Processing.
 Number 1470 of Lecture Notes in Computer Science, pages 193-205.
 Springer, Berlin, September 1998.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
33. C. Röder, T. Ludwig and A. Bode. H. R. Arabnia, editor.
Flexible Status Measurement in Heterogeneous Systems.
 Proceedings of the International Conference on Parallel and Distributed Processing Techniques and Applications, PDPTA'98. Volume I, pages 247-254.
 CSREA Press, July 1998.
[\[paper\]](#) [\[abstract\]](#)
34. R. Wismler, J. Trinitis and T. Ludwig.
OCM - A Monitoring System for Interoperable Tools.
 Proceedings of the SIGMETRICS Symposium on Parallel and Distributed Tools.
 Pages 1-9.
 ACM Press, August 1998.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
35. F. Munz, T. Stephan, U. Maier, T. Ludwig, A. Bode, S. Ziegler, S.

- Nekolla, P. Bartenstein and M. Schwaiger.
Bob Werner, editor.
NOW Based Parallel Reconstruction of Functional Images.
Proceedings of the First Merged International Parallel Processing
Symposium and Symposium on Parallel and Distributed
Computing.
Pages 210-214.
IEEE Computer Society Technical Committee on Parallel
Processing, Los Alamitos, California, USA, April 1998.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
36. F. Munz, T. Stephan, U. Maier, T. Ludwig, A. Bode, S. Ziegler, S.
Nekolla, P. Bartenstein and M. Schwaiger.
D.K. Panda and C.B. Stunkel, editors.
**Improved Functional Imaging through Network Based
Parallel Processing.**
Network-Based Parallel Computing - Communication,
Architecture, and Applications (Proceedings of the CANPC'98).
Volume 1362 of Lecture Notes in Computer Science, pages 88-97.
Springer, February 1998.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
37. C. Rödler, T. Ludwig and A. Bode.
A. Bode, A. Ganz, C. Gold, S. Petri, N. Reimer, B. Schiemann and
T. Schneckenburger, editors.
**NSR - A Tool for Load Measurement in Heterogeneous
Environments.**
Anwendungsbezogene Lastverteilung - ALV'98.
TUM-I9806, SFB-Bericht Nr. 342/01/98~A, pages 133-144.
Technische Universität München, February 1998.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
38. T. Ludwig and R. Wismüller.
M. Bubak, J. Dongarra and J. Wasniewski, editors.
OMIS 2.0 - A Universal Interface for Monitoring Systems.
Recent Advances in Parallel Virtual Machine and Message Passing
Interface.
Volume 1332 of Lecture Notes in Computer Science, pages
267-276.
November 1997.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
39. R. Wismüller, T. Ludwig, A. Bode, R. Borgeest, S. Lamberts, M.
Oberhuber, C. Rödler and G. Stellner.
Xu De, K.-E. Grospietsch and C. Steigner, editors.
**The Tool-set Project: Towards an Integrated Tool
Environment for Parallel Programming.**
Proceedings of Second Sino-German Workshop on Advanced
Parallel Processing Technologies, APPT'97.
Pages 9-16.
Fölbach, Koblenz, Germany, September 1997.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
40. S. Bottalico, F. de Stefani, T. Ludwig and G. Rackl.
C. Lengauer, M. Griebel and S. Gorlatch, editors.
**SEEDS - Simulation Environment for the Evaluation of
Distributed Traffic Control Systems.**

- Euro-Par'97 - Parallel Processing.
 Number 1300 of Lecture Notes in Computer Science, pages
 1357-1362.
 Springer, Berlin, August 1997.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
41. T. Ludwig, R. Wismüller and M. Oberhuber.
 H. Matthies and J. Schöle, editors.
OCM - A Monitoring System for PVM.
 Paralleles und Verteiltes Rechnen - 4. Workshop über
 Wissenschaftliches Rechnen.
 Pages 107-114.
 ISBN 3-8265-1826-8, ISSN 0945-0807.
 Shaker, Aachen, October 1996.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
42. T. Ludwig, R. Wismüller and M. Oberhuber.
OCM - An OMIS Compliant Monitoring System.
 Parallel Virtual Machine - EuroPVM'96: Third European PVM
 Conference, München, 7.-9. Oktober.
 Pages 81-90.
 ISBN 3-540-61779-5, ISSN 0302-9743.
 Springer, Berlin, October 1996.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
43. LNCS .
 A. Bode, J. Dongarra, T. Ludwig and V. Sunderam, editors.
**Parallel Virtual Machine - EuroPVM'96: Third European
 PVM Conference, München, 7.-9. Oktober.**
 Number 1156 of Lecture Notes in Computer Science.
 Springer, Berlin, October 1996.
44. T. Ludwig, M. Oberhuber and R. Wismüller.
 L. Boug, P. Fraigniaud, A. Mignotte and Y. Robert, editors.
**An Open Monitoring System for Parallel and Distributed
 Programs.**
 Euro-Par'96 - Parallel Processing.
 Volume I, number 1123 of Lecture Notes in Computer Science,
 pages 78-83.
 Springer, Berlin, August 1996.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
45. R. Wismüller and T. Ludwig.
 Lidell, H., Colbrook, A., Hertzberger, B. and Sloot, P., editors.
The Tool-set - An Integrated Tool Environment for PVM.
 Proc. High-Performance Computing and Networking.
 Volume 1067 of Lecture Notes in Computer Science, pages
 1029-1030.
 Springer Verlag, Brussels, Belgium, April 1996.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
46. A. Bode, J. Krammer, T. Ludwig, M. Oberhuber and R. Wismüller.
 Knopp, Schreiber, Czeck and Dowbiggin, editors.
Parallel Debugging and Performance Analysis Tools.
 PowerXplorer User Report, 1st edition.
 Pages 157-161.
 Universität Düsseldorf, Universität Düsseldorf, 1995.
47. T. Ludwig, R. Wismüller, R. Borgeest, S. Lamberts, C. Röder, G.

- Stellner and A. Bode.
 J. Dongarra, M. Gengler, B. Touracheau and X. Vigouroux,
 editors.
The Tool-set - An Integrated Tool Environemnt for PVM.
 Proceedings of the 2nd European PVM Users' Group Meeting
 (Short Papers).
 Pages 1-3.
 Ecole Normale Supérieure de Lyon, Lyon, France, September
 1995.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
48. C. Röder, S. Lamberts and T. Ludwig.
 J. Dongarra, M. Gengler, B. Tourancheau and X. Vigouroux,
 editors.
**PFSLib - An I/O Interface for Parallel Programming
 Environments on Coupled Workstations.**
 EuroPVM'95.
 Pages 59-64.
 Hermes, Paris, 1995.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
49. T. Ludwig and S. Lamberts.
 Victor Malyskin, editor.
PFSLib - A Parallel File System for Workstation Clusters.
 Parallel Computing Technologies - Proceedings of the Third
 International Conference, PaCT-95, St. Petersburg, Russia.
 Pages 246-251.
 Springer, Berlin, September 1995.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
50. A. Bode and T. Ludwig.
PVM in Germany and at Technical University Munich.
 First European PVM Users Group Meeting.
 IBM ECSE, Rom, Italy, 1994.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
51. G. Stellner, A. Bode, S. Lamberts and T. Ludwig.
 W. Gentzsch and U. Harms, editors.
**Developing Applications for Multicomputer Systems on
 Workstations.**
 High-Performance Computing and Networking, International
 Conference and Exhibition.
 Pages 286-292.
 Springer, Berlin, April 1994.
[\[paper\]](#) [\[abstract\]](#)
52. G. Stellner, A. Bode, S. Lamberts and T. Ludwig.
 C. Halatsis, D. Maritsas, G. Philokyrou and S. Theodoridis,
 editors.
**NXLib - A Parallel Programming Environment for
 Workstation Clusters.**
 PARLEV'94 Parallel Architectures and Languages Europe.
 Pages 745-748.
 Springer, Berlin, July 1994.
[\[paper\]](#) [\[abstract\]](#)
53. G. Stellner, A. Bode, S. Lamberts and T. Ludwig.
 K. M. Decker and R. M. Rehmann, editors.

- Emulating a Paragon XP/S on a Network of Workstations.**
Programming Environments for Massively Parallel Distributed Systems.
Pages 385-391.
Birkhuser Verlag, Basel, Switzerland, July 1994.
[\[paper\]](#) [\[abstract\]](#)
54. S. Lamberts, G. Stellner, A. Bode and T. Ludwig.
Paragon Parallel Programming Environment on Sun Workstations.
Proceedings Sun User Group 11th Annual Conference.
Pages 87-98.
San Jos, 1994.
[\[paper\]](#) [\[abstract\]](#)
55. G. Stellner, A. Bode, S. Lamberts and T. Ludwig.
Simulating a Paragon XP/S on a Network of Workstations.
Proceedings of the Intel Supercomputer Users' Group Conference.
Pages 77-88.
St. Louis, 1993.
56. T. Ludwig.
P. P. Spies, editor.
UPAS - Universally Programmable Architecture and Basic Software.
Euro-ARCH '93, Mnchen.
Pages 660-671.
Springer, Berlin, 1993.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
57. T. Ludwig.
V.E. Malyshkin, editor.
Aspects of Load Management on Parallel Computers.
Proceeding of the International Conference Parallel Computing Technologies, PaCT-93, Obninsk, Russia.
Pages 301-313, V.
Recursive Super Computers (ReSCo), Moscow, Russia, September 1993.
[\[paper\]](#) [\[abstract\]](#)
58. T. Ludwig.
Load Balancing on the Intel Hypercube.
Proceedings of the Intel 1992 Annual Users' Conference, Dallas, Texas, USA.
Pages 199-203.
Intel Supercomputer Systems Division, Beaverton, USA, October 1992.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
59. T. Ludwig.
Load Management for Process Objects.
Proceedings of the Workshop on Dynamic Object Placement and Load Balancing in Parallel and Distributed Systems, Utrecht, the Netherlands.
Pages 3-7.
Katholieke Universiteit, Leuven, Belgium, 1992.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
60. T. Ludwig and S. Lamberts.

A Testbed for the Evaluation of Load Management Schemes Using Process Migration.

Proceedings of the Technology Focus Conference, Intel Supercomputer Systems Division, University Partner Program, Timberline Lodge, Oregon, USA.

Pages 237-254.

1992.

[\[paper\]](#) [\[abstract\]](#)

61. T. Bemmerl, T. Ludwig and B. Ries.
N.N. Mirenkov, editor.

A Design and Specification Environment for Distributed Memory Multiprocessors.

Proceedings of the International Conference Parallel Computing Technologies, PaCT-91, Novosibirsk, USSR.

Pages 280-291.

World Science, Singapore, September 1991.

62. T. Bemmerl, R. Gebhart, P. Ginzinger and T. Ludwig.

A Parallel Development Environment for the iPSC Hypercube.

Proceedings of the First World Conference on Parallel Computing in Engineering and Engineering Education, UNESCO, Paris, France.

Pages 121-125.

The Microcomputer Unit Ltd, London, 1990.

63. T. Bemmerl, O. Hansen and T. Ludwig.

H. Burkhart, editor.

PATOP for Performance Tuning of Parallel Programs.

Proceedings of the CONPAR 90 - VAPP IV Joint International Conference on Vector and Parallel Processing, Zurich, Switzerland.

Pages 840-851.

Springer, Berlin, September 1990.

64. T. Bemmerl and T. Ludwig.

H. Burkhart, editor.

MMK - A Distributed Operating System Kernel with Integrated Dynamic Loadbalancing.

Proceedings of the CONPAR 90 - VAPP IV Joint International Conference on Vector and Parallel Processing, Zurich, Switzerland.

Pages 744-755.

Springer, Berlin, September 1990.

65. T. Bemmerl, H. Ertl and T. Ludwig.

Ein Multiprozessor-Betriebssystemkern mit globalen dynamischen Objekten für Multiprozessoren mit verteiltem Speicher.

Parallel-Algorithmen und -Rechnerstrukturen (FG 3.1.2), PARS-Workshop, München.

Pages 58-64.

Gesellschaft für Informatik e.V., January 1990.

66. T. Bemmerl, R. Gebhart, P. Ginzinger and T. Ludwig.

F. Andr  and J.P. Verjus, editors.

A Parallel Development Environment for the iPSC

Hypercube.

Proceedings of the First European Workshop on Hypercube and Distributed Computers, Rennes, France.

Pages 375-376.

North-Holland, Amsterdam, 1989.

67. T. Bemmerl, P. Hofstetter and T. Ludwig.

F. Andr  and J.P. Verjus, editors.

LOTOP - A Load Generator for Parallel Computers.

Proceedings of the First European Workshop on Hypercube and Distributed Computers, Rennes, France.

Pages 83-91.

North-Holland, Amsterdam, 1989.

68. T. Bemmerl, P. Hofstetter and T. Ludwig.

Ein Lastgenerator zur Erzeugung synthetischer Programme auf Parallelrechnern.

Parallel-Algorithmen und -Rechnerstrukturen (FG 3.1.2), PARS-Workshop, M nchen.

Pages 214-219.

Gesellschaft f r Informatik e.V., April 1989.

69. T. Bemmerl, O. Hansen and T. Ludwig.

Ein Leistungsmesssystem f r Multiprozessoren.

Parallel-Algorithmen und -Rechnerstrukturen (FG 3.1.2), PARS-Workshop, M nchen.

Pages 205-213.

Gesellschaft f r Informatik e.V., April 1989.

70. G. Fritsch, J. Volkert and T. Ludwig.

C.R. Jesshope and K.D. Reinartz, editors.

Many-Particle Problems on Distributed Shared Memory Systems.

Proceedings of the CONPAR 88, Manchester, UK.

Pages 177-185.

Cambridge University Press, Cambridge, UK, 1989.



Non-Reviewed Publications

1. Alexandros Stamatakis, Thomas Ludwig and Harald Meier.

RAxML: A Parallel Program for Phylogenetic Tree Inference.

Proceedings of the ECCB2003.

Paris, France, September 2003.

2. Alexandros Stamatakis, Thomas Ludwig and Harald Meier.

Neues vom Projekt ParBaum: Parallele und verteilte Systeme und Algorithmen zur Berechnung grosser phylogenetischer B ume mit Maximum-Likelihood.

KONWIHR Quartl.

Number 34, pages 4-7.

2003.

3. Alexandros Stamatakis, Thomas Ludwig and Harald Meier.
Siegfried Wagner, Werner Hanke, Arndt Bode and Franz Durst,
editors.
Adapting PAXML to the Hitachi SR8000-F1 Supercomputer.
High Performance Computing in Science and Engineering.
Pages 453-466.
Springer Verlag, Technische Universität München, München,
Germany, 2002.
[\[paper\]](#) [\[abstract\]](#)
4. F. Bry, P. Clote, H.-G. Hegering, H.-P. Kriegel, F. Kröger, T.
Ludwig and M. Wirsing.
**Weibuch über Perspektiven in der Ludwig-Maximilians-
Universität zum Anbruch des Informationszeitalters.**
July 1998.
[\[paper\]](#) [\[abstract\]](#)
5. T. Ludwig, R. Wismler, V. Sunderam and A. Bode.
**OMIS - On-line Monitoring Interface Specification (Version
2.0).**
TUM-I9733, SFB-Bericht Nr. 342/22/97~A.
Technische Universität München, Munich, Germany, July 1997.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
6. S. Lamberts, T. Ludwig, C. Röder and A. Bode.
**PFSLib - A File System for Parallel Programming
Environments.**
TUM-I9619, SFB-Bericht Nr. 342/10/96 A.
Technische Universität München, Munich, Germany, May 1996.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
7. T. Ludwig, R. Wismler, V. Sunderam and A. Bode.
OMIS - On-Line Monitoring Interface Specification.
TUM-I9609, SFB-Bericht Nr. 342/05/96 A.
Technische Universität München, Munich, Germany, February
1996.
[\[paper\]](#) [\[www\]](#) [\[abstract\]](#)
8. A. Bode, T. Ludwig, V. Sunderam and R. Wismler.
Workshop on PVM, MPI, Tools, and Applications.
TUM-I9535, SFB-Bericht Nr. 342/18/95 A.
Technische Universität München, Munich, Germany, November
1995.
[\[paper\]](#)
9. T. Ludwig, R. Artiges, F. Avitabile, P. Baraduc, O. Bournez, S.
Contassot-Vivier, J. Cohen, E. Frejafon, E. Jeannot, N.-d. Morelon,
G. Mouni, C. Perez, A. Pobla, C. Randriamaro, P. Rebreyend,
L.-P. Tock, M. Weber and J. v. Weizsäcker.
**The Solitaire Project - Finding Solutions for the Game in
Parallel.**
Number 94-01.
Laboratoire de l'Informatique du Parallélisme (LIP), Ecole
Normale Supérieure de Lyon, LIP, 46 Allée d'Italie, 69364 Lyon
Cedex 07, France, July 1994.
10. T. Ludwig.
Lecture Notes on Parallel Languages and Algorithms.
Number 94-02.

Laboratoire de l'Informatique du Parallélisme (LIP), Ecole Normale Supérieure de Lyon, LIP, 46 Allée d'Italie, 69364 Lyon Cedex 07, France, July 1994.

11. C. Suttner, C. Goller, P. Krauss, K.-J. Lange, T. Ludwig and T. Schnekenburger.
Heuristic Optimization of Parallel Computations.
 TUM-I9410, SFB 342/05/94 A.
 Technische Universität München, München, 1994.
12. G. Stellner, M. Schumann, S. Lamberts, T. Ludwig, A. Bode, M. Kiehl and R. Mehlhorn.
Developing Multicomputer Applications on Networks of Workstations Using NXLib.
 TUM-I9337 SFB-Bericht 342/17/93 A.
 Technische Universität München, Munich, Germany, December 1993.
13. S. Baker, H.-J. Beier, T. Bemmerl, A. Bode, H. Ertl, U. Graf, O. Hansen, J. Haunerding, P. Hofstetter, R. Knödseder, J. Kremenek, S. Langenbuch, R. Lindhof, T. Ludwig and others.
TOPSYS - Tools for Parallel Systems (Artikelsammlung).
 TUM-I9119, SFB-Bericht Nr. 342/13/91 A.
 Technische Universität München, Munich, Germany, June 1991.
14. T. Ludwig, O. Hansen and T. Bemmerl.
Evaluation of Load Management Strategies for Distributed Memory Multiprocessors.
 Number 4.5.2(b), Work Package 4.5.
 Technische Universität München, Munich, Germany, October 1991.
 [\[paper\]](#) [\[abstract\]](#)
15. O. Hansen, T. Ludwig, R. Milner and S. Baker.
Load Balancing Strategies.
 Number 4.5.1, Work Package 4.5.
 Technische Universität München and RSRE, December 1990.
16. T. Bemmerl, A. Bode, T. Ludwig and S. Tritscher.
MMK - Multiprocessor Multitasking Kernel (User's Guide and User's Reference Manual).
 TUM-I9048, SFB-Bericht Nr. 342/26/90 A.
 Technische Universität München, Munich, Germany, December 1990.
17. T. Bemmerl, A. Bode, O. Hansen and T. Ludwig.
A Testbed for Dynamic Loadbalancing on Distributed Memory Multiprocessors.
 Number 14, Work Package 4.5.
 Technische Universität München, Munich, Germany, August 1990.
18. T. Ludwig.
Parallelisierung des Monte Carlo Verfahrens nach Bird.
 Bd.~20/Nr.~10.
 Universität Erlangen, Erlangen, Germany, August 1987.
19. T. Ludwig.
SDL - Ein Hilfsmittel zur Erstellung von Mehrprozessprogrammen.
 December 1987.



Publications as Editor

1. Roland Wisniewski, Thomas Ludwig, Wolfgang Karl and Arndt Bode.
Thomas Ludwig and Barton Miller, editors.
Monitoring Concepts for Parallel Systems - An Evolution towards Interoperable Tool Environments.
On-Line Monitoring Systems and Computer Tool Interoperability.
Pages 1-21.
Nova Science Publishers, 2003.
2. Thomas Ludwig and Barton Miller, editors.
.
On-Line Monitoring Systems and Computer Tool Interoperability.
ISBN 1-59033-888-X.
Nova Science Publishers, New York, USA, 2003.
[\[abstract\]](#)
3. LNCS .
A. Bode, T. Ludwig, W. Karl and R. Wisniewski, editors.
Euro-Par 2000 - Parallel Processing, 6th International Euro-Par Conference, Munich, August/September 2000.
Number 1900 of Lecture Notes in Computer Science.
Springer, Berlin, August 2000.
4. LNCS .
A. Bode, J. Dongarra, T. Ludwig and V. Sunderam, editors.
Parallel Virtual Machine - EuroPVM'96: Third European PVM Conference, München, 7.-9. Oktober.
Number 1156 of Lecture Notes in Computer Science.
Springer, Berlin, October 1996.
5. T. Ludwig and R. Wisniewski.
A. Bode, T. Ludwig, V. Sunderam and R. Wisniewski, editors.
The Tool-set Environment.
Workshop on PVM, MPI, Tools, and Applications.
Pages 28-32.
Technische Universität München, November 1995.

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High-performance computing (HPC) has been useful in several disciplines and applications including analyzing 15-petabyte data generated by the large hadron collider at Centre Européen de Recherche Nucléaire (CERN) each year. HPC cannot be a replacement for a novel algorithmic technique. However, considering the advancements in HPC hardware, such as graphics processing units (GPUs) and field-programmable gate arrays (FPGAs), and recent trends in computing, such as cloud computing, using HPC to cope with the sequencing data is a promising solution. In this chapter, the authors provide an overview.

Prof.dr.ir. Marijn Janssen holds the Antoni van Leeuwenhoek chair in ICT and Governance and is head of the Information and Communication Technology section of the Technology, Policy and Management Faculty of Delft University of Technology. He is also honorary visiting professor at Brunel University, London, and visiting professor at United Nations University (UNU).