

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

Since 2022

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