# Gregor von Laszewski, Ph.D.

Research Professor, University of Virginia https://laszewski.github.io

Biocomplexity Institute Town Center Four 994 Research Park Boulevard Charlottesville, VA 22911 8282 South Stone Ridge Rd Bloomington, IN 47401 (812) 824-8660 laszewski@gmail.com

## **EDUCATION**

Ph.D., Computer Science, Syracuse University, Syracuse, NY

Sep. 1991 - Nov. 1996

Thesis: A Parallel Data Assimilation System and Its Implications on a Metacomputing Environment

Advisor: Geoffrey C. Fox

Fellowship at The Ohio State University, Columbus, OH

Sep. 1990 - Sep. 1991

Graduate exchange student

M.S. Computer Science (Diplom Informatiker), University of Bonn, Germany

Sep. 1987 - Nov. 1990

in collabooration with

The German National Institute for Information Technology (GMD),

 ${\bf now} \ {\bf Fraunhofer\text{-}Gesellschaft}$ 

Thesis: A Parallel Genetic Algorithm for the K-way Graph Partitioning Problem

Major: Artificial Intelligence

Minor: Physics

Advisor: Heinz Mühlenbein

B.S. Computer Science (Vordiplom), University, of Bonn, Germany.

Director, Service-Oriented Cyberinfrastructure Laboratory Associate Professor, Computer Science Department Associate Professor, Ph.D. Program, GCCIS Rochester Institute of Technology, Rochester, NY Sep. 1984 - Apr. 1987

Major: Coputer Science

Minor: Physics

## **EXPERIENCE**

Research Professor, Biocomplexity Institute University of Virginia, Charlottesville, VA	Nov 2021 - present
Assistant Director, Digital Science Center Indiana University, Bloomington, IN	Jul. 2012 - Dec. 2021
Adjunct Professor, Intelligent Systems Engineering Department Indiana University, Bloomington, IN	Sep. 2016 - Dec. 2021
Assistant Director of Cloud Comuting, Community GridsLab Indiana University, Bloomington, IN	Jul. 2009 – 2015
Adjunct Professor, Computer, Science Department Indiana University, Bloomington, IN	Sep. 2012 - Sep. 2015
Lead Architect, FutureGrid Indiana University, Bloomington, IN	Jul. 2009 – Jan. 2015
Scientist, Argonne National Laboratory, Mathematics and Computer Science Division. Argonne, IL.	Apr. 2002 - Jul. 2009
Sabbatical from Argonne National Laboratory Associate Professor, Rochester Institute of Technology, Rochester, NY	Aug. 2007 - Jul. 2009

Computation Institute, Chicago, IL,	- Jul. 2007
	- Jan. 2005
Assistant computer scientist, Argonne National Laboratory, Nov. 1998 Mathematics and Computer Science Division. Argonne, IL.	- Apr. 2002
Visiting professor/Guest Lecturer, Illinois Institute of Technology.  Computer Science Department, Chigaco IL  Jan. 2002	- Dec. 2002
Postdoctoral researcher, Argonne National Laboratory Mathematics and Computer Science Division. Argonne, IL.	- Nov. 1998
Research assistant, NASA Goddard Space Flight Center University Research Space Agency (USRA), Greenbelt, MD.	- Jan. 1995
Research assistant, German National Research Center for Information Technology (GMD) now Frauenhofer Gesellschaft, Sankt Augustin, Germany	- Sept. 1990
AWARDS	
Achievement Award. MLCommons Science Working Group efforts	2022
Best Staff Award. School of Informatics, Computing, and Engineering, Bloomington, IN, U.S.A.	Sept. 2018
Special Judges award at the FLL Robotics World Championship	0.010
Team coached won the special judges award, Detroit. The team also won multiple championship awards in the State of Indiana (2016–2018): 2016-2017 1st Place Programming B3 FLL QT Best Core Values; 2018 B3 FLL QT Best Project award; 2017-2018 Southern Indiana Best Presentation Award; 2018 All Girls Champion FL	liana Overall
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championship awards in the State of Indiana (2016–2018): 2016-2017 1st Place Programming B3 FLL QT Best Core Values; 2018 B3 FLL QT Best Project award; 2017-2018 Southern Indiana Best Presentation Award; 2018 All Girls Champion FL Sandia National Laboratories Recognition Award  Member of the CMCS Team, Livermore, CA, U.S.A.  Overall best research poster at Supercomputing 2004	Award; 2017 liana Overall L Challenge. Mar. 2005
championship awards in the State of Indiana (2016–2018): 2016-2017 1st Place Programming B3 FLL QT Best Core Values; 2018 B3 FLL QT Best Project award; 2017-2018 Southern Indiana Best Presentation Award; 2018 All Girls Champion FL Sandia National Laboratories Recognition Award  Member of the CMCS Team, Livermore, CA, U.S.A.  Overall best research poster at Supercomputing 2004  Poster won among 109 submissions. Pittsburgh, PA, U.S.A.  Chicago Innovation Award	Award; 2017 liana Overall L Challenge. Mar. 2005 Nov. 2004
championship awards in the State of Indiana (2016–2018): 2016-2017 1st Place Programming B3 FLL QT Best Core Values; 2018 B3 FLL QT Best Project award; 2017-2018 Southern Indiana B3 FLL QT Best Project award; 2017-2018 Southern Indiana B4 Presentation Award; 2018 All Girls Champion FL Sandia National Laboratories Recognition Award  Member of the CMCS Team, Livermore, CA, U.S.A.  Overall best research poster at Supercomputing 2004  Poster won among 109 submissions. Pittsburgh, PA, U.S.A.  Chicago Innovation Award  As member of the Globus Project, Chicago, IL, U.S.A.  Department of Energy Outstanding Mentor Award	Award; 2017 liana Overall L Challenge. Mar. 2005 Nov. 2004 Oct. 2003 Apr. 2003
championship awards in the State of Indiana (2016–2018): 2016-2017 1st Place Programming B3 FLL QT Best Core Values; 2018 B3 FLL QT Best Project award; 2017-2018 Southern Indiana Champion's Award; 2018 Southern Indiana Best Presentation Award; 2018 All Girls Champion FL Sandia National Laboratories Recognition Award  Member of the CMCS Team, Livermore, CA, U.S.A.  Overall best research poster at Supercomputing 2004  Poster won among 109 submissions. Pittsburgh, PA, U.S.A.  Chicago Innovation Award  As member of the Globus Project, Chicago, IL, U.S.A.  Department of Energy Outstanding Mentor Award  Argonne, IL, U.S.A.   Best of Show award in the High-Performance Computing Challenge Supercomputing, 98  Received the award on stage, coordinated across multiple National Labs	Award; 2017 liana Overall L Challenge.  Mar. 2005  Nov. 2004  Oct. 2003  Apr. 2003  Nov. 1998
championship awards in the State of Indiana (2016–2018): 2016-2017 1st Place Programming B3 FLL QT Best Core Values; 2018 B3 FLL QT Best Project award; 2017-2018 Southern Indiana Best Presentation Award; 2018 All Girls Champion FL Sandia National Laboratories Recognition Award  Member of the CMCS Team, Livermore, CA, U.S.A.  Overall best research poster at Supercomputing 2004  Poster won among 109 submissions. Pittsburgh, PA, U.S.A.  Chicago Innovation Award  As member of the Globus Project, Chicago, IL, U.S.A.  Department of Energy Outstanding Mentor Award  Argonne, IL, U.S.A.  Best of Show award in the High-Performance Computing Challenge Supercomputing, 98  Received the award on stage, coordinated across multiple National Labs  the application was leading to the HPC Challange award, Orlando, FL.	Award; 2017 liana Overall L Challenge.  Mar. 2005  Nov. 2004  Oct. 2003  Apr. 2003  Nov. 1998
championship awards in the State of Indiana (2016–2018): 2016-2017 1st Place Programming B3 FLL QT Best Core Values; 2018 B3 FLL QT Best Project award; 2017-2018 Southern Indiana Best Presentation Award; 2018 All Girls Champion FL Sandia National Laboratories Recognition Award  Member of the CMCS Team, Livermore, CA, U.S.A.  Overall best research poster at Supercomputing 2004  Poster won among 109 submissions. Pittsburgh, PA, U.S.A.  Chicago Innovation Award  As member of the Globus Project, Chicago, IL, U.S.A.  Department of Energy Outstanding Mentor Award  Argonne, IL, U.S.A.   Best of Show award in the High-Performance Computing Challenge Supercomputing, 98  Received the award on stage, coordinated across multiple National Labs  the application was leading to the HPC Challange award, Orlando, FL.  Fellowship, University Space Research Agency (USRA) at Goddard Space Flight Center.	Award; 2017 liana Overall L Challenge.  Mar. 2005  Nov. 2004  Oct. 2003  Apr. 2003  Nov. 1998

#### Awards for Activities Supervised by Dr. von Laszewski

- 1. Best student research project 2015, Indiana University SOIC
- 2. Supervised the building of a cluster on a wall from recycled computer parts by 8 undergraduate honors students. The resulting cluster wall was presented by a student to the Institute and he won 1 of 5 awards among 65 group presentations, Aug. 2008.
- 3. Supervised the development of a Grid certificate authority that was awarded the best student project at Polytechnic New York.
- 4. Supervised the development of an LDAP browser that won the Novel developers award.

### **GRANTS**

- AWS Cloud Award: co-PI Gregor von Laszewski, AWS Cloud Credit for Research. Jul. 2023 Sep. 2025, \$30K
- 2. Cloudbank: co-PI Gregor von Laszewski, Collaborative Research: Framework: Software: CINES: A Scalable Cyberinfrastructure for Sustained Innovation in Network Engineering and Science, Apr. 2023 Sep. 2024, \$5300
- 3. NIST: PI Gregor von Laszewski, Reusable Hybrid Multi-Services Data Analytics Framework, Sep. 2021 Aug. 2023, \$75K Total to G. von Laszewski
- 4. NSF: co-PI Gregor von Laszewski, XD Metrics Service (XMS), Jul. 2015 − Aug. 2021, #1445806 , ♥, \$750K Total to G. von Laszewski
- 5. XPS: FULL: DSD: Collaborative Research: Rapid Prototyping HPC Environment for Deep Learning, July 2, 2018 Aug 2022, Geoffrey Fox gcf@indiana.edu (PI), Judy Qiu (Co-PI), Gregor von Laszewski (Co-PI), \$315,000.00
- 6. NSF: co-PI Gregor von Laszewski, CSR: An Analytic Approach to Quantifying Availability (AQUA) for Cloud Resource Provisioning and Allocation #1409809/1409256, \$100K total to G. von Laszewski.
- 7. NSF: co-PI Gregor von Laszewski, XD TAS, with University of Buffalo, \$750K total to G. von Laszewski, 9/2009 9/2015,
- 8. NSF: co-PI Gregor von Laszewski, XPS: FULL: DSD: Collaborative Research: Rapid Prototyping HPC Environment for Deep Learning, \$315K total.
- 9. NSF: Gregor von Laszewski, Gregor von Laszewski, PI at Indiana University, Collaborative Research: DDDAS-TMRP: An Adaptive Cyberinfrastructure for Threat Management in Urban Water Distribution Systems, FY2009-2010, \$183K
- 10. NSF: Gregor von Laszewski, OGCE, subcontract with Indiana University, \$216K 9/1/2007 8/31/2010
- 11. Microsoft: Gregor von Laszewski, Donation of a 40 node cluster.
- 12. Microsoft: Gregor von Laszewski, PI. What to teach in advanced Cyberinfrastructure. Aug. 2008, \$5K. Summer 2008
- 13. Healthcare: Gregor von Laszewski, PI at RIT and Technical Director of the Emergency Directory Service, Development of an Emergency Directory Service. Subcontract with STEP of a grant-funded through GRRHIO via the NYSDOH. Nov 2008 Aug 2010, \$130K. Jan. 2009 Aug. 2010. Transitioned in Aug 2009 to RIT as moving the grant was not possible.
- 14. DOE: Gregor von Laszewski, PI, LDRD On-demand calculation of Advanced Photon Source Data, Awarded, Oct. 06, 2006-2007, \$300K.
- 15. DOE: Gregor von Laszewski, PI at Argonne National Laboratory SBIR on Insightful Workflows, Awarded. Sep. 06, \$30K

- NSF: Gregor von Laszewski, PI at University of Chicago, Collaborative Research: DDDAS-TMRP: An Adaptive Cyberinfrastructure for Threat Management in Urban Water Distribution Systems, University of Chicago, FY2006-FY2008, \$52K, ANI0540076
- 17. DOE: Al Wagner, Branko Ruscic, and Gregor von Laszewski. Active Thermo Chemical Tables as part of the DOE SciDAC Collaboratory for Multiscale Chemical Science, \$600K, Sept. 2004 Jun. 2006.
- 18. NSF: David Angulo and Gregor von Laszewski. REU Site: An Interdisciplinary REU Site for Bioinformatics and Grids, CNS0353989, \$260K, FY2004 FY2006.
- NSF: Gregor von Laszewski. Collaborative Research: Grid Portal Middleware, ANI0330545, NMI: \$393K, 1 Sep. 2003 - Sep. 2006.
- 20. DOE: Gregor von Laszewski and Keith Jackson. Commodity Grid Kits, Enabling Middleware Gregor von Laszewski for Designing Science Applications to enable Grid workflows. 

  7, \$500K, Sep. 2004 Sep. 2006.
- 21. DOE: Gregor von Laszewski and Keith Jackson. Commodity Grid Kits, Enabling Middleware for Designing Science Applications. , \$750K, Sep. 2002 Sep. 2004.
- 22. NSF: Gregor von Laszewski. Java CoG Kit Technologies, NSF Grant ACI9619019, \$245K, FY2002 FY204.
- 23. Microsoft: Gregor von Laszewski. Microsoft Equipment Donation, \$5K, FY2003.
- 24. Microsoft: Gregor von Laszewski. Microsoft Software Donation: MSDN Subscription, FY1992- FY2006.
- 25. DOE: Al Wagner, Brank Ruscic, and Gregor von Laszewski. Active Thermo Chemical Tables as part of the DOE MICS Collaboratory for Multiscale Chemical Science, \$900K, Sept. 2001 Sept. 2003.
- DOE: Randy Brameley, Rick McMullan, John Hoffman, and Gregor von Laszewski. NGIA Grid-based Collaboratory for RealTime Data Acquisition IU/ANL, FWP 56890, \$300K, FY1999.

### SELECTED EDUCATIONAL ACTIVITIES

- 1. Undergraduate Research Opportunities
  - Fall 2022-2023, University of Virginia Biocomplexity Institute and Initiative, support of 2 undergarduate students for MLCommons benchmarks,
  - Fall 2022-2023 support 4 undergraduate students at New York University for MLCommons benchmarks
  - Summer REU 2022 University of Virginia Biocomplexity Institute and Initiative, 5 students supervised
  - Virtual Summer REU at Florida Agricultural and Mechanical University support of 18 students from which 17 were minorities, Summer 2020
  - Summer Research Experience at Indiana University Supervised 5 students from which 4 are minorities, Summer 2021
  - Undergraduate Research Opportunities in Computing, Indiana University 2020, 2021
  - Research experience for undergraduates Leading the organization of a group of 10 undergraduate students
  - RIT Honors Class, Parallel Compute Cluster, Rochester Institute of Technology, 2008
  - NSF REU Site on Grid Computing and Bioinformatics, DePaul University 2004-2006
  - Interprofessional Project Team Course, IPRO at Illinois Institute of Technology, Chicago, IL, Spring 2003
  - DOE/NSF Faculty-Student Teams (FaST) Program, Argonne National Labs, IL, 2003, 2002
- 2. Various courses related to Grid Computing and Big Data, Indiana University
  - ENGR-E 599 Independent Study in Cloud Computing Engineering and AI, Spring 2020, Fall 2020, Spring 2021
  - CSCI-B 649 Graduate: Topics in Systems with focus on Cloud Computing, Spring 2020
  - ENGR-E 616 Graduate: Advanced Cloud Computing, Spring 2018, Spring 2020

- ENGR-E 516 Graduate: Engineering Cloud Computing Spring 2018, Fall 2018, Spring 2019, Spring 2020
- INFO-I 423 Undergraduate: Big Data Applications and Analytics (Undergraduates), Fall 2016
- INFO-I 523 Graduate: Big Data Applications and Analytics (Graduates), Fall 2016
- ENGR-E 599 Graduate: Topics in Intelligent Systems Engineering, Fall 2016
- CSCI-Y 790 Graduate: Graduate Independent Study, Fall 2014

#### 3. STEM student activities

- 2022-2023, K:11 Support of a high school student to be educated in parallel computing
- K5-6: Summer Camp, Indiana University, Introduction to Robotics and Python, Summer 2014
- K5-6: Introduction to Robot Programming, Indiana University
- K-12: Introduction to Cloud Computing for K-12 students, Purdue University K-12 Education Seminar, Sept. 2012
- K-12: Designing a Raspberry PI Cluster Case, Indiana University
- K5-12: Summer Camp on Robotics, Indiana University

#### Thesis Advised

- 1. MS: JavaScript CoG Kit. Fugang Wang, Rochester Institute of Technology, Dec 2009.
- 2. MS: GreenIT VM scheduling. Casey Rathbone, Dec 2010.
- 3. MS (Masters Project): Grid Security. Akylbek Zhumabayev, Rochester Institute of Technology, Graduation June 2009.
- 4. PhD: GridTorrents. Ali Kaplan, Indiana University, June 2009.
- 5. MS: GridShell, Boris Wachtmeister, Technical University Aachen, Germany, March 2008.
- 6. MS: Deployment Issues in Grid Computing. Guru Prasad, Southern Illinois University, Fall 2006.
- 7. PhD: An Integrated Architecture for Ad Hoc Grids. Kaizar Amin, Computer Science and Engineering Department, University of North Texas. Jan, 2006.
- 8. BS: Grid Service Data Needed for Estimation of Reliability in Scientific Workflow Systems, Daniel Colonnese, North Carolina State University, 2004.
- 9. MS: Grid Eigen Trust, A Framework for Computing Reputation in Grids. Beulah Kurian Alunkal, Computer Science Department, Illinois Institute of Technology, Chicago. Dec 2003.
- 10. MS: The Java CoG Kit Grid Desktop, A Simple and Central Approach to Grid Computing Using the Graphical Desktop Paradigm, Pankaj R. Sahasrabudhe, University of Louisville, 2003.
- 11. MS: Adapting BPEL4WS to the Grid, (committee member), Marcial Rion, Mathias Kengelbacher, A workflow language proposal for Grid environments, 2000, Main Advisor: Dr. Josef M. Joller, School of Technik, Raperswil, CH
- 12. BS: A Grid Certificate Authority, Mike Sosonkin, Polytechnic University, Brooklyn, New York (Best student project of the graduating class)

## **H-INDEX**

As of August 1, 2024 Google scholar reported 12257 and an h-index of 47

## TECHNICAL STRENGTHS

Throughout my carreer, I have used many software systems and programming languages. I have developed and overseen many different projects that simplified utilization of Cloud, Distributed Computing, and Grid Infrastructure. I am the lead architect of cloudmesh. I was the lead architect of FutureGrid (a multicloud deployment) and the Java CoG Kit which supported many application portals to provide easy access to heterogeneous distributed HPC infrastructure including benchmarking.

Cloud Computing VM, Containers, cloudmesh interfaces with AWS, Azure, Google, Oracle

Web related REST, JSON, YAML

Computer Languages Python, Java, Perl, C, C++, OCCAM, and others

Administration Project execution

GitHub I am managing over 200 GitHub repositories

Collaboration I am able to lead and work in large collaborative projects

### STANDARDS DOCUMENTS

[33] S Fitzgerald, Gregor von Laszewski, and Martin Swany. "GOSv2: A Data Definition Language for Grid Information Services". In: Global Grid Forum and GWD-GIS-011-5. 2001. URL: \(\mathbb{Z}\).

- [100] Gregor von Laszewski and Wo. L Chang. NIST Big Data Interoperability Framework: Volume 8, Reference Architecture Interfaces. Tech. rep. National INstutute of Standards, June 2019. URL: .
- [132] Gregor von Laszewski, Mike Helm, Steven M Fitzgerald, Pete Vanderbilt, Brett Didier, Peter Lane, and Martin Swany. "GOSv3: A Data Definition Language for Grid Information Services". In: Argonne National Laboratory and Pacific Northwest Laboratory and Grid Forum Working Group Document GWD-GIS-011-11. 2001. URL: 2.
- [176] NIST Big Data. Web Page. Feb. 2020. URL: .
- [177] NIST Big Data Interoperability Framework: Volume 8, Reference Architecture Interfaces. NIST Special Publication 1500-9r1. Gaithersburg, MD 20899: NIST, Oct. 2019. URL: .

### COPYRIGHTED SOFTWARE

[48] Jarek Gawor and Gregor von Laszewski. LDAP Browser/Editor. Copyright. 2000.

### PROCEEDINGS

- [55] Workshop on data intensive computing in the clouds-DataCloud. 2011, p. 1033. URL: .
- [79] Gregor von Laszewski, ed. *Grid Computing Environments 2006 Conference Proceedings*. in conjunction with IEEE/ACM SC06. Tampa, FL: Published Aug. 2008, Rochester Institute of Technology, Rochester NY, Nov. 2006.
- [80] Gregor von Laszewski, ed. Grid Computing Environments 2007 Conference Proceedings. in conjunction with IEEE/ACM SC07. Reno, NV: Published Mar. 2008, Rochester Institute of Technology, Rochester NY, Nov. 2007.
- [107] Gregor von Laszewski, J.P. Fleischer, Geoffrey C. Fox, Juri Papay, Sam Jackson, and Jeyan Thiyagalingam. "Templated Hybrid Reusable Computational Analytics Workflow Management with Cloudmesh, Applied to the Deep Learning MLCommons Cloudmask Application". In: eScience 23. Second Workshop on Reproducible Workflows, Data, and Security (ReWorDS 2022). Limassol, Cyprus, Oct. 2023. URL: 27.
- [116] Gregor von Laszewski and Geoffrey C. Fox. Proceedings of the CyberTraining REU2022 CyberTraining for Students and Technologies from Generation Z. Tech. rep. Charlottesvill, VA: University of Virginia, Oct. 2022. URL: Z.
- [213] Gregor von Laszewski, Robert Grossman, Michael Kozuchand, Rick McGeer, and Dejan Milojicic, eds. Federated Clouds '12: Proceedings of the 2012 Workshop on Cloud Services and Federation, and the 8th Open Cirrus Summit. San Jose, California, USA: ACM, 2012. ISBN: 978-1-4503-1754-2. URL: .

## SELECTED CLASS BOOKS AND PROCEEDINGS

- [59] Gregor Laszewski, ed. Big Data Software 1 (Proceedings). Online Books Digital Science Center. Bloomington, IN: Online, Indiana University, Dec. 2017. URL: 2.
- [60] Gregor Laszewski, ed. Big Data Software 2 (Proceedings). Online Books Digital Science Center. Bloomington, IN: Online, Indiana University, Dec. 2017. URL: .
- [61] Gregor Laszewski, ed. Cloud and Big Data Technologies (Proceedings). Vol. 8. Online Books Digital Science Center. Bloomington, IN: Online, Indiana University, May 2018. URL: .
- [62] Gregor Laszewski, ed. Cloud and Big Data Technologies (Proceedings). Vol. 9. Online Books Digital Science Center. Bloomington, IN: Online, Indiana University, May 2018. URL: .
- [63] Gregor Laszewski, ed. Cloud Computing Papers, Class Proceedings. Online Books Digital Science Center. Bloomington, IN: Online, Indiana University, 2018. URL:
- [66] Gregor Laszewski, ed. Projects in Big Data Software and Applications (Proceedings). Online Books Digital Science Center. Bloomington, IN: Online, Indiana University, May 2017. URL: .
- [67] Gregor Laszewski, ed. Use Cases in Big Data Software and Analytics (Proceedings). Vol. 3. Online Books Digital Science Center. Bloomington, IN: Online, Indiana University, Jan. 2018. URL:
- [69] Gregor Laszewski, ed. *Use Cases in Big Software and Analytics (Proceedings)*. Vol. 2. Online Books Digital Science Center. Bloomington, IN: Online, Indiana University, Dec. 2017. URL: 🗷.
- [76] Gregor von Laszewski. Cloud Computing. Online Book. Bloomington IN, U.S.A.: Indiana University, Feb. 2020. URL: 🗷.
- [77] Gregor von Laszewski. Cloud Technologies. 3rd ed. Indiana University, Class Book. Bloomington IN, U.S.A.: Online, Dec. 2019, p. 998. URL: 2.
- [83] Gregor von Laszewski. Issues in Parallel Computing. 1995. URL: 🗹.
- [85] Gregor von Laszewski. Linux for Cloud Computing. Online Book. Bloomington IN, U.S.A.: Indiana University, Feb. 2020. URL: 🗗.
- [86] Gregor von Laszewski. Python for Cloud Computing. Online Book. Bloomington IN, U.S.A.: Indiana University, Feb. 2020. URL: .
- [88] Gregor von Laszewski. Scientific Writing with Markdown. Online Book. Bloomington IN, U.S.A.: Indiana University, Feb. 2020. URL: .
- [115] Gregor von Laszewski and Geoffrey C. Fox. *Handbook of Clouds and Big Data*. Bloomington. IN: Indiana University, Dec. 2018. URL: 2.

#### BOOK CHAPTERS

- [13] Kaizar Amin and Gregor von Laszewski. "High-Level Grid Execution Patterns". In: Distributed Computing IWDC 2004. Springer Berlin Heidelberg, 2004, pp. 543–543. DOI: 10.1007/978-3-540-30536-1\_69. URL: \(\mathbb{Z}\).
- [23] Jai Dayal, Casey Rathbone, Lizhe Wang, and Gregor von Laszewski. "Towards on Demand IT Service Deployment". In: *Internet Policies and Issues. Volume* 7 2nd quarter. Nova, 2011, pp.249–262. ISBN: 978-1-61668-745-8.
- [38] Ian Foster, Gregor von Laszewski, George K Thiruvathukal, and Brian Toonen. "A Computational Framework for Telemedicine". In: Future Generation Computer Systems 14.1 (1998). The Telemedical Information Society, pp. 109–123. ISSN: 0167-739X. DOI: https://doi.org/10.1016/S0167-739X(98)00013-2. URL: ...
- [41] Geoffrey C Fox, Gregor von Laszewski, Javier Diaz, Kate Keahey, Jose Fortes, Renato Figueiredo, Shava Smallen, Warren Smith, and Andrew Grimshaw. "Contemporary High Performance Computing". In: ed. by Jeffrey S. Vetter. 1st ed. Vol. 1. republished in 2018. Boca Raton, FL: Chapman and Hall/CRC, 2013. Chap. Futuregrid: a Reconfigurable Testbed for Cloud, HPC and Grid Computing, pp. 603–636. ISBN: 9781351104005. URL: 

  [27]

- [58] Tobias Kurze, Lizhe Wang, Gregor von Laszewski, Jie Tao, Marcel Kunze, Fugang Wang, David Kramer, Wolfgang Karl, and Jaliya Ekanayake. "Cyberaide Virtual Applicance: On-Demand Deploying Middleware for Cyberinfrastructure". In: International Conference on Cloud Computing (CloudComp'09). Ed. by Avresky, Dimiter R., Diaz, Michel, Bode, Arndt, Ciciani, Bruno, Dekel, Eliezer, Akan, Ozgur, Bellavista, Paolo, Cao, Jiannong, Dressler, Falko, Ferrari, Domenico, Gerla, Mario, Kobayashi, Hisashi, Palazzo, Sergio, Sahni, Sartaj, Shen, Xuemin (Sherman), Stan, Mircea, Xiaohua, Jia, Zomaya, Albert, Coulson, and Geoffrey. Vol. 34. Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering. Munich, Germany: Springer Berlin Heidelberg, Oct. 2010, pp. 132–144. ISBN: 978-3-642-12636-9. DOI: 10.1007/978-3-642-12636-9\_10. URL: 4.5.
- [95] Gregor von Laszewski and Kaizar Amin. "Grid Middleware". In: *Middleware for communications*. Ed. by Qusay Mahmoud. Chichester, England and Hoboken, NJ: Wiley, 2004. ISBN: 978-0-470-86206-3. URL: .
- [96] Gregor von Laszewski and Kaizar Amin. "Middleware for Communications". In: *Grid Middleware*. Ed. by Qusay H. Mahmoud. Wiley, 2004, pp. 109–130. ISBN: 0-470-86206-3. DOI: 10.1002/0470862084.ch5. URL:
- [120] Gregor von Laszewski, Jarek Gawor, Sriram Krishnan, and Keith Jackson. "Commodity Grid Kits Middleware for Building Grid Computing Environments". In: *Grid Computing: Making the Global Infrastructure a Reality*. Ed. by Fran Berman, Geoffrey Fox, and Toney Hey. Communications Networking and Distributed Systems. Wiley, 2003, pp. 639–656. ISBN: 0-470-85319-0. URL: 2.
- [128] Gregor von Laszewski, Mihael Hategan, and Deepti Kodeboyina. "Work coordination for Grid computing". In: *Grid Technologies*. Ed. by M.P. Bekakos, G.A. Gravvanis, and H.R. Arabnia. Vol. 5. State-of-the-art in Science and Engineering. Wit, 2006. ISBN: 1-84564-055-1. URL: Z.
- [129] Gregor von Laszewski, Mihael Hategan, and Depti Kodeboyina. "Grid Workflow with the Java CoG Kit". In: Workflows for E-science: Scientific Workflows for Grids. Ed. by Ian J. Taylor, Ewa Deelman, Dennis B. Gannon, and Matthew Shields. Secaucus, NJ, USA: Springer-Verlag New York and Inc., 2007. ISBN: 1846285194. URL: 🗹.
- [146] Gregor von Laszewski, Mei-Hui Su, Joseph Insley, Ian Foster, and Carl Kesselman. "Sourcebook of Parallel Computing". In: *Quasi-Realtime Microtomography Experiments at Photon Sources*. Ed. by Jack Dongara, Ian Foster, Geoffrey Fox, Wiliam Gropp, Kenn Kennedy, Linda Torczon, and Andy White. New York: Morgan Kaufman Publishers, 2003, pp. 258–265. ISBN: 9781558608719. URL: 27.
- [148] Gregor von Laszewski and Patrick Wagstrom. "Gestalt of the Grid". In: *Tools and Environments for Parallel and Distributed Computing*. Ed. by Salim Hariri and Manish Parashar. Parallel and Distributed Computing. Wiley, 2004, pp. 149–187. ISBN: 978-0-471-47484-5. URL: .
- [155] Gregor von Laszewski, Fugang Wang, Lee, Hyungro, Chen, Heng, and Geoffrey C. Fox. "The FutureGrid Testbed for Big Data". In: *Cloud Computing for Data-Intensive Applications*. Ed. by Xiaolin Li and Judy Qiu. BigSystem '14. Vancouver, BC, Canada: Springer, 2014, TBD. ISBN: 978-1-4503-2909-5. DOI: 10.1145/2609441.2609638. URL: 2.
- [189] Omer Rana, Asif Akram, Rashid Al-Ali, David Walker, Gregor von Laszewski, and Kaizar Amin. "Quality-of-Service Based Grid Communities". In: Extending Web Services Technologies: The Use of Multi-Agent Approaches. Ed. by Lawrence Cavedon, Zakaria Maamar, David Martin, and Boualem Benatallah. Vol. 13. Multiagent Systems, Artificial Societies and Simulated Organizations. Springer, 2005. ISBN: 0-387-23343-1. DOI: 10.1007/0-387-23344-X\_8. URL: 2.
- [235] A. J. Younge, Gregor von Laszewski, L. Wang, and G. C. Fox. "Providing a Green Framework for Cloud Based Data Centers". In: *The Handbook of Energy-Aware Green Computing*. Ed. by Ahmad, I., Ranka, and Sanjay. Chapman and Hall/CRC Press, 2011. Chap. 17. ISBN: 978-1-4665-0116-4. URL: \(\mathbb{Z}\).

# JOURNAL ARTICLES

[3] Jay Alameda, Marcus Christie, Geoffrey Fox, Joe Futrelle, Dennis Gannon, Mihael Hategan, Gopi Swamy, Gregor von Laszewski, Mehmet A. Nacar, Marlon Pierce, Eric Roberts, Charles Severance, and Mary Thomas. "The Open Grid Computing Environments collaboration: portlets and services for science gateways". In: Concurrency and Computation: Practice and Experience 19.6 (2007), pp. 921–942. ISSN: 1532-0634. DOI: 10.1002/cpe.1078. URL: .

- [6] Rashid Al-Ali, Omer Rana, Gregor von Laszewski, Abdelhakim Hafid, Kaizar Amin, and David Walker. "A Model for Quality-of-Service Provision in Service Oriented Architectures". In: *International Journal of Grid and Utility Computing* (2005), p. 1. URL: \(\mathbb{C}\).
- [7] Rashid J. Al-Ali, Kaizar Amin, Gregor von Laszewski, Omer F. Rana, David W. Walker, Mihael Hategan, and Nestor Zaluzec. "Analysis and Provision of QoS for Distributed Grid Applications". In: *Journal of Grid Computing* 2.2 (June 2004). 10.1007/s10723-004-6743-8, pp. 163-182. ISSN: 1570-7873. DOI: 10.1007/s10723-004-6743-8. URL: \(\overline{C}\).
- [14] Kaizar Amin, Gregor von Laszewski, Rashid Al Ali, Omer Rana, and David Walker. "An Abstraction Model for a Grid Execution Framework". In: *Euromicro Journal of Systems Architecture* 52.2 (2006), pp. 73–87. ISSN: 1383-7621. DOI: 10.1016/j.sysarc.2004.10.007. URL: \(\overline{C}\).
- [20] James C. Browne, Robert L. DeLeon, Abani K. Patra, William L. Barth, John Hammond, Matthew D. Jones, Thomas R. Furlani, Barry L. Schneider, Steven M. Gallo, Amin Ghadersohi, Ryan J. Gentner, Jeffrey T. Palmer, Nikolay Simakov, Martins Innus, Andrew E. Bruno, Joseph P. White, Cynthia D. Cornelius, Thomas Yearke, Kyle Marcus, Gregor Laszewski, and Fugang Wang. "Comprehensive, open-source resource usage measurement and analysis for HPC systems". In: Concurr. Comput. Pract. Exp. 26.13 (2014), pp. 2191–2209. DOI: 10.1002/cpe.3245. URL: \(\overline{\sigma}\).
- [36] Jacques Phillipe Fleischer, Gregor von Laszewski, Carlos Theran, and Yohn Jairo Parra Bautista. "Time Series Analysis of Cryptocurrency Prices Using Long Short-Term Memory". In: *Algorithms* 15.7 (2022). ISSN: 1999-4893. DOI: 10.3390/a15070230. URL: .
- [37] Ian Foster, Joeseph Insley, Gregor von Laszewski, Carl Kesselman, and Marcus Thiebaux. "Distance Visualization: Data Exploration on the Grid". In: *IEEE Computer* 32.12 (Dec. 1999), pp. 36–43. ISSN: 0018-9162. DOI: 10.1109/2.809249. URL: .
- [43] Geoffrey C. Fox, Gregor von Laszewski, Fugang Wang, and Saumyadipta Pyne. "AICov: An Integrative Deep Learning Framework for COVID-19 Forecasting with Population Covariates". In: *Journal of Data Science* 19.2 (2021), pp. 293–313. ISSN: 1680-743X. DOI: 10.6339/21-JDS1007. URL: \(\overline{C}\).
- [45] Thomas R. Furlani, Matthew D. Jones, Steven M. Gallo, Andrew E. Bruno, Charng-Da Lu, Amin Ghadersohi, Ryan J. Gentner, Abani K. Patra, Robert L. DeLeon, Gregor von Laszewski, Fugang Wang, Ann Zimmerman, FurlaniThomas R., Barry I. Schneider, Matthew D. Jones, John Towns, David L. Hart, Abani K. Patra, Robert L. Deleon, Steven M. Gallo, Charng-Da Lu, Amin Ghadersohi, Ryan J. Gentner, Andrew E. Bruno, John R. Boisseau, Fugang Wang, and Gregor Laszewski. "Performance Metrics and Auditing Framework using Application Kernels for High-performance Computer Systems". In: Concurrency and Computation: Practice and Experience 25.7 (July 2013), pp. 918–931. DOI: 10.1002/cpe.2871. URL:
- [50] Vladimir Getov, Gregor von Laszewski, Michael Philippsen, and Ian Foster. "Multi-Paradigm Communications in Java for Grid Computing". In: Communications of ACM 44.10 (Oct. 2001), pp. 118–125. ISSN: 0001-0782. DOI: 10.1145/383845.383872. URL: .
- [51] Tom Goodale, Shantenu Jha, Hartmut Kaiser, Thilo Kielmann, Pascal Kleijer, Gregor von Laszewski, Craig Lee, Andre Merzky, Hrabri Rajic, and John Shalf. "SAGA: A Simple API for Grid Applications. High-level application programming on the Grid". In: *Computational Methods in Science and Technology* 12.1 (2006), pp. 7–20.
- [52] XiaoShan He, Xianhe Sun, and Gregor von Laszewski. "QoS guided Min-Min heuristic for grid task scheduling". In: Journal of Computer Science and Technology 18.4 (2003), pp. 442–451. DOI: 10.1007/BF02948918. URL: \(\mathbb{Z}\).
- [72] Gregor von Laszewski. "A Loosely Coupled Metacomputer: Cooperating Job Submissions Across Multiple Supercomputing Sites". In: *Concurrency: Practice and Experience* 11.15 (Dec. 1999). The initial version of this paper was available in 1996, pp. 933–948. ISSN: 1096-9128. DOI: 10.1002/(SICI)1096-9128(19991225)11: 15<933::AID-CPE461>3.0.CO;2-J. URL: .
- [89] Gregor von Laszewski. "The Grid-Idea and Its Evolution". In: Journal of Information Technology 47.6 (June 2005), pp. 319–329. DOI: 10.1524/itit.2005.47.6.319. URL: \(\mathbb{Z}\).
- [91] Gregor von Laszewski. "Workflow Concepts of the Java CoG Kit". In: Journal of Grid Computing 3 (3-4 Jan. 2005), pp. 239–258. ISSN: 1570-7873. DOI: 10.1007/s10723-005-9013-5. URL: \(\mathbb{Z}\).
- [94] Gregor von Laszewski, Beulah Alunkal, and Ivana Veljkovic. "Toward Reputable Grids". In: Scalable Computing: Practice and Experience 6.3 (Sept. 2005). submitted in 2003, pp. 95–106. URL: .
- [101] Gregor von Laszewski, Jai Dayal, and Lizhe Wang. "eMOLST: A Documentation Flow for Distributed Health Informatics". In: Concurrency and Computation: Practice and Experience 23.16 (2011), pp. 1857–1867. DOI: 10.1002/cpe.1745. URL: 2.

- [108] Gregor von Laszewski, J.P. Fleischer, R. Knuuti, G.C. Fox, J. Kolessar, T.S. Butler, and J. Fox. "Opportunities for enhancing MLCommons efforts while leveraging insights from educational MLCommons earthquake benchmarks efforts". In: Frontiers in High Performance Computing, 1.1233877 (Oct. 2023), p. 31. URL: Z.
- [121] Gregor von Laszewski, Jarek Gawor, Peter Lane, Nell Rehn, Mike Russell, and Keith Jackson. "Features of the Java Commodity Grid Kit". In: Concurrency and Computation: Practice and Experience 14.13-15 (2002), pp. 1045–1055. ISSN: 1532-0634. DOI: 10.1002/cpe.674. URL: .
- [123] Gregor von Laszewski, Jarek Gawor, Pawel Plaszczak, Mike Hategan, Kaizar Amin, Ravi Madduri, and Scott Gose. "An Overview of Grid File Transfer Patterns and their Implementation in the Java CoG Kit". In: Journal of Neural Parallel and Scientific Computing 12.3 (Sept. 2004). Special Issue on Grid Computing, pp. 329–352. ISSN: 1061-5369. URL: .
- [141] Gregor von Laszewski, Branko Ruscic, Kaizar Amin, Patrick Wagstrom, Sriram Krishnan, and Sandeep Nijsure. "A Framework for Building Scientific Knowledge Grids Applied to Thermochemical Tables". In: The International Journal of High Performance Computing Applications 17.4 (Dec. 2003), pp. 431–447. DOI: 10.1177/10943420030174007. URL: .
- [142] Gregor von Laszewski, Michael Russell, Ian Foster, John Shalf, Gabrielle Allen, Greg Daues, Jason Novotny, and Edward Seidel. "Community Software Development with the Astrophysics Simulation Collaboratory". In: Concurrency and Computation: Practice and Experience 14.13-15 (2002), pp. 1289–1301. ISSN: 1532-0634. DOI: 10.1002/cpe.688. URL:
- [161] Gregor von Laszewski, Mary Westbrook, Ian Foster, Edwin Westbrook, and Craig Barnes. "Using Computational Grid Capabilities to Enhance the Ability of an X-Ray Source for Structural Biology". In: Cluster Computing 3.3 (2000), pp. 187–199. DOI: 10.1023/A:1019036421819. URL: .
- [171] Stephen Mock, Mary Thomas, Maytal Dahan, Kurt Mueller, Catherine Mills, and Gregor von Laszewski. "A Perl Commodity Grid Kit". In: *Concurrency and Computation: Practice and Experience* 14.13-15 (2002), pp. 1085–1095. ISSN: 1532-0634. DOI: 10.1002/cpe.695. URL: .
- [173] Mohamed, A Gaber, Geoffrey C Fox, and Gregor von Laszewski. "Blocked LU factorization on a multiprocessor computer". In: Computer-Aided Civil and Infrastructure Engineering 8.1 (1993), pp. 45–56. URL: .
- [174] James D. Myers, Thomas C. Allison, Sandra Bittner, Brett Didier, Michael Frenklach, William H. Green, Yen-Ling Ho, John Hewson, Wendy Koegler, Carina Lansing, David Leahy, Michael Lee, Renata McCoy, Michael Minkoff, Sandeep Nijsure, Gregor von Laszewski, David Montoya, Luwi Oluwole, Carmen Pancerella, Reinhardt Pinzon, William Pitz, Larry A. Rahn, Branko Ruscic, Karen Schuchardt, Eric Stephan, A. Wagner, Theresa Windus, and Christine Yang. "A Collaborative Informatics Infrastructure for Multi-Scale Science". In: Cluster Computing 8.4 (2005), pp. 243–253. DOI: 10.1007/s10586-005-4092-4. URL: .
- [180] Niranda Perera, Arup Kumar Sarker, Kaiying Shan, Alex Fetea, Supun Kamburugamuve, Thejaka Amila Kanewala, Chathura Widanage, Mills Staylor, Tianle Zhong, Vibhatha Abeykoon, Gregor von Laszewski, and Geoffrey Fox. "Supercharging distributed computing environments for high-performance data engineering". In: Frontiers in High Performance Computing 2 (2024). ISSN: 2813-7337. DOI: 10.3389/fhpcp.2024.1384619. URL: \(\overline{\mathcal{Z}}\).
- [194] Branko Ruscic, Reinhardt E. Pinzon, Melita L. Morton, Gregor von Laszewski, Sandra J. Bittner, Sandeep G. Nijsure, Kaizar A. Amin, Michael Minkoff, and Albert F. Wagner. "Introduction to Active Thermochemical Tables: Several Key Enthalpies of Formation Revisited". In: *J. Phys. Chem. A* 108.45 (2004), pp. 9979–9997. DOI: 10.1021/jp047912y.

- [196] Michael Russell, Gabrielle Allen, Ian Foster, Ed Seidel, Jason Novotny, John Shalf, Gregor von Laszewski, and Greg Daues. "The Astrophysics Simulation Collaboratory: A Science Portal Enabling Community Software Development". In: Journal on Cluster Computing 5.3 (July 2002), pp. 297–304. ISSN: 1386–7857. DOI: 10.1023/A:1015629422149. URL: .
- [200] Karen Schuchardt, Carmen Pancerella, Larry A. Rahn, Brett Didier, Deepti Kodeboyina, David Leahy, James D. Myers, Oluwayemisi O. Oluwole, William Pitz, Branko Ruscic, Jing Song, Gregor von Laszewski, and Christine Yang. "Portal-based Knowledge Environment for Collaborative Science". In: Concurrency and Computation: Practice and Experience 19.12 (2007), pp. 1703–1716. DOI: 10.1002/cpe.1201. URL:
- David Snelling, Sven van den Berghe, Gregor von Laszewski, Philipp Wieder, D. Breuer, Jon MacLaren, Denis Nicole, John Brooke, and Hans-Christian Hoppe. "A Unicore Globus Interoperability Layer". In: Computing and Informatics 21 (2002), pp. 399–411. ISSN: 1335-9150. URL: .
- [204] P. Stelling, C. DeMatteis, I. Foster, C. Kesselman, C. Lee, and Gregor von Laszewski. "A Fault Detection Service for Wide Area Distributed Computations". In: Cluster Computing 2.2 (1999), pp. 117–128. ISSN: 1386-7857. DOI: 10.1023/A:1019070407281. URL: \(\overline{C}\).
- [207] M P Thomas, J Burruss, L Cinquini, G Fox, D Gannon, L Gilbert, Gregor von Laszewski, K Jackson, D Middleton, R Moore, M Pierce, B Plale, A Rajasekar, R Regno, E Roberts, D Schissel, A Seth, and W Schroeder. "Grid portal architectures for scientific applications". In: Journal of Physics: Conference Series 16 (Jan. 2005), pp. 596–600. DOI: 10.1088/1742-6596/16/1/083. URL: .
- [208] M. Thomas, J. Burruss, L. Cinquini, G. Fox, D. Gannon, L. Glilbert, Gregor Gregor von Laszewski, K. Jackson, D. Middleton, R. Moore, M. Pierce, B. Plale, A. Rajasekar, R. Regno, E. Roberts, D. Schissel, A. Seth, and W. Schroeder. "Grid Portal Architectures for scientific applications". In: *Journal of Physics* 16 (2005), pp. 596–600. DOI: 10.1088/1742-6596/16/1/083. URL: 27.
- [217] Lizhe Wang, Marcel Kunze, Jie Tao, and Gregor von Laszewski. "Towards building a cloud for scientific applications". In: Advances in Engineering Software 42.9 (2011), pp. 714–722. ISSN: 0965-9978. DOI: https://doi.org/10.1016/j.advengsoft.2011.05.007. URL: \(\overline{C}\).
- [218] Lizhe Wang, Tobias Kurze, Jie Tao, Marcel Kunze, and Gregor von Laszewski. "On-demand Service Hosting on Production Grid Infrastructures". In: *The Journal of Supercomputing* 66.3 (2013), pp. 1178–1193. DOI: 10.1007/s11227-011-0666-5.
- [219] Lizhe Wang, Gregor von Laszewski, Dan Chen, Jie Tao, and M. Kunze. "Provide Virtual Machine Information for Grid Computing". In: *IEEE Transactions on Systems, Man, and Cybernetics, Part A: Systems and Humans* 40.6 (Nov. 2010), pp. 1362–1374. DOI: 10.1109/TSMCA.2010.2052598.
- [223] Lizhe Wang, Gregor von Laszewski, Fang Huang, Jai Dayal, Tom Frulani, and Geoffrey Fox. "Task scheduling with ANN-based temperature prediction in a data center: a simulation-based study". In: Eng. Comput. (Lond.) 27.4 (2011), pp. 381–391. DOI: 10.1007/s00366-011-0211-4. URL: 

  2. C.
- [225] Lizhe Wang, Gregor von Laszewski, Marcel Kunze, Jie Tao, and Jai Dayal. "Provide Virtual Distributed Environments for Grid computing on Demand". In: Advances in Engineering Software 41.2 (Feb. 2010), pp. 213–219. ISSN: 0965-9978. DOI: 10.1016/j.advengsoft.2009.09.002. URL: .
- [226] Lizhe Wang, Gregor von Laszewski, Jie Tao, and Marcel Kunze. "Grid Virtualization Engine: Design, Implementation and Evaluation". In: *IEEE Systems Journal* 3.4 (2009), pp. 477–488. DOI: 10.1109/JSYST.2009. 2028589. URL: 2.
- [228] Lizhe Wang, Gregor von Laszewski, Andrew Younge, Xi He, Marcel Kunze, Jie Tao, and Cheng Fu. "Cloud Computing: a Perspective Study". In: New Generation Computing 28.2 (2010). Springer, Ohmsha, Ltd., pp. 137–146. DOI: 10.1007/s00354-008-0081-5. URL: 2.
- [229] Lizhe Wang, Laszewski, Gregor Von, Jie Tao, and Marcel Kunze. "Virtual Data System on Distributed Virtual Machines in Computational Grids". In: International Journal of Ad Hoc and Ubiquitous Computating 6.4 (Sept. 2010), pp. 194–204. ISSN: 1743-8225. DOI: 10.1504/IJAHUC.2010.035532. URL: \(\mathbb{Z}\).
- [230] Lizhe Wang, Jie Tao, Gregor von Laszewski, and Holger Marten. "Multicores in Cloud Computing: Research Challenges for Applications". In: JCP 5.6 (2010), pp. 958–964. DOI: 10.4304/jcp.5.6.958-964. URL: 2.
- [232] Yuxin Wang, Fransesco DeCarlo, Derrick Mancini, Ian McNulty, Brian Tieman, John Bresnahan, Ian Foster, Joseph Insley, Peter Lane, Gregor von Laszewski, Carl Kesselman, Mei-Hui Su, and Marcus Thiebaux. "A High-Throughput X-Ray Microtomography System at the Advanced Photon Source". In: Review of Scientific Instruments 72.4 (Apr. 2001), pp. 2062–2068. DOI: 10.1063/1.1355270. URL: .
- [234] Xiaoyu Yang, Lizhe Wang, and Gregor Laszewski. "Recent Research Advances in e-Science". In: Cluster Computing 12.4 (Dec. 2009), pp. 353–356. ISSN: 1386-7857. DOI: 10.1007/s10586-009-0104-0. URL: ..."

# ARTICLE IN PROCEEDINGS AND WORKSHOPS

- [1] Vibhatha Abeykoon, Gregor von Laszewski, Supun Kamburugamuve, Kannan Govindarajan, Pulasthi Wickramasinghe, Chathura Widanage, Niranda Perera, Ahmet Uyar, Gurhan Gunduz, and Selahattin Akkas. "Streaming Machine Learning Algorithms with Big Data Systems". In: 2019 IEEE International Conference on Big Data (Big Data), Los Angeles, CA, USA. Ed. by Chaitanya Baru, Jun Huan, Latifur Khan, Xiaohua Hu, Ronay Ak, Yuanyuan Tian, Roger S. Barga, Carlo Zaniolo, Kisung Lee, and Yanfang Fanny Ye. IEEE, Dec. 2019, pp. 5661–5666. Doi: 10.1109/BigData47090.2019.9006337. URL: .
- [2] N. Ahmed, R. Alo, C. Amelink, Y.Y. Baek, A. Chudhary, K. Collins, A. Esterline, E. Fox, G. Fox, A Hagberg, R. Kenyon, C. Kuhlman, J. Leskovec, D. Machi, M. Marathe, M. Meghanathan, Y. Miyazaki, J. Qiu, N. Ramakrishnan, S.S. Ravi, R. Rossi, R. Sosic, and G. von Laszewski. "net.science: A Cyberinfrastructure for Sustained Innovation in Network Science and Engineering". In: *Gateways Conference 2020* (Nov. 2020). URL:
- [4] Rashid Al-Ali, Kaizar Amin, von Laszewski, Gregor, Omer Rana, and David Walker. "An OGSA-based Quality of Service Framework". In: Proceedings of the Second International Workshop on Grid and Cooperative Computing (GCC2003). Ed. by Li, Minglu, Sun, Xian-He, Deng, Qianni, Ni, and Jun. Lecture Notes on Computer Science 3003. Shanghai, China: Springer Berlin / Heidelberg, Dec. 2004, pp. 529–540. ISBN: 978-3-540-21993-4. DOI: 10.1007/978-3-540-24680-0\_88. URL: \[ \overline{\sigma} \].
- [5] Rashid Al-Ali, Gregor von Laszewski, Kaizar Amin, Mihael Hategan, Omer Rana, David Walker, and Nester Zaluzec. "QoS Support for High-performance Scientific Grid Applications". In: Proceedings of the IEEE/ACM 4th International Symposium on Cluster Computing and the Grid (CCGrid 2004). Chicago, IL, USA: IEEE Computer Society Press, Apr. 2004, pp. 134–143. DOI: 10.1109/CCGrid.2004.1336559. URL: 2.
- [10] K. Amin, G. von Laszewski, M. Sosonkin, A.R. Mikler, and M. Hategan. "Ad hoc grid security infrastructure". In: The 6th IEEE/ACM International Workshop on Grid Computing. 2005, p. 8. DOI: 10.1109/GRID.2005. 1542726. URL: 2.
- [11] Kaizar Amin, Mihael Hategan, Gregor von Laszewski, estor J. NZaluzec, Shawn Hampton, and Albert Rossi. "GridAnt: A Client-Controllable Grid Workflow System". In: 37th Hawai'i International Conference on System Science. Vol. 7. The original paper is: von Laszewski, Gregor and Kaizar Amin and Shawn Hampton and Sandeep Nijsure. Technical report and Argonne National Laboratory and 31 July 2002. https://laszewski.github.io/papers/gridant.pdf. Big Island, HW: IEEE Computer Society, Los Alamitos, CA, USA, Jan. 2004. DOI: 10.1109/HICSS.2004.1265491. URL: .
- [12] Kaizar Amin, Mihael Hategan, Gregor von Laszewski, and Nestor J. Zaluzec. "Abstracting the Grid". In: Proceedings of the 12th Euromicro Conference on Parallel, Distributed and Network-Based Processing (PDP 2004). La Coruña, Spain, Feb. 2004, pp. 250–257. DOI: 10.1109/EMPDP.2004.1271452. URL:
- [15] Kaizar Amin, Gregor von Laszewski, and Armin R. Mikler. "Grid Computing for the Masses: An Overview". In: *Grid and Cooperative Computing (GCC2003)*. Shanghai, China, Dec. 2003, pp. 464–473. URL: \(\overline{\mathbf{C}}\).
- [17] Kaizar Amin, Gregor von Laszewski, and Armin R. Mikler. "Toward an Architecture for Ad Hoc Grids". In: 12th International Conference on Advanced Computing and Communications (ADCOM 2004). Ahmedabad Gujarat, India, Dec. 2004. URL: .
- [18] Kaizar Amin, Sandeep Nijsure, and Gregor von Laszewski. "Open Collaborative Grid Services Architecture (OCGSA)". In: Euroweb 2002 Conference and The Web and the GRID: from e-Science to e-Business. St Anne's College Oxford, UK: The British Computer Society, Dec. 2002, pp. 101–107. DOI: 10.14236/ewic/ew2002.14. URL: .
- [19] Sudeepth Ananad, Srikanath Yoginath, Gregor von Laszewski, and Beulah Alunkal. "Flow-based Multistage Co-allocation Service". In: *Proceedings of the International Conference on Communications in Computing*. Ed. by Braan J d'Auriol. Las Vegas: CSREA Press, June 2003, pp. 24–30. URL: .

- [21] Dan Chen, Lizhe Wang, Shuaiting Wang, Muzhou Xiong, Gregor von Laszewski, and Xiaoli Li. "Enabling Energy-Efficient Analysis of Massive Neural Signals Using GPGPU". In: Proceedings of the 2010 IEEE/ACM Int'L Conference on Green Computing, Communications and Int'L Conference on Cyber-Physical and Social Computing. GREENCOM-CPSCOM '10. Washington, DC, USA: IEEE Computer Society, 2010, pp. 147–154. ISBN: 978-0-7695-4331-4. DOI: 10.1109/GreenCom-CPSCom.2010.24.
- [27] Javier Diaz, Gregor von Laszewski, Fugang Wang, and Geoffrey C. Fox. "Abstract Image Management and Universal Image Registration for Cloud and HPC Infrastructures". In: *IEEE Cloud 2012*. Honolulu, June 2012. DOI: 10.1109/CLOUD.2012.94. URL: ☑.
- [28] Javier Diaz, Gregor von Laszewski, Fugang Wang, Andrew J Younge, and Geoffrey C. Fox. "FutureGrid Image Repository: A Generic Catalog and Storage System for Heterogeneous Virtual Machine Images". In: Third IEEE International Conference on Coud Computing Technology and Science (CloudCom2011). Athens, Greece, Dec. 2011, pp. 560–564. DOI: 10.1109/CloudCom.2011.85. URL: .
- [29] Javier Diaz, Andrew Younge, Gregor von Laszewski, Fugang Wang, and Geoffrey C. Fox. "Grappling cloud infrastructure services with a generic image repository". In: *CCA11: Cloud Computing and Its Applications*. Argonne National Laboratory, USA., Apr. 2011. URL: 2.
- [31] Jeremy Espenshade, Marcin Lukowiak, Shaaban Muhammad, and Gregor von Laszewski. "Flexible framework for commodity FPGA cluster computing". In: 2009 International Conference on Field-Programmable Technology. 2009, pp. 465–471. DOI: 10.1109/FPT.2009.5377649. URL: \(\mathbb{Z}\).
- [32] Jeremy Espenshade, Andrew Pangborn, James Cavenaugh, Gregor von Laszewski, and Doug Roberts. "Accelerating Partitional Algorithms for Flow Cytometry on GPUs". In: *The 7th IEEE International Symposium on Parallel and Distributed Processing with Applications (ISPA-09)*. Chengdu, Jiuzhai Valley, China: IEEE, Aug. 2009, pp. 226–233. DOI: 10.1109/ISPA.2009.29. URL: \(\overline{\mathbb{C}}\).
- [34] Steve Fitzgerald, Ian Foster, Carl Kesselman, Gregor von Laszewski, Warren Smith, and Steve Tuecke. "A Directory Service for Configuring High-Performance Distributed Computations". In: *Proceedings of the 6th IEEE Symposium on High-Performance Distributed Computing*. Portland, OR, Aug. 1997, pp. 365–375. DOI: 10.1109/HPDC.1997.626445. URL: 2.
- [44] Thomas R Furlani, Barry I. Schneider, Matthew D. Jones, John Towns, David L. Hart, Abani K. Patra, Robert L. DeLeon, Steven M. Gallo, Charng-Da Lu, Amin Ghadersohi, Ryan J. Gentner, Andrew E. Bruno, John R. Boisseau, Fugang Wang, and Gregor von Laszewski. "Data analytics driven cyberinfrastructure operations, planning and analysis using XDMoD". In: *Proceedings of the SC12 Conference*. 2012. URL: \(\mathbb{Z}\).
- [46] Thomas R. Furlani, Barry L. Schneider, Matthew D. Jones, John Towns, David L. Hart, Steven M. Gallo, Robert L. DeLeon, Charng-Da Lu, Amin Ghadersohi, Ryan J. Gentner, Abani K. Patra, Gregor von Laszewski, Fugang Wang, Palmer, Jeffrey T., Simakov, and Nikolay. "Using XDMoD to Facilitate XSEDE Operations, Planning and Analysis". In: Proceedings of the Conference on Extreme Science and Engineering Discovery Environment: Gateway to Discovery. XSEDE '13. San Diego, California: ACM, 2013, 46:1–46:8. ISBN: 978-1-4503-2170-9. DOI: 10.1145/2484762.2484763. URL: \[\mathbb{T}\].
- [49] Hans Michael Gerndt, Omer F. Rana, Gregor von Laszewski, and Wolfgang Ziegler. "09131 Abstracts Collection Service Level Agreements in Grids". In: Service Level Agreements in Grids. Ed. by Hans Michael Gerndt, Omer F. Rana, Gregor von Laszewski, and Wolfgang Ziegler. Dagstuhl Seminar Proceedings 09131. Dagstuhl, Germany: Schloss Dagstuhl Leibniz-Zentrum fuer Informatik, Germany, 2009. URL: 2.
- [53] Supun Kamburugamuve, Chathura Widanage, Niranda Perera, Vibhatha Abeykoon, Ahmet Uyar, Thejaka Amila Kanewala, Gregor von Laszewski, and Geoffrey Fox. HPTMT: Operator-Based Architecture for Scalable High-Performance Data-Intensive Frameworks. accepted for publication. 2021. arXiv: 2107.12807 [cs.DC]. URL: Z.
- [54] Ali Kaplan, Geoffrey C. Fox, and Gregor von Laszewski. "GridTorrent Framework: A High-performance Data Transfer and Data Sharing Framework for Scientific Computing". In: *International Workshop on Grid Computing Environments* 2007 (GCE07). 2007. URL: \(\mathbb{Z}\).
- [57] Tobias Kurze, Lizhe Wang, Gregor von Laszewski, Jie Tao, and Marcel Kunze. "Cyberaide onServe: Software as a Service on Production Grids". In: *Proceedings of the 39th International Conference on Parallel Processing (ICPP'10)*. San Diego, CA, USA, Sept. 2010, pp. 395–403. DOI: 10.1109/ICPP.2010.47. URL: .

- [70] Gregor Laszewski and Geoffrey C. Fox. "Automated sharded mongodb deployment and benchmarking for big data analysis". In: Chameleon Cloud User Meeting. University of Chicago. 2017. URL: .
- [74] Gregor von Laszewski. "A Parallel Genetic Algorithm for the Graph Partitioning Problem". In: Transputer Research and Applications 4 and Proceedings of the 4th Conference of the North-American Transputers Users Group. Ed. by David Fielding. Ithaca, NY: IOS Press, Amsterdam, Oct. 1990, pp. 164–172. URL: ..."
- [75] Gregor von Laszewski. "An Interactive Parallel Programming Environment Applied in Atmospheric Science". In: Making Its Mark and Proceedings of the 6th Workshop on the Use of Parallel Processors in Meteorology. Ed. by G.-R. Hoffman and N. Kreitz. European Centre for Medium Weather Forecast. Reading, UK: World Scientific, Dec. 1996, pp. 311–325. ISBN: 978-9810233501. URL: .
- [81] Gregor von Laszewski. "Grid Computing: Enabling a Vision for Collaborative Research". In: *The Sixth International Conference on Applied Parallel Computing*. Ed. by Fagerholm, Juha, Haataja, Juha, Järvinen, Jari, Lyly, Mikko, Røaback, Peter, Savolainen, and Ville. Vol. 2367. Lecture Notes in Computer Science. (*Invited Talk*). Espoo, Finland: Springer Berlin / Heidelberg, June 2002, pp. 37–52. ISBN: 978-3-540-43786-4. DOI: 10.1007/3-540-48051-X\_4. URL: ...
- [82] Gregor von Laszewski. "Intelligent Structural Operators for the k-way Graph Partitioning Problem". In: Proceedings of the 4th International Conference on Genetic Algorithms. (Plenary presentation). San Diego, CA: Morgan Kaufman, July 1991, pp. 45–52. ISBN: 1-55860-208-9. URL: 

  7.
- [87] Gregor von Laszewski. "Reusable Hybrid and Multi-Cloud Analytics Service Framework". In: 4th International Conference on Big data, IoT, and Cloud Computing (ICBICC 2022). Keynote. Chengdu, China: IASED, Dec. 2022. URL: \(\overline{\mathbf{Z}}\).
- [93] Gregor von Laszewski, Beulah Alunkal, Jarek Gawor, Ravi Madhuri, Pawel Plaszczak, and Xian-He Sun. "A File Transfer Component for Grids". In: *Proceedings of the International Conference on Parallel and Distributed Processing Techniques and Applications*. Ed. by H.R. Arabnia and Youngson Mun. Vol. 1. Las Vegas: CSREA Press, June 2003, pp. 24–30. URL: 2.
- [97] Gregor von Laszewski, Eric Blau, Michael Bletzinger, Jarek Gawor, Peter Lane, Stuart Martin, and Michael Russell. "Software, Component, and Service Deployment in Computational Grids". In: IFIP/ACM Working Conference on Component Deployment. Ed. by Judith Bishop. Vol. 2370. Lecture Notes in Computer Science. Berlin, Germany: Springer-Verlag, London, UK, June 2002, pp. 244–256. ISBN: 3-540-43847-5. URL: ...
- [102] Gregor von Laszewski, Javier Diaz, Fugang Wang, and Geoffrey C. Fox. "Comparison of Multiple Cloud Frameworks". In: *IEEE Cloud 2012*. Honolulu, HI, June 2012. DOI: 10.1109/CLOUD.2012.104. URL: \(\mathbb{Z}\).
- [104] Gregor von Laszewski and Leor E. Dilmanian. "e-Science Project and Experiment Management with Microsoft Project". In: *Grid Computing Environments Workshop and GCE'08*. Austin, TX: IEEE, Nov. 2008. DOI: 10.1109/GCE.2008.4738449. URL: 🗹.
- [109] Gregor von Laszewski and Ian Foster. "Grid Infrastructure to Support Science Portals for Large Scale Instruments". In: Proceedings of the Workshop Distributed Computing on the Web (DCW). (Invited Talk). University of Rostock and Germany, June 1999, pp. 1–16. URL: \(\overline{\mathbb{C}}\).
- [112] Gregor von Laszewski, Ian Foster, Jarek Gawor, Peter Lane, Nell Rehn, and Mike Russell. "Designing Gridbased Problem Solving Environments and Portals". In: *Proceedings of the 34th Annual Hawaii International Conference on System Sciences (HICSS-34)*. Vol. 9. HICSS '01. Maui, HW: IEEE Computer Society, Washington, DC, USA, Jan. 2001, pp. 9028—. ISBN: 0-7695-0981-9. URL: 27.
- [113] Gregor von Laszewski, Ian Foster, Jarek Gawor, Warren Smith, and Steve Tuecke. "CoG Kits: A Bridge between Commodity Distributed Computing and High-Performance Grids". In: *Proceedings of the ACM 2000 conference on Java Grande*. JAVA'00. San Francisco, CA, USA: ACM, New York, NY, USA, June 2000, pp. 97–106. ISBN: 1-58113-288-3. DOI: 10.1145/337449.337491. URL:
- [117] Gregor von Laszewski and Geoffrey C. Fox. "Teaching Big Data and Open Source Software on Chameleon Cloud". In: Chameleon Cloud User Meeting. University of Chicago. July 2017. URL: .
- [118] Gregor von Laszewski, Geoffrey C. Fox Fox, and FutureGrid Team. "Dynamic Provisioned Experiments in FutureGrid". In: 2nd IEEE International Conference on Cloud Computing Technology and Science (Cloud-Com2010). Indianapolis, IN, Dec. 2010. URL: .
- [119] Gregor von Laszewski, Geoffrey C. Fox, Fugang Wang, Andrew J. Younge, Gregory G. Archit Kulshrestha Pike, Warren Smith, Jens Voeckler, Renato J. Figueiredo, Jose Fortes, Kate Keahey, and Ewa Deelman. "Design of the FutureGrid Experiment Management Framework". In: *Proceedings of Gateway Computing Environments* 2010 (GCE2010) at SC10. New Orleans, LA: IEEE, Nov. 2010. DOI: 10.1109/GCE.2010.5676126.

- [122] Gregor von Laszewski, Jarek Gawor, Carlos J. Peña, and Ian Foster. "InfoGram: A Peer-to-Peer Information and Job Submission Service". In: *Proceedings of the 11th Symposium on High Performance Distributed Computing*. HPDC '02. Edinbrough, U.K.: IEEE Computer Society, Washington, DC, USA, July 2002, pp. 333–342. ISBN: 0-7695-1686-6. URL: .
- [124] Gregor von Laszewski, Christopher Grubb, Matthew Bone, and David Angulo. "Workflow Management Through Cobalt". In: *International Workshop on Grid Computing Environments 2006 in Conjunction with SC06*. 2006. URL: 

  .
- [125] Gregor von Laszewski, Christopher Grubbs, Matthew Bone, and David Angulo. "The Java CoG Kit Experiment Manager". In: *International Workshop on Grid Computing Environments 2006 in Conjunction with SC06*. 2006. URL: \(\overline{\mathcal{C}}\).

- [136] Gregor von Laszewski and Fugang Wang Lizhe Wang. "Simulation of Threat Management of Urban Water Distribution Systems with Grid Workflow". In: *The Second International Conference on Parallel, Distributed, Grid and Cloud Computing for Engineering.* Extended paper available. Ajaccio, Corsica, France, Apr. 2011. DOI: 10.1007/11758532\_54. URL: 2.
- [137] Gregor von Laszewski, Mühlenbein, and Heinz. "Partitioning a graph with a parallel genetic algorithm". In: 1st International Workshop on Parallel Problem Solving from Nature. Ed. by Schwefel, Hans-Paul, Männer, and Reinhard. Vol. 496. Lecture Notes in Computer Science. 1-3 Oct 1990. Dortmund, Germany: Springer Berlin / Heidelberg, Oct. 1991, pp. 165–169. ISBN: 978-3-540-54148-6. DOI: 10.1007/BFb0029748. URL: 2.
- [139] Gregor von Laszewski, Anthony Orlowski, Richard H. Otten, Reilly Markowitz, Sunny Gandh, Adam Chai, Geoffrey C. Fox, and Wo L. Chang. "Using GAS for Speedy Generation of HybridMulti-Cloud Auto Generated AI Services". In: IEEE COMPSAC 2021: Intelligent and Resilient Computing for a Collaborative World45th Anniversary Conference. All Virtual: IEEE, July 2021. URL: 2.
- [140] Gregor von Laszewski, Manish Parashar, Gaber A. Mohamed, and Geoffrey C Fox. "On the Parallelization of Blocked LU Factorization Algorithms on Distributed Memory Architectures". In: *Proceedings of the 1992 ACM/IEEE Conference on Supercomputing*. Vol. 92. Supercomputing '92. Minneapolis, Minnesota, USA: IEEE Computer Society Press, 1992, pp. 170–179. ISBN: 0818626305. URL: 2.
- [143] Gregor von Laszewski, Mike Seablom, Milo Makivic, Peter Lyster, and Sanya Ranka. "Design Issues for the Parallelization of an Optimal Interpolation Algorithm". In: Coming of Age and Proceedings of the 4th Workshop on the Use of Parallel Processing in Atmospheric Science. Ed. by G.-R. Hoffman and N. Kreitz. European Centre for Medium Weather Forecast. Reading, UK: World Scientific, Nov. 1994, pp. 290–302. URL:
- [144] Gregor von Laszewski, Kazuyuki Shudo, and Yoichi Muraoka. "Grid-based Asynchronous Migration of Execution Context in Java Virtual Machines". In: *Proceedings of EuroPar 2000*. Ed. by Arndt Bode, Thomas Ludwig, Wolfgang Karl, and Roland Wismüller. Vol. 1900. Lecture Notes in Computer Science. (*Invited Talk*). Munich, Germany: Springer, Aug. 2000, pp. 22–34. DOI: 10.1007/3-540-44520-X\_3. URL: .
- [145] Gregor von Laszewski and Mikhail Sosonkin. "A Grid Certificate Authority for Community and Ad-hoc Grids". In: 7th International Workshop on Java for Parallel and Distributed Computing and published in the Proceedings of the 19th International Parallel and Distributed Processing Symposium. Denver, CO: IEEE, Apr. 2005. DOI: 10.1109/IPDPS.2005.29. URL: .
- [147] Gregor von Laszewski, Mei-Hui Su, Joseph A. Insley, Ian Foster, John Bresnahan, Carl Kesselman, Marcus Thiebaux, Mark L. Rivers, Steve Wang, Brian Tieman, and Ian McNulty. "Real-Time Analysis, Visualization, and Steering of Microtomography Experiments at Photon Sources". In: Ninth SIAM Conference on Parallel Processing for Scientific Computing. San Antonio, TX, Mar. 1999. URL: 

  2.

- [150] Gregor von Laszewski, Fugang Wang, Geoffrey Fox, David L. Hart, Thomas R. Furlani, Robert L. DeLeon, and Steven M. Gallo. "Peer Comparison of XSEDE and NCAR Publication Data". In: 2015 IEEE International Conference on Cluster Computing and. Chicago, IL, USA. Chicago, IL, USA: IEEE, Sept. 8, 2015, pp. 531–532. ISBN: 978-1-4673-6598-7. DOI: 10.1109/CLUSTER.2015.98. URL: .
- [152] Gregor von Laszewski, Fugang Wang, Geoffrey C. Fox, David L. Hart, Thomas R. Furlani, Robert L. DeLeon, and Steven M. Gallo. "Peer Comparison of XSEDE Publication Data". In: XSEDE2015. Poster and Technical Report. Indiana University. St. Louis: IEEE, July 2015. URL: \(\mathbb{C}\).
- [154] Gregor von Laszewski, Fugang Wang, Hyungro Lee, Heng Chen, and Geoffrey C. Fox. "Accessing multiple clouds with cloudmesh". In: *Proceedings of the 2014 ACM international workshop on Software-defined ecosystems BigSystem '14*. ACM Press, 2014. DOI: 10.1145/2609441.2609638. URL: \(\overline{\mathcal{L}}\).
- [156] Gregor von Laszewski, Fugang Wang, Andrew Younge, Zhenhua Guo, and Marlon Pierce. "JavaScript Grid Abstractions". In: *Proceedings of the Grid Computing Environments 2007 at SC07*. Reno, NV, Nov. 2007. URL: \(\overline{\mathcal{Z}}\).
- [157] Gregor von Laszewski, Fugang Wang, Andrew Younge, Xi He, Zhenhua Guo, and Marlon Pierce. "Cyberaide JavaScript: A JavaScript Commodity Grid Kit". In: *GCE08 at SC'08*. Austin, TX: IEEE, Nov. 2008. DOI: 10.1109/GCE.2008.4738448. URL: 2.
- [158] Gregor von Laszewski and Lizhe Wang. "GreenIT Service Level Agreements". In: *Grids and Service-Oriented Architectures for Service Level Agreements*. Ed. by Wieder, Philipp, Yahyapour, Ramin, Ziegler, and Wolfgang. Banff, Canada: Springer US, Oct. 2009, pp. 77–88. ISBN: 978-1-4419-7320-7. URL: 2.
- [159] Gregor von Laszewski, Lizhe Wang, Fugang Wang, Geoffrey C Fox, and Mahinthakumar G Kumar. "Threat detection in an urban water distribution systems with simulations conducted in grids and clouds". In: Proc. The Second International Conference on Parallel and Distirbuted and Grid and cloud Computing for Engineering and Ajaccio and Corsica and France. Citeseer. 2011. URL: Z.
- [160] Gregor von Laszewski, Lizhe Wang, Andrew J. Younge, and Xi He. "Power-Aware Scheduling of Virtual Machines in DVFS-enabled Clusters". In: Proceedings of the 2009 IEEE International Conference on Cluster Computing (Cluster 2009). New Orleans: IEEE, Aug. 2009. DOI: 10.1109/GREENCOMP.2010.5598294. URL:
- [162] Gregor von Laszewski, Mary L. Westbrook, Craig Barnes, and Ian Foster. "Supercomputing Data Analysis with an Example on the APS CATs". In: *International Workshop on New Opportunities for Better User Group Software (NOBUGS)*. Argonne, IL. Dec. 1997.
- [164] Gregor von Laszewski, Branko Ruscic, Patrick Wagstrom, Sriram Krishnan, Kaizar Amin, Bittner Nijsure Sandeep, Reinhardt Pinzon, John C. Hewson, Melita L. Morton, Mike Minkoff, and Al Wagner. "A Grid Service-Based Active Thermochemical Table Framework". In: *Third International Workshop on Grid Computing (GRID '02)*. Vol. 2536. Lecture Notes in Computer Science. Baltimore, MD: Springer-Verlag, London, UK, Nov. 2002, pp. 25–38. ISBN: 3-540-00133-6. URL: 

  .
- [166] Hui Li, Geoffrey Fox, Gregor von Laszewski, and Arun Chauhan. "Co-processing SPMD computation on CPUs and GPUs cluster". In: 2013 IEEE International Conference on Cluster Computing (CLUSTER). 2013, pp. 1–10. DOI: 10.1109/CLUSTER.2013.6702632. URL: 2.
- [167] Kumar Mahinthakumar, Gregor von Laszewski, Ranji Ranjithan, Downey Brill, Jim Uber, Ken Harrison, Sarat Sreepathi, and Emily Zechman. "An Adaptive Cyberinfrastructure for Threat Management in Urban Water Distribution Systems". In: *Proceedings of the International Conference on Computational Science and ICCS 2006.* Vol. 3993. ICCS'06. Reading, UK: Springer-Verlag, 2006, pp. 401–408. ISBN: and 978-3-540-34383-7. DOI: 10.1007/11758532\_54. URL: .

- [168] Mark McCombe, Gregor von Laszewski, and Geoffrey C. Fox. "Automated sharded mongodb deployment and benchmarking for big data analysis". In: Chameleon Cloud User Meeting. University of Chicago. 2017. URL:
- [178] Carmen Pancerella, James D. Myers, Thomas C. Allison, Kaizar Amin, Sandra Bittner, Brett Didier, Michael Frenklach, William H. Green Jr., Yen-Ling Ho, John Hewson, Wendy Koegler, Carina Lansing, David Leahy, Michael Lee, Renata McCoy, Michael Minkoff, Sandeep Nijsure, Gregor von Laszewski, David Montoya, Reinhardt Pinzon, William Pitz, Larry Rahn, Branko Ruscic, Karen Schuchardt, Eric Stephan, Al Wagner, Baoshan Wang, Theresa Windus, Lili Xu, and Christine Yang. "Metadata in the Collaboratory for Multi-Scale Chemical Science". In: 2003 Dublin Core Conference: Supporting Communities of Discourse, Practice-Metadata Research and Applications. Seatle, WA, Sept. 2003. ISBN: 0974530301. URL: \(\overline{\mathbb{C}}\).
- [182] Marlon Pierce, S. Marru, Gopi Kandaswami Wenjun Wu, Gregor von Laszewski, Rion Dooley, Maytal Dahan, Nancy Wilkins-Diehr, Thomas, and Mary. "Open Grid Computing Environments". In: *TeraGrid 2009 Meeting*. Arlington, VA, June 2009. URL: 2.
- [183] Beth Plale, Peter Dinda, and Gregor von Laszewski. "Key Concepts and Services of a Grid Information Service". In: 15th International Conference on Parallel and Distributed Computing Systems (PDCS 2002). Louisville, KY, Sept. 2002, pp. 437–442. URL: \(\mathbb{Z}\).
- [191] Casey Rathbone, Lizhe Wang, Gregor von Laszewski, and Fugang Wang. "Cyberaide Creative: On-Demand Cyberinfrastructure Provision in Clouds". In: International Workshop on Grid Computing and Applications and and Technologies (GridCAT 2009) in conjunction with the 10th International Symposium on Pervasive Systems and Algorithms and Networks (I-SPAN 2009). Kaoshiung, Taiwan: IEEE, Dec. 2009, pp. 684–690. DOI: 10.1109/I-SPAN.2009.23. URL:
- [192] B. Ruscic, R. E. Pinzon, M. L. Morton, B. Wang, A. F. Wagner, Gregor von Laszewski, S. G. Nijsure, K. A. Amin, Sandra J. Bittner, and M. Minkoff. "Further Refinements of the Bond Dissociation Energy in Water and Hydroxyl Radical Using the Active Thermochemical Tables Approach". In: *Proceedings of the 58th International Symposium Molecular Sectrosctroscopy*. Columbus, OH, June 2003, p. 178. URL: .
- [195] Michael Russell, Gabrielle Allen, Ian Foster, Ed Seidel, Jason Novotny, John Shalf, Gregor von Laszewski, and Greg Daues. "The Astrophysics Simulation Collaboratory: A Science Portal Enabling Community Software Development". In: Proceedings of the 10th IEEE International Symposium on High Performance Distributed Computing. San Francisco, CA, Aug. 2001, pp. 207–215. DOI: 10.1109/HPDC.2001.945190. URL:
- [202] Sarat Sreepathi, Kumar Mahinthakumar, Emily Zechman, Ranji Ranjithan, Downey Brill, Xiaosong Ma, and Gregor von Laszewski. "Cyberinfrastructure for Contamination Source Characterization in Water Distribution Systems". In: Computational Science ICCS 2007. Ed. by Shi, Yong, van Albada, Geert Dick, Dongarra, Jack, Sloot, and Peter M. A. Berlin, Heidelberg: Springer Berlin Heidelberg, 2007, pp. 1058–1065. URL:
- [205] Paul Stelling, Ian Foster, Carl Kesselman, Craig Lee, and Gregor von Laszewski. "A Fault Detection Service for Wide Area Distributed Computations". In: Proceedings of the 7th IEEE International Symposium on High Performance Distributed Computing. Chicago, IL, July 1998, pp. 268–278. DOI: 10.1109/HPDC.1998.709981. URL: .
- [206] Shawn M. Strande, Haisong Cai, Trevor Cooper, Karen Flammer, Christopher Irving, Gregor von Laszewski, Amit Majumdar, Dmistry Mishin, Philip Papadopoulos, Wayne Pfeiffer, Robert S. Sinkovits, Mahidhar Tatineni, Rick Wagner, Fugang Wang, Nancy Wilkins-Diehr, Nicole Wolter, and Michael L. Norman. "Comet: Tales from the Long Tail: Two Years In and 10000 Users Later". In: Proceedings of the Practice and Experience in Advanced Research Computing 2017 on Sustainability, Success and Impact. PEARC17. New Orleans, LA, USA: Association for Computing Machinery, 2017, p. 38. ISBN: 9781450352727. DOI: 10.1145/3093338.3093383. URL:
- [210] Sudharshan Vazhkudai and Gregor von Laszewski. "A Greedy Grid The Grid Economic Engine Directive". In:

  Proceedings of the 15th International Parallel and Distributed Processing Symposium and International Workshop on Internet Computing and E-Commerce (ICEC'01). IPDPS '01. http://dl.acm.org/citation.cfm?id=645609.662793.

  San Francisco, CA, USA: IEEE Computer Society, Washington, DC, USA, Apr. 2001, pp. 1806–1815. ISBN:
  0-7695-0990-8. DOI: 10.1109/IPDPS.2001.925170. URL: 

  ...

- [212] Snigdha Verma, Manish Parashar, Jarek Gawor, and Gregor von Laszewski. "Design and Implementation of a CORBA Commodity Grid Kit". In: *Proceedings of the Second International Workshop on Grid Computing (GRID'01)*. Ed. by Craig A. Lee. Vol. 2241. Lecture Notes in Computer Science. Denver: Springer-Verlag, London, UK, Nov. 2001, pp. 2–12. ISBN: 3-540-42949-2. URL: 2.
- [214] Rick Wagner, Philip Papadopoulos, Dmitry Mishin, Trevor Cooper, Mahidhar Tatineti, Gregor von Laszewski, Fugang Wang, and Geoffrey C. Fox. "User Managed Virtual Clusters in Comet". In: *Proceedings of the XSEDE16 Conference on Diversity, Big Data, and Science at Scale*. Miami, FL, USA: ACM, New York, NY, July 2016, 24:1–24:8. ISBN: 978-1-4503-4755-6. DOI: 10.1145/2949550.2949555. URL: \(\overline{\mathcal{Z}}\).
- [215] Fugang Wang, Gregor von Laszewski, Geoffrey C. Fox, Thomas R. Furlani, Robert L. DeLeon, and Steven M. Gallo. "Towards a Scientific Impact Measuring Framework for Large Computing Facilities a Case Study on XSEDE". In: Proceedings of the 2014 Annual Conference on Extreme Science and Engineering Discovery Environment. XSEDE '14. Atlanta, GA, USA: ACM, 2014, 25:1–25:8. ISBN: 978-1-4503-2893-7. DOI: 10.1145/2616498.2616507. URL: \[ \subseteq \subseteq \].
- [216] Fugang Wang, Gregor von Laszewski, Timothy Whitson, Geoffrey C Fox, Thomas R Furlani, Robert L DeLeon, and Steven M Gallo. "Evaluating the Scientific Impact of XSEDE". In: *Proceedings of the Practice and Experience on Advanced Research Computing*. ACM. 2018, p. 10. DOI: 10.1145/3219104.3219124. URL: ...
- [220] Lizhe Wang, Gregor von Laszewski, Jai Dayal, Xi He, and Thomas R. Furlani. "Thermal Aware Workload Scheduling with Backfilling for Green Data Centers". In: *Proceedings of the 28th IEEE International Performance Computing and Communications Conference (IPCCC)*. Arizona, U.S., Dec. 2009, pp. 289–296. DOI: 10.1109/PCCC.2009.5403821.
- [221] Lizhe Wang, Gregor von Laszewski, Jai Dayal, Xi He, Andrew J. Younge, and Thomas R. Furlani. "Towards Thermal Aware Workload Scheduling in a Data Center". In: *Proceedings of the 10th International Symposium on Pervasive Systems, Algorithms and Networks (ISPAN2009)*. ISPAN '09. Kao-Hsiung, Taiwan: IEEE Computer Society, Washington, DC, USA, Dec. 2009, pp. 116–122. ISBN: 978-0-7695-3908-9. DOI: 10.1109/I-SPAN.2009.22.
- [222] Lizhe Wang, Gregor von Laszewski, Jay Dayal, and Fugang Wang. "Towards Energy Aware Scheduling for Precedence Constrained Parallel Tasks in a Cluster with DVFS". In: *Proceedings of the 10th IEEE/ACM International Conference on Cluster and Cloud and Grid Computing*. CCGRID '10. Melbourne, Victoria, Australia: IEEE Computer Society, Washington, DC, USA, May 2010, pp. 368–377. ISBN: 978-0-7695-4039-9. DOI: 10.1109/CCGRID.2010.19. URL: .
- [227] Lizhe Wang, Gregor von Laszewski, Jie Tao, and Marcel Kunze. "Schedule Distributed Virtual Machines in a Service Oriented Environment". In: Proceedings of the 24th IEEE International Conference on Advanced Information Networking and Applications (AINA'10). Perth, Australia, Apr. 2010, pp. 230–236. DOI: 10.1109/AINA.2010.47. URL: 2.
- [231] Yuxin Wang, Francesco De Carlo, Ian Foster, Joseph Insley, Carl Kesselman, Peter Lane, Gregor von Laszewski, Derrick C. Mancini, Ian McNulty, Mei-Hui Su, and Brian Tieman. "Quasi-Realtime X-Ray Microtomography System at the Advanced Photon Source". In: *Proceedings of SPIE99*. Vol. 3772. Orlando, FL, Apr. 1999, pp. 318–327. DOI: 10.1117/12.363735. URL: 2.
- [233] X.-H. Sun X. He and Gregor von Laszewski. "A QoS Guided Scheduling Algorithm for the Computational Grid". In: *Proceedings of the International Workshop on Grid and Cooperative Computing (GCC02)*. Hainan, Chian, Dec. 2002. URL: \(\overline{\mathbb{Z}}\).
- [236] Andrew J. Younge, Robert Henschel, James T. Brown, Gregor von Laszewski, Judy Qiu, and Geoffrey C. Fox. "Analysis of Virtualization Technologies for High Performance Computing Environments". In: *Proceedings of the 4th International Conference on Cloud Computing (CLOUD 2011)*. Washington, DC: IEEE, July 2011, pp. 9–16. DOI: 10.1109/CLOUD.2011.29. URL: 2.
- [237] Andrew J. Younge, Gregor von Laszewski, Lizhe Wang, Sonia Lopez-Alarcon, and Warren Carithers. "Efficient resource management for Cloud computing environments". In: *Proceedings of the International Conference on Green Computing*. GREENCOMP '10. Chicago, IL: IEEE Computer Society, Washington, DC, USA, 2010, pp. 357–364. ISBN: 978-1-4244-7612-1. DOI: 10.1109/GREENCOMP.2010.5598294. URL:
- [238] Yong Zhao, Hategan, M., Clifford, B., Foster, I., von Laszewski, G., Nefedova, V., Raicu, I., Stef-Praun, T., Wilde, and M. "Swift: Fast, Reliable and Loosely Coupled Parallel Computation". In: 2007 IEEE Congress on Services. 2007, pp. 199–206. DOI: 10.1109/SERVICES.2007.63.

### **THESIS**

[73] Gregor von Laszewski. "A Parallel Data Assimilation System and Its Implications on a Metacomputing Environment". AAI9737816. PhD thesis. USA, 1996. ISBN: 0591478021. URL: .

### SELECTED REFEREED POSTERS AT MAJOR CONFERENCES

- [8] Thomas C. Allison, Sandra Bittner, Brett Didier, Michael Frenklach, William H. Green Jr., Darrian Hale, Mihael F. Hategan-Marandiuc, Carina Lansing, Gregor Laszewski, David Leahy, James D. Myers, Michael Minkoff, David Montoya, Luwi Oluwole, Carmen Pancerella, Reinhardt Pinzon, William Pitz, Larry Rahn, Jane Riese, Branko Ruscic, Karen Schuchardt, Albert F. Wagner, Theresa Windus, Christine Yang, and Ginger Young. Collaboratory for Multi-scale Chemical Science. DOI SciDAC PI Meeting (Poster), Charleston, SC. Mar. 2004.
- [39] G. C. Fox, A. J. Younge, Gregor von Laszewski, A. Kulshrestha, and F. Wang. *Rain: Dynamically Provisioning Clouds within Future Grid.* SC10 International Conference for High Performance Computing. Nov. 2010.
- [40] G.C. Fox and von Laszewski Gregor. "AI for Science and Engineering". In: NSF Meeting. Poster. Oct. 2023. URL: \(\mathbb{Z}\).
- [133] Gregor von Laszewski and Keith Jackson. Commodity Grid Kits. DOI SciDAC PI Meeting (Poster), Charleston, SC. Mar. 2004. URL: 🗷.
- [169] Donald McMullen, Randall Bramley, John C. Huffman, John Bollinger, Edward Dambik amd Kia Huffman, and Gregor vonLaszewski. *The Xport collaboratory for high-brilliance X-ray crystallography*. SC Poster. 2000. URL: Z.
- [198] Arup Sakar, Niranda Perera, Gregor von Laszewski, Mills Staylor, and Geoffrey C. Fox. "Heterogeneous DataPipelines for Scientific Computing". In: 2023 OLCF User Meeting. Poster. Oak Ridge National Laboratory, Knoxville, TN, Oct. 2023. URL: .
- [209] M. P. Thomas, L. Cinquini J. Burruss, G. C. Fox, D. Gannon, L. Gilbert, Gregor von Laszewski, K. Jackson, D. Middleton, R. Moore, and et al. *Grid Portal Architectures for Scientific Applications*. DOI SciDAC Meeting 2005 (Poster), San Francisco, CA. June 2005. URL: ...

#### REPORTS

- [22] Varshitha Chennamsetti, Gregor von Laszewski, Ruochen Gu, Laiba Mehnaz, Juri Papay, Samuel Jackson, Jeyan Thiyagalingam, Sergey V. Samsonau, and Geoffrey C. Fox. *MLCommons Cloud Masking Benchmark with Early Stopping*. 2024. arXiv: 2401.08636 [cs.DC]. URL: ...
- [25] Frederic Desprez, Geoffrey Fox, Kate Keahey Emmanuel Jeannot, Michael Kozuch, David Margery, Pierre Neyron, Lucas Nussbaum, Christian Perez, Olivier Richard, Warren Smith, Gregor von Laszewski, and Jens Voeckler. Supporting Experimental Computer Science. Report. Argonne: Argonne National Laboratory, Mar. 2012. URL: 

  7.
- [26] Javier Diaz, Gregor von Laszewski, Fugang Wang, and Geoffrey C Fox. Towards cloud deployments using futuregrid. Tech. rep. 2011. URL: 🗷.
- [35] Jacques Fleischer, Gregor von Laszewski, Carlos Theran, and Yohn Jairo Parra Bautista. *Time Series Analysis of Blockchain-Based Cryptocurrency Price Changes*. 2022. DOI: 10.48550/ARXIV.2202.13874. URL: .
- [42] Geoffrey C. Fox, Gregor von Laszewski, Fugang Wang, and Saumyadipta Pyne. "AICov: An Integrative Deep Learning Framework for COVID-19 Forecasting with Population Covariates". In: CoRR abs/2010.03757 (2020). arXiv: 2010.03757. URL: .
- [47] Dennis Gannon, Geoffrey Fox, Marlon Pierce, Beth Plale, G von Laszewski, Charles Severance, Joseph Hardin, Jay Alameda, Mary Thomas, and John Boisseau. *Grid portals: a scientist's access point for grid services*. Tech. rep. 2003.
- [56] Sriram Krishnan, Patrick Wagstrom, and Gregor von Laszewski. "GSFL: A workflow framework for grid services". In: *Preprint ANL/MCS-P980-0802 and Argonne National Laboratory* 9700 (2002), pp. 25–31. URL:
- [71] Gregor von Laszewski. A collection of graph partitioning algorithms. Tech. rep. Citeseer, 1993. URL: 2.

- [84] Gregor von Laszewski. Java CoG Kit Workflow Concepts for Scientific Experiments. Tech. rep. Argonne National Laboratory, 2003. URL: 🗷.
- [90] Gregor von Laszewski. The Parallelization of a Weather Prediction Model. Tech. rep. Technical Report SCCS 533 and Northeast Parallel Architectures Center at Syracuse University, 1993. URL: 2.
- [92] Gregor von Laszewski, Badi Abdul-Wahid, Fugang Wang, Lee, Hyungro, Fox, Geoffrey C, Chang, and Wo. Cloudmesh in support of the NIST Big Data Architecture Framework. Tech. rep. Indiana University, Bloomingtion, IN 47408, USA, 2017.
- [98] Gregor von Laszewski, Wo Chang, Russell Reinsch, Olivera Kotevska, Ali Karimi, Abdul Rahman Sattar, Garry Mazzaferro, and Geoffrey C. Fox. Whitepaper on Reusable Hybrid and Multi-Cloud Analytics Service Framework. 2023. arXiv: 2310.17013 [cs.DC]. URL: 

  7.
- [99] Gregor von Laszewski, Wo Chang, Russell Reinsch, Olivera Kotevska, Ali Karimi, Abdul Rahman Sattar, Garry Mazzaferro, and Geoffrey C. Fox. "Whitepaper on Reusable Hybrid and Multi-Cloud Analytics Service Framework". In: arxiv. submitted. Oct. 2023. URL: 2.
- [105] Gregor von Laszewski, J. P. Fleischer, and Geoffrey C. Fox. Hybrid Reusable Computational Analytics Workflow Management with Cloudmesh. Nov. 2022. DOI: 10.48550/ARXIV.2210.16941. URL: 2.
- [106] Gregor von Laszewski, J.P. Fleischer, and Geoffrey C. Fox. Hybrid Reusable Computational Analytics Workflow Management with Cloudmesh. 12 pages. 2023. arXiv: 2210.16941 [cs.DC]. URL: .
- [110] Gregor von Laszewski and Ian Foster. "Usage of LDAP in Globus". In: Mathematics and Computer Science Division and Argonne National Laboratory (1998). URL: \(\overline{\mathcal{L}}\).
- [126] Gregor von Laszewski and Ruochen Gu. An Overview of MLCommons Cloud Mask Benchmark: Related Research and Data. 2023. arXiv: 2312.04799 [cs.DC]. URL: 2.
- [130] Gregor von Laszewski and Mike Hategan. Grid Workflow An Integrated Approach. 2005. URL: 🗹.
- [131] Gregor von Laszewski and Mike Hategan. Java cog kit karajan/gridant workflow guide. Tech. rep. Technical Report, Argonne National Laboratory, Argonne, IL, USA, 2005. URL: 2.
- [138] Gregor von Laszewski, Anthony Orlowski, Richard Otten, Adam Chai, Reilly Markowitz, Sunny Gandhi, and Caleb Wilson. *Towards Automatically Generated Hybrid Multi-Cloud AI Services*. UROC report. Indiana University, 2020. URL: 2.
- [149] Gregor von Laszewski and Fugang Wang. Scientific Impact Report Repository. GitHub. Nov. 2021. URL: 🗹.
- [165] Hyungro Lee, Gregor von Laszewski, Fugang Wang, and Geoffrey C Fox. Towards understanding cloud usage through resource allocation analysis on xsede. Tech. rep. Bloomington, IN: Indiana University, Mar. 2014. URL:
- [170] Marco Minutoli, Reece Neff, Naw Sattar, Hao Lu, John Feo, Henning Mortveit, Anil Vullikanti, Dawen Xie, Amanda Wilson, Gregor von Laszewski, Parantapa Bhattacharya, Ananth Kalyanaraman, Michela Becchi, Madhav Marathe, and Mahantesh Halappanavar. Ripples: Exascale-Enabled Influence Maximization on Massive Social Networks with Implications to Pandemic Planning. Tech. rep. Charlottesville, VA, USA: University of Virginia, Nov. 2023.
- [172] A. Gaber Mohamed, Geoffrey C. Fox, Gregor von Laszewski, Manish Parashar, Tomasz Haupt, Kim Mills, Ying-Hua Lu, Neng-Tan Lin, and Nang-kang Yeh. Applications Benchmark Set for Fortran-D and High Performance Fortran. Tech. rep. CRPC-TR92260. Center for Research on Parallel Computation, Rice University, P.O. Box 1892, Houston, TX 77251-1892, June 1992. URL: ...
- [181] Niranda Perera, Arup Kumar Sarker, Mills Staylor, Gregor von Laszewski, Kaiying Shan, Supun Kamburugamuve, Chathura Widanage, Vibhatha Abeykoon, Thejaka Amila Kanewela, and Geoffrey Fox. *In-depth Analysis On Parallel Processing Patterns for High-Performance Dataframes*. 2023. arXiv: 2307.01394 [cs.DC].
- [184] Eric Puryear, David Angulo, Kevin Drew, Gregor von Laszewski, and Alex Schilling. The Enhanced Mass Spectrometry I/O Project. Tech. rep. DePaul University, 2006. URL: 2.
- [185] Eric Puryear, David Angulo, Kevin Drew, Alex Schilling, and Gregor von Laszewski. *Developing a Distributed and Scalable Foundation for Mass Spectrometry Data*. Tech. rep. DePaul University CTI Tech Report, 2005, pp. 1–7. URL: .
- [186] Eric Puryear, David Angulo, Alex Schilling, Kevin Drew, and Gregor von Laszewski. *Comparing mass spectra*. Tech. rep. DePaul University CTI Tech Report, 2006, pp. 1–7.
- [187] Jennifer van Puymbrouck, David Angulo, Drew, Hollenbeck Kevin, Ann Lee, Dominic Battre, Alex Schilling, David Jabon, and Gregor von Laszewski. "A Batch Import Module for an Empirically Derived Mass Spectral Database". In: DePaul University CTI Tech Report (2006). URL: \(\overline{\mathbf{C}}\).

- [188] Larry A. Rahn, Carmen M. Pancerella, Michael Chieh-Chuin Chen, Wendy S K Doyle, Jan A. Nobel, Tom Allison, Jared Chase, Brett Didier, Zoran M. Djurisic, Todd Elsethagen, Michael Frenklach, William H. Green, Vidhya Gurumoorthi, Deepti Kodeboyina, David Leahy, Jun Li, David Montoya, James D. Myers, Oluwayemisi O. Oluwole, William Pitz, Reinhardt Pinzon, Branko Ruscic, Karen Schuchardt, Jing Song, Lisong Sun, Gregor von Laszewski, Al Wagner, and Lili Xu. Collaboratory for Multi-scale Chemical Science (CMCS): Project Final Report. Tech. rep. July 2006. URL: .
- [190] Omer F. Rana, Ali Shaikhali1, and Gregor von Laszewski. Creating and Managing Grid Services. Technical Report. Argonne, IL: Argonne National Lab, Aug. 2000. URL: 🗹.
- [197] Lorander Saggu, Saliya Ekanayake, Yang Ruan, Gregor von Laszewski, and Geoffrey C. Fox. Genomic Sequence Analysis Automation. Tech. rep. Poster. Indiana University, July 2014. URL: 2.
- [199] Arup Kumar Sarker, Aymen Alsaadi, Niranda Perera, Mills Staylor, Gregor von Laszewski, Matteo Turilli, Ozgur Ozan Kilic, Mikhail Titov, Andre Merzky, Shantenu Jha, and Geoffrey Fox. Design and Implementation of an Analysis Pipeline for Heterogeneous Data. 2024. arXiv: 2403.15721 [cs.DC]. URL: 2.
- [211] Snigdha Verma, Jarek Gawor, Gregor von Laszewski, and Manish Parashar. Status of a Bridge between CORBA and Globus. Tech. rep. Argonne National Laboratry, 2001. URL: .
- [224] Lizhe Wang, Gregor von Laszewski, Marcel Kunze, and Jie Tao. A cumulus project: design and implementation. Report. Rochester Institute of Technology, 2008. URL: 🗷.

#### SELECTED INVITED TALKS AND PRESENTATIONS

- 1. Gregor von Laszewski, Reusable Hybrid and Multi-Cloud Analytics Service Framework, 4th International Conference on Big data, IoT, and Cloud Computing (ICBICC 2022)
- 2. Gregor von Laszewski, Research projects in Data Science, FAMU, Florida, Summer 2021.
- 3. Data Analytics with the Big Data NIST Reference Architecture. Gregor von Laszewski, IndyPy − PyData Indy 2019. Video URL: 🗷
- 5. Cloudmesh Virtual Cluster Management for Data-Intensive Applications, Gregor von Laszewski, DePy 2015 1st Annual Conference on Python applications in Data Analysis, Machine Learning, and Web, Chicago, Ill, May 29-30 2015. Video
- 6. Cloudmesh, HPCS2014 Halifax, Nova Scotia, CA, June 25-27, 2014
- 7. FutureGrid, OpenCirrus Meeting, Oct 2011, Georgia Tech
- 8. Panelist: Opportunities of Services Business in Cloud Age at Cloud2011, 7/8/2011
- 9. Green Computing, IUPUI, Indianapolis, IU Energy Conference, Aug 6-7, 2009.
- 10. Towards GreenIT, Indiana University, July, 2009.
- 11. Grids for Synchrotrons, ESRF Grenoble, , Dec 8, 2008.
- 12. Cyberinfrastucture Research. 2008, University of Albany
- 13. Scientific Workflows. 2008, Research Computing and NYSGrid via Access Grid, Rochester Institute of Technology
- 14. Cyberinfrastucture Workflows. 2008, CCRG Rochester Institute of Technology
- 15. Cyberinfrastucture Research. 2007, IBM Raleigh

- 16. Grid Workflows, 2007, Georgia Tech
- 17. Grid Workflows, 2007, University of Buffalo
- 18. CoG Kits: an opportunity for Collaboration, October 2006, Southern Illinois University
- 19. The use of XML in Grids, September 2006, Loyola University Evolution of Grid Computing with education experiences, SC07 Educational Planning Workshop, July 27-30, Argonne National Laboratory.
- 20. Active Thermochemical Table Infrastructure, CMCS Workshop, Urbana, IL, June 7-8, 2006.
- 21. Scientific Process Management, NIH, Washington DC, Feb. 3, 2006.
- 22. April 2005, Georgia Tech, Java CoG Kit
- 23. Grid Workflow with the Java CoG Kit 4. TACC, Austin, TX, 13 May 2005.
- 24. Grid Programming Patterns with the Java CoG Kit 4. GlobusWorld, Boston, Massachusetts, 7-11 February 2005.
- 25. Workflow support in the Java CoG Kit 4. Boston, Massachusetts, 7-11 February 2005.
- 26. Keynote: CoG Kit Abstractions. Workshop on Grid Application Programming Interfaces in conjunction with GGF12, Brussels, Belgium, 20 September 2004. (Keynote).
- 27. Java cog kit workflow abstractions. GGF Workshop Management Working Group, GGF11 The Eleventh Global Grid Forum, Honolulu, Hawaii USA, 6-10 June 2004. (Presentation).
- 28. GridAnt. GlobusWorld, San Francisco, 20 January 2004.
- 29. Grid computing. Illinois Institute of Technology, October 2004.
- 30. The State of Grid Computing in the U.S.A. In Grid Symposium of the Ministry of Science, Germany. Wissenschaftszentrum, Bonn, 28 November 2002. (Invited Talk).
- 31. The Science of Collaboratories Workshop Series The State of Collaboratory Tools and Technologies, Sponsored by the University of Michigan and the National Science Foundation. Ann Arbor, Michigan, 19-20 July 2001. (Invited Participant).
- 32. HPC Consortium Meeting, GridSIG, Sun Microsystems. Status of the Globus Project, Heidelberg, Germany, 19-20 June 2001. (Invited Talk).
- 33. The Use of Java in High Performance Computing. In EuroPar 2000, Munich, Germany, 30 August 2000. (Panelist).
- 34. Application Programming in the Grid. Europar 2000, Munich, Germany, August 28 September 1 2000.
- 35. Unicore and Globus. Unicore Meeting, Juelich, Germany, Sept 2000.
- 36. Building Portals with Java. Computing Portals Workshop, San Francisco, CA, 78 December 2000.
- 37. Gregor von Laszeswki. Using Java in Grids. In High Performance Computing and Java, number 284 in Seminar 341, Dagstuhl, Germany, 2025 August 2000. International Conference and Research Center for Computer Science. (Invited Talk)
- 38. Building Portals with CoG. Science Portals Workshop, Urbana, IL, 22-23 September 1999.
- 39. Information Services for the Common Component Architecture. Knoxville, TN, July 1999.
- 40. Application programming in the Grid. Aachen, Germany, September 1999.
- 41. Studying and Working in the U.S.A. Aachen, Germany, September 1999.
- 42. A Grid-based Computing Portal. Alliance Chemistry Portals Meeting, Urbana, IL, August 15 2000.
- 43. Using Globus and Java on Clusters and Grids. In International Workshop on Global and Cluster
- 44. Computing (WGCC2000), Tsukuba, Japan, 15-17 March 2000. (Invited Talk).

- 45. Panel on Commodity Technologies and Grid, ISCOPE 99, December 1999. (Panelist).
- 46. The Globus Grid Infrastructure. Julich, Germany, September 1999. (Invited Talk).
- 47. Dattor, Gridforum, and Computing Portals. Julich, Germany, September 1999. (Invited Talk).
- 48. Recent Development in the Globus Project. In 3rd HLRS Metacomputing Workshop, Stuttgart Germany, 6-7 June 2000. (Invited Talk).
- 49. JavaGrande Meeting at Supercomputing. Orlando, FL, November 1998. (Panelist).
- 50. Recent Development in the Globus Project. In 2nd Symposium on Multidisciplinary Environments And Applications, MAPINT 98/MDICE Workshop, Dayton, Ohio USA, August 1998. Aeronautical Systems Center (ASC), Major Shared Resource Center (MSRC), and Wright Patterson AFB. (Invited Talk).
- 51. Reusable Components of Globus-J, October 1998. Workshop of Desktop Access to Remote Resources,
- 52. JavaGrande Forum and Argonne National Laboratory, Chicago, IL.
- 53. SC98 BoF: Java Grande. Z, Orlando, FL, November 1998. (Panelist).
- 54. Gregor von Laszewski, Mary L. Westbrook, Craig Barnes, and Ian Foster. Supercomputing Data Analysis with an Example on the APS CATs. In International Workshop on New Opportunities for Better User Group Software (NOBUGS). Argonne, IL, December 1997.
- 55. The Globus Project: A Metacomputing Toolkit for Multidisciplinary Applications. In 1st Symposiumon Multidisciplinary Environments and Applications, MAPINT '97/MDICE Workshop, Dayton, Ohio USA, August 1997. Aeronautical Systems Center (ASC), Major Shared Resource Center (MSRC), and Wright Patterson AFB. (Invited Talk).
- 56. Using the Globus Metacomputing Toolkit for Seamless Computing. Supercomputing Center at ECMWF, Reading, UK, December 1997. (Invited Talk).
- 57. Introduction to Java. Illinois Institute of Technology, May 1997.
- 58. Introduction to Genetic Algorithms. Argonne National Laboratory, Summer Program, July 1998.
- 59. Parallel Optimal Interpolation. NASA Goddard Space Flight Center, June 1996.

# SELECTED SEMINARS AND COLLOQUIA

- 1. Tutorial: FutureGrid TG11, 2011
- 2. Overview of FutureGrid, PTI, 2010.
- 3. JavaScript CoG Kit, Teragrid 2009.
- 4. Building Commodity Grids. In CHEF Workshop. University of Michigan, Ann Arbor, 1415 October 2002.
- 5. Grid Computing: A Collaborative Approach. In Collaborative and Distance Learning Technologies (CDLT) Day at U.S. Army Engineering Research and Development Center (ERDC), Vicksburg, MS, 29 October 2002. (Invited Talk).
- Gregor von Laszewski, Nestor J. Zaluzec, and Xian He Sun. Computationally Mediated Experimental Science. The Illinois Institute of Technology Inter-professional Projects Program, IPRO305, Fall 2002. A project-oriented class.
- 7. Gregor von Laszewski and Xian He Sun. CS595: Grid and Ubiquitous Computing. Illinois Institute of Technology, Chicago, IL, Spring 2002. Course material, teaching, and project supervision.
- 8. Gregor von Laszewski. Java CoG Kit Tutorial at the Joint ACM Java Grande ISCOPE 2002 Conference. Seattle, Washington, 3 November 2002.
- 9. Gregor von Laszewski. The Importance of CoG Kits for Grid Users. Globus Retreat, Chicago, IL, 2001.

- 10. Gregor von Laszewski. The Java Cog Kit. Globus Retreat, Chicago, IL, 2001.
- 11. Global Grid Forum. Introduction to the Global Grid Forum Information Services Working Group, Amsterdam, The Netherlands, 2 March 2001.
- 12. IPDPS 2001. Grid Computing, Globus, and Java Interface to the Grid, San Francisco, CA, 27 April 2001. Z.
- 13. Vladimir Getov, Jose E. Moreira, Roldan Pozo, and Gregor von Laszewski. Java for High-Performance Computing. In Java One Conference and Java Grande Conference, San Fransisco, CA, 2 June 2001.
- 14. International Symposium in High Performance and Distributed Computing. High Performance and Grid Programming in Java and Python, San Francisco, CA, 6 August 2001. Gregor von Laszewski and Steve Fitzgerald. The Globus Grid Programming Toolkit. Tutorial at SC99, Portland, OR, 1319 November 1999.
- 15. Gregor von Laszewski and Steven Fitzgerald. The Globus Grid Programming Toolkit. The 7th IEEE Symposium on High-Performance Distributed Computing, July 1998.
- 16. Introduction to the Metacomputing Toolkit. High-Performance Computing Tutorial, The National Center for Supercomputing Applications, University of Illinois at Urbana Champaign, April 1998.
- 17. Gregor von Laszewski, Mary L. Westbrook, Craig Barnes, and Ian Foster. Supercomputing Data Analysis with an Example on the APS CATs. In International Workshop on New Opportunities for Better User Group Software (NOBUGS). Argonne, IL, December 1997.
- 18. Using LDAP in the real world. De Paul University, Chicago, IL, January 2000.
- 19. Gregor von Laszewski. The Java CoG Kit. Globus Retreat, Pittsburgh, PA, July 30 August 1 2000

## SELECTED COMMUNITY ACTIVITIES

My community activities involve a wide variety of activities, including program committees, grant reviews, community education, advisory board. Most recently, however, I have refocussed the community activities while spending my time voluntarily on educational activities of the community. This includes extraordinary efforts with STEM students, undergraduates and Graduate students. This effort has been most rewarding as I have seen many students accelerating in their educational quest and excellence manifested by several awards.

#### Selected Project and Proposal Review Panel Activities

- 1. STEM: Taught Programming to a team of elementary school children 5th and 6th graders that won 2nd place in the regional FLL competition 2015 (remarkable due to the ages while the winning team was high school)
- 2. Reviewer for Fonds National de la Recherche Luxembourg, 2014
- 3. Member of the International Advisory Board of Cybera, Alberta, CA, 2008 present.
- 4. Member of the Unicore Review Committee of the German Ministry of Science, Germany. Wissenschaftszentrum, Bonn, Nov. 27 2000-2002.
- 5. Review Committee for The Engineering and Physical Sciences Research Council (EPSRC), UK. 🗹.
- 6. NSF Review Panels, 2004.
- 7. DOE proposal reviews, 2002, 2003, 2004, 2005, 2006.
- 8. GCE08 Steering Committee

#### Chair and Steering Committee

- 1. 2016 IEEE International Conference on Cloud Engineering Workshop (IC2EW).
- 2. 1109/IC2EW.2016.66
- 3. CCGrid2015, CCGrid2016, Committee Member
- 4. CloudCom 2014, Track Chair

- 5. ICCCT-2014, 5th International Conference on Computer and Communication Technology, Reviewer
- 6. CAC 2013, Track Chair
- 7. Workshop on Federated Clouds 2012 and 8th OpenCirrus Summit, (Co-Chair, Program Co-chair, Proceedings editor)
- 8. Dagstuhl Seminar Mar 2009 (Co-Chair).
- 9. GCE08 in conjunction with SC08, co-Chair
- 10. GCE07 Steering Committee
- 11. Grid 2007, Program vice-chair, Austin, TX collocated with Cluster 2007, Sept 17 21 in 2007
- 12. GCE06 in conjunction with SC06, Chair
- 13. Minisymposium on Grid Workflow, Globus World, San Francisco, 20 January 2004. Chair.
- 14. Minisymposium on Grid Workflow. Gregor von Laszewski and Ewa Delman. San Francisco, CA, 2023 January 2003. Chair.
- 15. Global Grid Forum Grid Information Services Working Group/Area Chair. 2001 2002.
- 16. Grid Forum Grid Information Services Working Group/Area Chair. 2000 2001.
- 17. GIS Working Group. GGF 2, Vienna, VA, July 1518 2001. Chair.
- 18. GIS Working Group. GGF 1, Amsterdam, NL, March 29 2001. Chair.
- 19. Joint ACM Java Grande ISCOPE 2001 Conference. Stanford University, California, June 24 2001. Committee and Tutorials Chair.
- 20. Second Workshop on Desktop Access to Remote Resources. Sandia National Laboratory, Albuquerque, NM, 15-16 February 1999. Steering Committee.
- 21. First Workshop Desktop Access to Remote Resources, 89th October 1998. Steering Committee and Chair.
- 22. Computing Portals Workshop and 3rd International Workshop on Desktop Access to Remote Resources. Together with Computing Portals Working Group (Datorr), Java Grande Forum, and The 3rd International Symposium on Computing in Object-Oriented Parallel Environments, San Francisco, California, U.S.A., 7 December 1999. Steering Committee and Chair.
- 23. IEEE Task Force on Cluster Computing. 1998-2000. Advisory Committee.
- 24. SC98 BoF: Desktop Access to Remote Resources. Gregor von Laszewski. Orlando, FL, November 1998.
- 25. Organizer of the BoF. Supercomputing SC93. Portland, OR, Nov. 15-19 1993. Best Student Paper Selection Committee.

#### Selected Committee Review Activities

- 1. Committee Co-chair CloudCom2012 in the topic Cloud Computing on HPC, 2014.
- 4th Workshop on Scientific Cloud Computing (ScienceCloud) 2013 June 17th, 2013, New York City, NY, USA (Committee).
- 3. IEEE CloudCom 2012, 2011, 2010 (Committee).
- 4. ITSM2012 (Committee)
- 5. PPAM2011 (Committee).
- 6. TerraGrid 2010 (Awards Committee)
- 7. FGMMS2010 (Committee).
- 8. CCGrid 2010, 2008, 2007, 2006, 2005 (Committee) in conjunction with SC'.

- 9. GCE, 2010, 2009, 2005 (Committee).
- 10. ICPADS, 2010 (Committee).
- 11. IGCC 2010 (Committee).
- 12. IPDPS 2009, 2008 (Committee).
- 13. Grid 2009, 2007 (Committee).
- 14. Cluster 2009
- 15. TeraGrid 2009 (Student Mentor).
- 16. GCE08 (Committee and co-Chair).
- 17. Euro-Par 2008 (Committee).
- 18. ICPADS'2007. 13th International Conference on Parallel and Distributed Systems, December 5 7, 2007 at National Tsing Hua University, Hsinchu, Taiwan. (Committee).
- 19. High-Performance Computing Symposium (HPC 2007) Norfolk, VA (Committee).
- 20. CCGrid2007 (Committee).
- 21. HPC 2007: High Performance Computing Symposium, Z, March 25-29, 2007 (Committee)
- 22. 2-nd IEEE International Conference on e-Science and Grid Computing, Dec. 4- 6, 2006, Amsterdam, Netherlands, (Committee).
- 23. IEEE 2006 International Symposium on Modern Computing, 3-6 October 2006, Sofia, Bulgaria, (Committee)
- 24. Grid2006, (Committee)
- 25. ICCGI06 International Multi-Conference on Computing in the Global Information Technology, March 15, August 1-3, 2006, Bucharest, Romania, (Advisory Committee)
- 26. Supercomputing, SC06, SC03, SC00, SC98, SC97, SC95.
- 27. PPAM 2005, Sixth International Conference on Parallel Processing and Applied Mathematics.
- 28. IPDPS, 19th IEEE International Parallel and Distributed Processing Symposium. Denver, Colorado, 48 April 2005
- 29. EuroPar 2006, 2005
- 30. Coordination Abstractions for Worldwide Computing, Software Technology Mini-Track, HICSS-38, Jan. 2005.
- 31. Third International Symposium on Automated Technology for Verification and Analysis, Taipei, Taiwan, 4-7 October 2005.
- 32. International Conference on eScience and Grid Technologies 2005. Melbourne, Australia, 5-8 December 2005.
- 33. 6th IEEE/ACM International Workshop on Grid Computing (Grid 2005) held in conjunction with SuperComputing 2004. Seattle, WA,Nov. 2005.
- 34. Challenges of Large Applications in Distributed Environments (CLADE). Honolulu, HI, 7 June 2004.
- 35. Workshop on Component Models and Systems for Grid Applications, held in conjunction with ICS 2004: 18th Annual ACM International Conference on Supercomputing, Saint-Malo, France, June 26-July 1, 2004.
- 36. EuroPar 2004. Pisa, Italy, 31 Aug.3rd Sept. 2004.
- 37. BioGrid'04, Second International Workshop on Biomedical Computations on the Grid, held in conjunction with, 4-th IEEE/ACM International Symposium on Cluster Computing and the Grid, Chicago, Illinois, USA, April 19-22, 2004
- 38. Workshop on Component Models and Systems for Grid Applications, Held in conjunction with ICS 2004, 18th Annual ACM International Conference on Supercomputing. SaintMalo, France, June 26 July 1 2004.

- 39. 5th IEEE/ACM International Workshop on Grid Computing (Grid 2004) held in conjunction with SuperComputing 2004. Pittsburgh, USA, 8 November 2004.
- 40. Advanced Computing and Communications ADCOM2004. Ahmedabad Gujarat, India, 15-18 December 2004.
- 41. IPDPS 2003, International Parallel and Distributed Processing Symposium (IPDPS). Nice, France, 26 April 2003.
- 42. International Conference on Machine Learning and Cybernetics 2003.
- 43. The Eleventh International Conference on Parallel Architectures and Compilation Techniques. Charlottesville, Virginia, September 22-25 2002.
- 44. SAINT2002. The 2002 Symposium on Applications and the Internet. Nara City, Nara, Japan, 28 Jan -1 Feb 2002.
- 45. The 2002 Symposium on Applications and the Internet. Nara City, Nara, Japan, 28 Jan 1 Feb 2002.
- 46. Joint ACM Java Grande and ISCOPE 2002 Conference. Seattle, Washington, November 3-5 2002.
- 47. CCGrid 2002, 2nd IEEE/ACM International Symposium on Cluster Computing and the Grid. Berlin, Germany, 21-24 May 2002.
- 48. 1st IEEE/ACM International Symposium on Cluster Computing and the Grid. Brisbane, Australia, 15-18 May 2001.
- 49. EuroPar 2001. Manchester, UK, http://europar.man.ac.uk/, 2831 August 2001.
- 50. IPDPS 2001, International Parallel and Distributed Processing Symposium . San Fransisco, CA, 27 April 2001.
- 51. Second International Workshop on Infrastructure for Agents, MAS, and Scalable MAS. The 5th International Conference on Autonomous Agents, Montreal, Canada, May 28 June 1 2001.
- 52. Java in High-Performance Computing at HPCN Europe 2001 Conference. Amsterdam, The Netherlands,
- 53. ACM Java Grande 2000 Conference. San Francisco, California, June 3-5 2000.
- 54. International Workshop on Metacomputing Systems and Applications. Toronto, August 2124 in conjunction with the 29th International Conference on Parallel Processing, August 21 2000.
- 55. Ninth SIAM Meeting on Parallel Processing. Minisymposium on Innovative Wide Area Applications, San Antonio, TX, 2224 March 1999. Session Host.
- 56. International Conference on Parallel and Distributed Processing Techniques and Applications. Las Vegas, Nevada, USA, June 30 July 2 1999.
- 57. International Telemedical Information Society (ITIS) Symposium, 1998.
- 58. PDPTA 1998. Las Vegas, Nevada, August 1998. Session Host.
- 59. Supercomputing SC93. Portland, OR, Nov. 15-19 1993.
- 60. Java for High-Performance Networking, 1997, 1998, 1999, 2000, 2001.

#### Journal Article Reviews

- 1. Journal for Grid Computing.
- 2. Concurrency and Computation: Practice and Experience.
- 3. IEEE Concurrency.
- 4. Parallel Computing
- 5. Computing in Science and Engineering
- 6. Journal of International Telemedical Information Society (ITIS) Letters.

### SOFTWARE DEVELOPED

### Selected Current Software and Online Projects

Defining schemas for the grid information services

- [30] Digital Science Lab. FutureSystems at Indiana University. 2015. URL: 🗹.
- [64] Gregor Laszewski. Cloudmesh Code Repositories. GitHub. Feb. 2020. URL: 🗹.
- [65] Gregor Laszewski. Cyberaide Bookmanager. PyPI and GitHub. Feb. 2020. URL: 🗹.
- [78] Gregor von Laszewski. Cloudmesh Community. GitHub. Feb. 2020. URL: 🗹.
- [114] Gregor von Laszewski and Geoffrey Fox. Cybertraining Publications. Web Page. Aug. 2021. URL: 🗹.
  - 1. More than 70 projects at Cloudmesh Code Repositories, 2021-04,
  - 2. More than 174 projects at Cloudmesh Community 2021-04,
  - 3. Cloudmesh for SDSC virtual cluster project (Architect of client)
  - 4. FutureGrid Software (Architect)
  - 5. FutureGrid Image Management (Architect)
  - 6. FutureGrid Cloud Accounting (Architect)
  - 7. TAS XDMoD (accounting report generator, software science impact)

### Selected Completed projects

AdHoc Workflows; Grid Desktop GridFTP user interface; GridRLS user interface; GridAnt; Grid Certificate Authority; Qstat Monitor for Cobalt and PBS queuing systems; GSFL – Grid Service Flow Language; Cyberaide; Gridshell; Grid MS Project; Java CoG Kit; GridScript; GridWorkflow (Karajan); GridTorrent; Adaptive workflows for threat management analysis; Real-time analysis of advanced photon source data; Coordination of fast nuclear reactor simulations; Developed a sophisticated Metacomputing environment allowing seamless uses of multiple supercomputers; Developed one of the very first parallel Genetic algorithms for k-way Graph Partitioning.