

MARCO NETTO

Program Manager · Architect · Engineer · Innovator · Researcher

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SUMMARY

Over 20 years of experience with backend systems (HPC, Grid, and Cloud) and 8+ years managing multi-disciplinary teams to create novel technologies mixing Cloud, AI, and High Performance Computing. Core HPC competences are: resource allocation, job scheduling, and workflow orchestration. Passion for creating first-of-a-kind technologies with clients and simplifying HPC for more people to use it.

EXPERIENCE

Microsoft Azure HPC - Sao Paulo, Brazil / Redmond, USA

Since 2022 / 2023

- Onboarding of HPC workloads to cloud
- Research and development on tools and processes to simplify the use of HPC in the cloud

IBM Research - Sao Paulo, Brazil

2011–2022

- Researcher (2011–2022), Research Manager (2013–2022), and Master Inventor (2014–2022)
- Helped the growth of a new IBM Research lab: talent acquisition, R&D agenda, technology development, culture establishment, mentoring, collaborations, etc
- Co-developed 110+ patent applications (+80 granted) on Cloud, AI, HPC, IoT Data Analytics, UX, and DevOps. Mentored hundreds of inventors, bringing IBM Brazil to the top Brazilian company with U.S. patents
- Recipient of IBM technical awards, including on:
 - workload migration to the cloud, with US 50+ million in cost reductions
 - bootstrapping businesses and AI+HPC-based technologies in digital agriculture
- Led researchers and engineers on projects to simplify usage of cloud for HPC workloads: job memory and queue wait time predictors and AI-based cloud bursting advisors.
- Bootstrapped DevOps components of the IBM Discovery Accelerator initiative as a product manager

Dell Center @ PUCRS - Porto Alegre, Brazil

2010

- Creation of automation tools for performance evaluation in virtualized environments

Hewlett Packard Center @ PUCRS - Porto Alegre, Brazil

2000 – 2004

- R&D for HPC resource management: <http://crono.sourceforge.net>
- System administrator for HPC environments
- Solution developer for orchestrating HPC protein folding simulations

EDUCATION

Ph.D. in Computer Science, The University of Melbourne, Australia

2006 – 2010

M.S. in Computer Science, PUCRS, Brazil

2003 – 2004

B.S. in Computer Science, PUCRS, Brazil

1998 – 2002

TECHNICAL COMMUNITY SERVICE AND INTELLECTUAL PROPERTY

Selected publications

- Context-aware Execution Migration Tool for Data Science Jupyter Notebooks on Hybrid Clouds. IEEE eScience'21
- HPC Cloud for Scientific and Business Applications: Taxonomy, Vision, and Research Challenges. ACM CSUR'18
- Job Placement Advisor Based on Turnaround Predictions for HPC Hybrid Clouds. FGCS'17
- Helping HPC Users Specify Job Memory Requirements via Machine Learning. HUST @ SuperComputing'16

Selected Service

- Program Committee member of ACM/IEEE Supercomputing Conference'22
- Keynote speaker at IEEE SBAC-PAD'21: HPC Cloud: challenges, opportunities, and efforts on bringing HPC to the masses

Intellectual Property

- Full list of granted patents: <https://bit.ly/marconettousptopatents>
- Full list of scientific publications: <https://bit.ly/marconettopublications>
- Full list of citations from scholar google: <https://bit.ly/marconettocitations>

PATENTS

Issued Patents

119. US11620334. Commercial Video Summaries Using Crowd Annotation [↗](#). 2023.
118. US11601693. Automatic Adaptation of Digital Content [↗](#). 2023.
117. US11271829. Sla-Aware Task Dispatching With a Task Resolution Control [↗](#). 2022.
116. US11375251. Automatically Generating Enhancements to Av Content [↗](#). 2022.
115. US11252202. Support Request Assignment Using Pace of Conversation [↗](#). 2022.
114. US11289076. Assisting Meeting Participants via Conversation Loop Detection and Resolution Using Conversation Visual Representations and Time-Related Topic Usage [↗](#). 2022.
113. US11316886. Preventing Vulnerable Configurations in Sensor-Based Devices [↗](#). 2022.
112. US11249743. Data Analytics to Determine Software Maintenance Advisory Using Input Data [↗](#). 2022.
111. US11468134. Provisioning a Customized Software Stack for Network-Based Question and Answer Services [↗](#). 2022.
110. US11380215. Reward-Based Ecosystem for Tracking Nutritional Consumption [↗](#). 2022.
109. US11250086. Visualization and Augmentation of Human Knowledge Construction During Material Consumption [↗](#). 2022.
108. US11425639. Trusted Method for Consuming and Sharing Wi-Fi Internet Access [↗](#). 2022.
107. US11263278. Triggering Personalized Search Queries Based on Physiological and Behavioral Patterns [↗](#). 2022.
106. US11206190. Using an Artificial Intelligence Based System to Guide User Dialogs in Designing Computing System Architectures [↗](#). 2021.
105. US11176024. Software Patch Application and Testing Optimization [↗](#). 2021.
104. US11132181. Computer Enhanced and Automatic Computer-Generated Integrated Development Environment Reconfiguration [↗](#). 2021.
103. US11210108. Guiding the Installation Process of Sensor-Based Devices [↗](#). 2021.
102. US11055195. Orchestrating an Interruption During Installation of Sensor-Based Devices [↗](#). 2021.
101. US11163592. Generation of Benchmarks of Applications Based on Performance Traces [↗](#). 2021.
100. US11138094. Creation of Minimal Working Examples and Environments for Troubleshooting Code Issues [↗](#). 2021.
99. US11126646. Implicit and Explicit Cognitive Analyses for Data Content Comprehension [↗](#). 2021.
98. US11126524. Configuration of Key-Mapping [↗](#). 2021.
97. US11173835. Notifying Passengers of Imminent Vehicle Braking [↗](#). 2021.
96. US11087569. Vehicle Accident Data Management System [↗](#). 2021.
95. US11158016. Customized Career Counseling and Management [↗](#). 2021.
94. US10979298. Collaboration Network and Server [↗](#). 2021.
93. US10958828. Advising Image Acquisition Based on Existing Training Sets [↗](#). 2021.
92. US10958708. Crowdsourcing Big Data Transfer [↗](#). 2021.
91. US10949545. Data Privacy Awareness in Workload Provisioning [↗](#). 2021.
90. US10999301. Methods, Systems, and Program Product for Analyzing Cyber-Attacks Based on Identified Business Impacts on Businesses [↗](#). 2021.
89. US11093280. Automatic Reconfiguration of High Performance Computing Job Schedulers Based on User Behavior, User Feedback, and Job Performance Monitoring [↗](#). 2021.

88. US10972532. Dynamic Shared Server Resource Allocation [↗](#). 2021.
87. US11030011. User Interface and System Supporting User Decision Making and Readjustments in Computer-Executable Job Allocations in the Cloud [↗](#). 2021.
86. US11074057. System and Method for Determining When Cloud Virtual Machines Need to Be Updated [↗](#). 2021.
85. US10638206. Video Annotation Based on Social Media Trends [↗](#). 2020.
84. US10680912. Infrastructure Resource Provisioning Using Trace-Based Workload Temporal Analysis for High Performance Computing [↗](#). 2020.
83. US10635825. Data Privacy Awareness in Workload Provisioning [↗](#). 2020.
82. US10783594. Agriculture Management Based on Farmer Expertise and Interests [↗](#). 2020.
81. US10606640. Rescheduling High Performance Computing Jobs Based on Personalized Sanity Checks and Job Problem Resolution Classification [↗](#). 2020.
80. US10839098. System to Prevent Export of Sensitive Data [↗](#). 2020.
79. US10579689. Visualization and Augmentation of Human Knowledge Construction During Material Consumption [↗](#). 2020.
78. US10579751. System and Method for Conducting Computing Experiments [↗](#). 2020.
77. US10671681. Triggering Personalized Search Queries Based on Physiological and Behavioral Patterns [↗](#). 2020.
76. US10552223. User Interface and System Supporting User Decision Making and Readjustments in Computer-Executable Job Allocations in the Cloud [↗](#). 2020.
75. US10331482. Automatic Reconfiguration of High Performance Computing Job Schedulers Based on User Behavior, User Feedback, and Job Performance Monitoring [↗](#). 2019.
74. US10331481. Automatic Reconfiguration of High Performance Computing Job Schedulers Based on User Behavior, User Feedback, and Job Performance Monitoring [↗](#). 2019.
73. US10284636. Dynamic Shared Server Resource Allocation [↗](#). 2019.
72. US10255259. Providing Data Quality Feedback While End Users Enter Data in Electronic Forms [↗](#). 2019.
71. US10204091. Providing Data Quality Feedback While End Users Enter Data in Electronic Forms [↗](#). 2019.
70. US10212270. Inferring Social Protocols Guiding the Use of Portable Devices [↗](#). 2019.
69. US10360123. Auto-Scaling Thresholds in Elastic Computing Environments [↗](#). 2019.
68. US10267950. System, Method and Program Product for Providing Populace Centric Weather Forecasts [↗](#). 2019.
67. US10067798. User Interface and System Supporting User Decision Making and Readjustments in Computer-Executable Job Allocations in the Cloud [↗](#). 2018.
66. US9866619. Transmission of Hierarchical Data Files Based on Content Selection [↗](#). 2018.
65. US9898479. Data Distribution System, Method and Program Product [↗](#). 2018.
64. US9983864. System and Method for Determining When Cloud Virtual Machines Need to Be Updated [↗](#). 2018.
63. US9749459. Inferring Social Protocols Guiding the Use of Portable Devices [↗](#). 2017.
62. US9600262. System, Method and Program Product for Updating Virtual Machine Images [↗](#). 2017.
61. US9697562. Resource Provisioning for Electronic Books [↗](#). 2017.
60. US9590875. Content Delivery Infrastructure With Non-Intentional Feedback Parameter Provisioning [↗](#). 2017.

59. US9633334. Facilitating User Incident Reports [↗](#). 2017.
58. US9535751. Resource Selection Advisor Mechanism [↗](#). 2017.
57. US9513935. Auto-Scaling Thresholds in Elastic Computing Environments [↗](#). 2016.
56. US9456308. Method and System for Creating and Refining Rules for Personalized Content Delivery Based on Users Physical Activities [↗](#). 2016.
55. US9418354. Facilitating User Incident Reports [↗](#). 2016.
54. US9298443. System and Method for Determining When Cloud Virtual Machines Need to Be Updated [↗](#). 2016.
53. US9294362. Adjusting Quality of Service in a Cloud Environment Based on Application Usage [↗](#). 2016.
52. US9294363. Adjusting Quality of Service in a Cloud Environment Based on Application Usage [↗](#). 2016.
51. US9092498. Data Distribution System, Method and Program Product [↗](#). 2015.
50. US8930957. System, Method and Program Product for Cost-Aware Selection of Stored Virtual Machine Images for Subsequent Use [↗](#). 2015.
49. US9038085. System, Method and Program Product for Cost-Aware Selection of Stored Virtual Machine Images for Subsequent Use [↗](#). 2015.
48. US8983816. Efficient Evaluation of Network Robustness With a Graph [↗](#). 2015.
47. US8930541. System, Method and Program Product for Cost-Aware Selection of Templates for Provisioning Shared Resources [↗](#). 2015.
46. US9164802. System, Method and Program Product for Allocating Resources and Services [↗](#). 2015.
45. US8909189. System, Method and Program Product for Maintaining Deployed Response Team Members Synchronized [↗](#). 2014.
44. US8676985. System, Method and Program Product for Local Client Device Context-Aware Shared Resource and Service Management [↗](#). 2014.
43. US8854219. System, Method and Program Product for Providing Populace Movement Sensitive Weather Forecasts [↗](#). 2014.
42. US8854219. System, Method and Program Product for Providing Populace Movement Sensitive Weather Forecasts [↗](#). 2014.
41. US8635294. System, Method and Program Product for Proactively Provisioning Emergency Computer Resources Using Geospatial Relationships [↗](#). 2014.
40. US8832239. System, Method and Program Product for Optimizing Virtual Machine Placement and Configuration [↗](#). 2014.
39. US8046759. Resource Allocation Method and System [↗](#). 2011.

Pending Patents

38. US20230012543. Data Transformation for Acceleration of Context Migration in Interactive Computing Notebooks [↗](#).
37. US20230140791. Programming Task Supporting Material Generation [↗](#).
36. US20230116608. Management of Recalibration of Risk Related Models Impacted by Extreme Weather Events and Climate Change Conditions [↗](#).
35. US20230088318. Remotely Healing Crashed Processes [↗](#).
34. US20220405065. Model Document Creation in Source Code Development Environments Using Semantic-Aware Detectable Action Impacts [↗](#).
33. US20220318049. Program Context Migration [↗](#).
32. US20220308862. Coordinated Source Code Commits Utilizing Risk and Error Tolerance [↗](#).

31. US20220303291. Data Retrieval for Anomaly Detection [↗](#).
30. US20220283930. Creating Test Cases for Testing Software Using Anonymized Log Data [↗](#).
29. US20220206786. Code Library Selection Management [↗](#).
28. US20220091829. Application Migration Using Cost-Aware Code Dependency Graph [↗](#).
27. US20220067897. Food-Product Tracking by Photogrammetry [↗](#).
26. US20210375154. Automatic Creation and Annotation of Software-Related Instructional Videos [↗](#).
25. US20210303740. Object Loss Prevention Using Cognitive Computing [↗](#).
24. US20210026973. Automatic and Customized Data Deletion Actions [↗](#).
23. US20200326669. Auto-Adjustable Machine Functionality Using Analytics of Sensor Data [↗](#).
22. US20200245043. Video Annotation Based on Social Media Trends [↗](#).
21. US20200134476. Generating Code Performance Hints Using Source Code Coverage Analytics, Inspection, and Unstructured Programming Documents [↗](#).
20. US20200118080. Time-Sensitive Analysis for Identifying Resources to Resolve a Requirement [↗](#).
19. US20180349828. People Interruption Management System and Method Based on Task Detection and Physiological Measures [↗](#).
18. US20180060987. Identification of Abnormal Behavior in Human Activity Based on Internet of Things Collected Data [↗](#).
17. US20170177583. System and Method for Identifying Gifts Having Shared Interests via Social Media Networking, User Profiles and Browsing Data [↗](#).
16. US20170180290. Selective Content Dissemination Based on Social Media Content Analysis [↗](#).
15. US20160132213. Efficient Facilitation of Human Review and Computational Analysis [↗](#).
14. US20170109157. System, Method and Program Product for Updating Virtual Machine Images [↗](#).
13. US20140365342. Resource Provisioning for Electronic Books [↗](#).
12. US20140358609. Discovering Task Dependencies for Incident Management [↗](#).
11. US20140358610. Discovering Task Dependencies for Incident Management [↗](#).
10. US20140337076. Managing Support Team Inquiries [↗](#).
9. US20140337377. Managing Support Team Inquiries [↗](#).
8. US20140214583. Data Distribution System, Method and Program Product [↗](#).
7. US20140067486. Systems, Methods, and Computer Program Products for Prioritizing Information [↗](#).
6. US20140045446. System, Method and Program Product for Maintaining Deployed Response Team Members Synchronized [↗](#).
5. US20140006620. System, Method and Program Product for Local Client Device Context-Aware Shared Resource and Service Management [↗](#).
4. US20130339203. Risk-Based Dynamic Geo-Location Based Replication of Services in Cloud Computing [↗](#).
3. US20130132971. System, Method and Program Product for Streamlined Virtual Machine Desktop Display [↗](#).
2. US20130116920. System, Method and Program Product for Flood Aware Travel Routing [↗](#).
1. US20060218430. System and Method for Allocating Transactions to a Plurality of Computing Systems [↗](#).

PUBLICATIONS

- 2022**
- CCPE [Workflow provenance in the lifecycle of scientific machine learning](#). S., R., A., L. G., L., V., S., E., T., R., B., R., C., D., V. Brazil, E., M., M., V., P., o.. *Concurrency and Computation: Practice and Experience (CCPE)*, 34(14):e6544. 2022
- 2021**
- eScience [Context-aware Execution Migration Tool for Data Science Jupyter Notebooks on Hybrid Clouds](#). R. L. F. Cunha, L. V. Real, R. Souza, B. Silva, M. A. S. Netto. *IEEE Int. Conf. on eScience (eScience)*. 2021
- 2020**
- SPE [New generation cloud computing](#). B. Varghese, M. A. S. Netto, I. Martin Llorente, R. Buyya. *Software Practice and Experience (SPE)*, 50(6):803–804. 2020
- 2019**
- SC-WORKS [Provenance Data in the Machine Learning Lifecycle in Computational Science and Engineering](#). R. Souza, P. Valduriez, M. Mattoso, R. Cerqueira, M. Aurelio Stelmar Netto, L. Azevedo, V. Lourenco, E. F. de Souza Soares, R. Thiago, R. Brandao, D. Civitarese, E. Vital Brazil, M. Ferreira Moreno. *IEEE/ACM Workflows in Support of Large-Scale Science in conjunction with Int. Conf. for High Performance Computing, Networking, Storage and Analysis - SuperComputing (SC-WORKS)*. 2019
- eScience [Efficient Runtime Capture of Multiworkflow Data Using Provenance](#). R. Souza, M. Mattoso, L. Azevedo, R. Thiago, E. F. de Souza Soares, M. Nery dos Santos, M. A. S. Netto, E. Vital Brazil, R. Cerqueira, P. Valduriez. *IEEE 15th Int. Conf. on eScience (eScience)*. 2019
- 2018**
- CSUR [HPC Cloud for Scientific and Business Applications: Taxonomy, Vision, and Research Challenges](#). M. A.S. Netto, R. N. Calheiros, E. R. Rodrigues, R. L.F. Cunha, R. Buyya. *ACM Computing Surveys (CSUR)*, 51(1):8:1–8:29. 2018
- CSUR [A Manifesto for Future Generation Cloud Computing: Research Directions for the Next Decade](#). B., R., S., S. Narayana, C., G., C., R., S., Y., V., B., G., E., J., B., V., L. Miguel, N., M. A. S., T., A. Nadjaran, R., M. Alejandra, L., I. M., V., S. De Capitani Di, S., P., M., D., V., C., B., R., A., M. D. De, R., O., Z., W., J., H., G., W., Z., A. Y., S., H.. *ACM Computing Surveys (CSUR)*, 51(5):105:1–105:38. 2018
- FGCS [JobPruner: A Machine Learning Assistant for Exploring Parameter Spaces in HPC Applications](#). B. Silva, M. A.S. Netto, R. L.F. Cunha. *Future Generation Computer Systems (FGCS)*, 83():144–157. 2018
- eScience [A Scalable Machine Learning System for Pre-Season Agriculture Yield Forecast](#). I. Oliveira, R. L. F. Cunha, B. Silva, M. A. S. Netto. *Proc. IEEE 14th IEEE Int. Conf. on e-Science (eScience)*. 2018

- eScience [DeepDownscale: a Deep Learning Strategy for High-Resolution Weather Forecast](#). E. Rocha Rodrigues, I. Oliveira, R. L. F. Cunha, M. A. S. Netto. Proc. of the 14th IEEE Int. Conf. on e-Science (eScience). 2018
- BreSci [A Search Space Exploration Framework for e-Science Applications](#). E. B. Gauch, B. Castanheira, B. Silva, R. L. F. Cunha, M. A. S. Netto. Proc. XII Brazilian e-Science Workshop (BreSci). 2018
- 2017**
- FGCS [Job Placement Advisor Based on Turnaround Predictions for HPC Hybrid Clouds](#). R. L.F. Cunha, E. R. Rodrigues, L. P. Tizzei, M. A.S. Netto. Future Generation Computer Systems (FGCS), 67():35–46. 2017
- 2016**
- SC-WORKS [SLA-aware Interactive Workflow Assistant for HPC Parameter Sweeping Experiments](#). B. Silva, M. A.S. Netto, R. L.F. Cunha. Proc. of the IEEE/ACM Int. Workshop on Workflows in Support of Large-Scale Science in conjunction with Int. Conf. for High Performance Computing, Networking, Storage and Analysis - SuperComputing (SC-WORKS). 2016
- SC-HUST [Helping HPC Users Specify Job Memory Requirements via Machine Learning](#). E. R. Rodrigues, R. L.F. Cunha, M. A.S. Netto, M. Spriggs. Proc. of the IEEE/ACM Int. Workshop on HPC User Support Tools in conjunction with Int. Conf. for High Performance Computing, Networking, Storage and Analysis - SuperComputing (SC-HUST). 2016
- FGCS [Impact of user patience on auto-scaling resource capacity for cloud services](#). M. D. de Assuncao, C. H. Cardonha, M. A.S. Netto, R. L.F. Cunha. Future Generation Computer Systems (FGCS), 55():41–55. 2016
- FGCS [Optimising Resource Costs of Cloud Computing for Education](#). F. Koch, M. D. Assuncao, C. Cardonha, M. A. S. Netto. Future Generation Computer Systems (FGCS), 55():473–479. 2016
- CoRR [Exploiting Workload Cycles for Orchestration of Virtual Machine Live Migrations in Clouds](#). A. Baruchi, E. T. Midorikawa, L. M. Sato, M. A. S. Netto. The Computing Research Repository (CoRR)(). 2016
- 2015**
- Computer [Deciding When and How to Move HPC Jobs to the Cloud](#). M. A. S. Netto, R. L. F. Cunha, N. Sultanum. Computer, 48(11):112–115. 2015
- IBM-JRD [An architecture and algorithm for context-aware resource allocation for digital teaching platforms](#). F.L. Koch, M. D. de Assuncao, C. H. Cardonha, M. A. S. Netto, T. T. Primo. IBM Journal of Research and Development (IBM-JRD), 59(6):1:1-1:9. 2015
- JPDC [Big Data computing and clouds: Trends and future directions](#). M. D. de Assuncao, R. N. Calheiros, S. Bianchi, M. A. S. Netto, R. Buyya. Journal of Parallel and Distributed Computing (JPDC), 79–80():3–15. 2015
- MASCOTS [Using Application Data for SLA-aware Auto-scaling in Cloud Environments](#). A. A. D. P. Souza, M. A. S. Netto. Proc. of the IEEE 23rd Int. Symp. on Modeling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS'15). 2015

- GECON [Optimizing Multi-tenant Cloud Resource Pools via Allocation of Reusable Time Slots](#). L. P. Tizzei, M. A. S. Netto, S. Tao. Proc. of the 12th Int. Conf. on Economics of Grids, Clouds, Systems, and Services (GECON'15). 2015
- ICSOC [An SLA-based Advisor for Placement of HPC Jobs on Hybrid Clouds](#). K. Mantripragada, L. P. Tizzei, A. P. D. Binotto, M. A. S. Netto. Proc. of the Int. Conf. on Service Oriented Computing (ICSOC'15). 2015
- [Application Level Monitoring and SLA Violation Detection for Multi-tenant Cloud Services](#). V. C. Emeakaroha, M. A. S. Netto, I. Brandic, C. A. F. De Rose. Chapter in Emerging Research in Cloud Distributed Computing Systems. IGI Global. 2015
- [A Feasibility Study of Using HPC Cloud Environment for Seismic Exploration](#). K. M. Mantripragada, A. P. D. Binotto, L. P. Tizzei, M. A. S. Netto. Proc. of the 77th EAGE Conf. and Exhibition. 2015
- [Supporting the Scheduling over Local HPC and Cloud Platforms: An FWI Case Study](#). A.P.D. Binotto, L.P. Tizzei, K. Mantripragada, M.A.S. Netto. Proc. of Second EAGE Workshop on High Performance Computing for Upstream. 2015
- 2014**
- MASCOTS [Evaluating Auto-scaling Strategies for Cloud Computing Environments](#). M. A. S. Netto, C. Cardonha, R. L. F. Cunha, M. D. de Assuncao. Proc. of the IEEE 22nd Int. Symp. on Modeling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS'14). 2014
- CLOUD [Exploiting User Patience for Scaling Resource Capacity in Cloud Services](#). R. L. F. Cunha, M. D. de Assuncao, C. Cardonha, M. A. S. Netto. Proc. of the 7th IEEE Int. Conf. on Cloud Computing (CLOUD'14). 2014
- CNSM [Improving Virtual Machine Live Migration via Application-level Workload Analysis](#). A. Baruchi, E. Midorikawa, M. A. S. Netto. Proc. of the 10th Int. Conf. on Network and Service Management (CNSM'14). 2014
- [Challenges and Opportunities for HPC Cloud in Natural Resources](#). A. C. Nogueira, A. Binotto, K. Mantripragada, L. P. Tizzei, N. Sultanum, M. A. S. Netto. Proc. of the SPE Large Scale Computing and Big Data Challenges in Reservoir Simulation Conf. & Exhibition. 2014
- 2013**
- SPE [EMUSIM: an integrated emulation and simulation environment for modeling, evaluation, and validation of performance of Cloud computing applications](#). R. N. Calheiros, M. A. S. Netto, C. A. F. De Rose, R. Buyya. Software: Practice and Experience (SPE), 43(5):595–612. 2013
- ICSOC [Patience-aware Scheduling for Cloud Services: Freeing Users from the Chains of Boredom](#). C. Cardonha, M. D. de Assuncao, M. A. S. Netto, R. L. F. Cunha, C. Queiroz. Proc. of the 11th Int. Conf. on Service Oriented Computing (ICSOC'13). 2013
- CNSM [Leveraging Attention Scarcity to Improve the Overall User Experience of Cloud Services](#). M. A. S. Netto, M. D. de Assuncao, S. Bianchi. Proc. of the IFIP 9th Int. Conf. on Network and Service Management (CNSM'03). 2013
- IM [When Cloud Virtual Machine Images Need to Be Updated](#). M. A. S. Netto, M. D. de Assuncao, L. Renganarayana, C. Young. Proc. of the IFIP/IEEE Int. Symp. on Integrated Network Management (IM'13). 2013

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- AINA [Scheduling Workflows in Multi-Cluster Environments](#). S. L. Stanzini, L. M. Sato, M. A. S. Netto. Proc. of the IEEE 27th Int. Conf. on Advanced Information Networking and Applications (AINA'13) Workshops. 2013
- 2012**
- CCPE [Coordinated Rescheduling of Bag-of-Tasks for Executions on Multiple Resource Providers](#). M. A. S. Netto, R. Buyya. Concurrency and Computation: Practice and Experience (CCPE), 24(12):1362–1376. 2012
- FGCS [Towards autonomic detection of SLA violations in Cloud infrastructures](#). V. C. Emeakaroha, M. A. S. Netto, R. N. Calheiros, I. Brandic, R. Buyya, C. A. F. De Rose. Future Generation Computer Systems (FGCS), 28(7):1017–1029. 2012
- JPDC [Performance evaluation of OpenMP-based algorithms for handling Kronecker descriptors](#). A. M. de Lima, M. A. S. Netto, T. Webber, R. M. Czekster, C. A. F. De Rose, P. Fernandes. Journal of Parallel and Distributed Computing (JPDC), 72(5):678–692. 2012
- NOMS [CloudAffinity: A Framework For Matching Servers to Cloudmates](#). M. D. Assuncao, M. A. S. Netto, B. Peterson, L. Renganarayana, J. Rofrano, C. Ward, C. Young. Proc. of the 13th IEEE/IFIP Network Operations and Management Symp. (NOMS'12). 2012
- GECON [A Cost Analysis of Cloud Computing for Education](#). F. Luiz Koch, M. D. de Assuncao, M. A. S. Netto. Proc. of the 9th Int. Conf. on Economics of Grids, Clouds, Systems, and Services (GECON'12). 2012
- CloudAM [Context-aware Job Scheduling for Cloud Computing Environments](#). M. D. de Assuncao, M. A. S. Netto, F. Koch, S. Bianchi. Proc. of the Int. Workshop on Clouds and eScience Applications Management (CloudAM'12), held in conjunction with the 5th IEEE/ACM Int. Conf. on Utility and Cloud Computing (UCC 2012). 2012
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- HCW [Offer-based Scheduling of Deadline-Constrained Bag-of-Tasks Applications for Utility Computing Systems](#). M. A. S. Netto, R. Buyya. *Proc. of the 18th Int. Heterogeneity in Computing Workshop (HCW'09)*, in conjunction with the 23rd IEEE Int. Parallel and Distributed Processing Symp. (IEEE IPDPS'09). 2009
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- GRID [Rescheduling Co-Allocation Requests based on Flexible Advance Reservations and Processor Remapping](#). M. A. S. Netto, R. Buyya. *Proc. of the 9th IEEE/ACM Int. Conf. on Grid Computing (GRID'08)*. 2008
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- HiPC [Message Passing over .NET-based Desktop Grids](#). C. Queiroz, M. A. S. Netto, R. Buyya. Proc. of the Workshop on Cutting Edge Computing, in conjunction with the 13th IEEE Int. Conf. on High Performance Computing (HiPC'06). 2006
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- eScience [Transparent Resource Allocation to Exploit Idle Cluster Nodes in Computational Grids](#). M. A. S. Netto, R. N. Calheiros, R. K. S. Silva, C. A. F. De Rose, C. Northfleet, W. Cirne. Proc. of the First IEEE Int. Conf. on e-Science and Grid Computing (eScience'05). 2005
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- ICPP [CRONO: A Configurable and Easy to Maintain Resource Manager Optimized for Small and Mid-Size GNU/Linux Cluster](#). M. A. S. Netto, C. A. F. De Rose. Proc. of the 32nd Int. Conf. on Parallel Processing (ICPP'03). 2003
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AWARDS, GRANTS, RECOGNITIONS, AND SCHOLARSHIPS

- Excellence in Reviewing: Future Generation Computer Systems	2023
- IBM Master Inventor	2020
- IBM Research Accomplishment Award	2020
- IBM Master Inventor	2017
- IBM Research Accomplishment Award	2017
- IBM Academy of Technology Membership	2017
- Outstanding Reviewer: Future Generation Computer Systems	2017
- IEEE Senior Membership	2016
- Outstanding Reviewer: Journal of Parallel and Distributed Computing	2015
- IBM Master Inventor	2014
- FINEP HPC-Cloud (US\$ 2.4 million) Gov. Grant	2014
- Top Reviewer Meritorious Award from IEEE Computer Society	2013
- IBM Research Division Award	2013
- IBM Research Accomplishment Award	2012
- 3 Finalists for the Best Practitioner Paper Award (Frontiers)	2012
- IEEE CCGrid Student Travel Scholarship	2007
- ACM Middleware Student Grant	2006
- Melbourne Intl. Research Scholarship (MIRS)	2006 – 2009
- Endeavour Intl. Postgrad. Research Scholarship (IPRS)	2006 – 2009
- Master course — Brazilian Government Agency (CAPES)	2003 – 2004
- Scholarship on High Performance Computing — Hewlett Packard	2000 – 2004

PROFESSIONAL SERVICE AND SELECTED TALKS

Membership: ACM Senior (member since 2017, elevated to Senior in 2023)

Membership: IEEE Senior (member since 2006, elevated to Senior in 2016)

Keynote Speaker. IEEE Intl. Symp. on Computer Architecture and High Performance Computing (SBAC-PAD) 2021:
HPC Cloud: challenges, opportunities, and efforts on bringing HPC to the masses

Panelist. IEEE Intl. Conf. on Cloud Computing (IEEE CLOUD): Enablement of Cloud Computing

Journal Editorial. Journal of Software: Practice and Experience. 2020. New generation cloud computing

Tutorial Chair. IEEE/ACM International Conference on Utility and Cloud Computing (UCC) 2018.

Invited Speaker. PetTalks: Research Career in IT, 2021.

Invited Speaker. Hub 2014: Innovation in IT, 2014.
<http://sudotec.org.br/noticia/107>

Workshop Chair. 3rd High Performance Machine Learning Workshop, in conjunction with IEEE CCGRID 2020

Workshop Chair. 18th Workshop on Adaptive and Reflexive Middleware, in conjunction with ACM/IFIP Middleware 2019

Tutorial Presenter. XXXIV Brazilian Symposium on Computer Networks and Distributed Systems (SBRC):
Challenges and Building Blocks to Create HPC Cloud Platforms

Session Chair. IEEE 23rd Intl. Symp. on Modeling, Analysis and Sim. of Computer and Telco Systems (MASCOTS), 2015

Session Chair. 2014 IEEE 7th Intl. Conf. on Cloud Computing (CLOUD), 2014

Journal Reviewer (current and past):

- IEEE Transactions on Parallel and Distributed Systems
2019 2018 2017 2016 2014 2013 2011 2008
- Journal of Parallel and Distributed Computing
- ACM Computing Surveys
- Future Generation Computer Systems
- Concurrency and Computation: Practice and Experience (2010-2017)
- Software: Practice and Experience
- IEEE Transactions on Services Computing
2013
- IEEE Transactions on Cloud Computing
2019 2015-2016 2013-2014
- IEEE Transactions on Computers

Conference Program Committee (paper reviewer):

- SC (SuperComputing). ACM/IEEE The Intl. Conf. for High Performance Computing, Networking, Storage, and Analysis.
2022 [↗](#)
- Middleware. ACM/IFIP Intl. Conf. on Middleware.
2020 [↗](#) 2011 [↗](#)
- GECON. Intl. Conf. on Economics of Grids, Clouds, Systems, and Services
2022 [↗](#) 2021 [↗](#) 2020 [↗](#) 2019 [↗](#) 2018 [↗](#) 2017 [↗](#) 2016 [↗](#) 2013 [↗](#) 2012 [↗](#)
- UCC. IEEE/ACM Intl. Conf. on Utility and Cloud Computing
2019 [↗](#) 2018 [↗](#)
- SBAC-PAD. IEEE Intl. Symp. on Computer Architecture and High Performance Computing
2015 [↗](#)
- CloudAM. Intl. Workshop on Cloud and Edge Computing, and Applications Management
2021 [↗](#) 2020 [↗](#) 2019 [↗](#) 2018 [↗](#) 2017 [↗](#) 2016 [↗](#) 2015 [↗](#) 2014 [↗](#) 2013 [↗](#)
- ExtremeGreen. Extreme Green & Energy Efficiency in Large Scale Distributed Systems
2015 [↗](#)
- IDCS. Intl. Conf. on Internet and Distributed Computing Systems
2016 [↗](#) 2012 [↗](#)
- InterCloud-HPC. Intl. Symp. on Cloud Computing and Services for High Performance Computing Systems
2020 [↗](#)
- FAB. International Symposium on Foundations and Applications of Big Data Analytics
2017 [↗](#) 2016 [↗](#) 2015 [↗](#)
- VECPAR. Intl. Meeting on High Performance Computing for Computational Science
2018 [↗](#)
- LatinCloud. IEEE Latin America Conference on Cloud Computing and Communications
2012 [↗](#)
- ERAD-SP. Regional School of High Performance Computing, Sao Paulo
2022 [↗](#) 2021 [↗](#) 2020 [↗](#) 2019 [↗](#) 2018 [↗](#) 2016 [↗](#) 2015 [↗](#) 2014 [↗](#) 2013 [↗](#)