



Maicon Saul Faria

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SUMMARY

Ph.D on Physics in the University of São Paulo with emphasis in simulations on Condensed Matter and Statistical Mechanics. Post-Doctorate in the University of Campinas with emphasis on development of high performance software with NVIDIA CUDA for Electromagnetism related research.

Abax High Performance Computation (abaxcluster.com.br) HPC Project manager and specialist on HPC for scientific research applications with 5 year experience in deploying HPC solutions, sellings, system and client support, software development and research. Academic background on physics and engineering with experience on intensive computational applications with GPGPU processing. Good relation network on Academic environment with some of the best and leaders researchers in several science areas.

EXPERIENCE

Project Manager, Abax High Performance Computing

Campinas, São Paulo — 2011-today

Work as hardware and software project designer helping clients to choose the best platform for their scientific applications also advising the submission of projects to Federal and State science's finance agencies. The project design were done with careful analysis of client's needs that demand a strong knowledge of scientific algorithms, hardware capabilities and software tools.

Accomplishments

- Project and manage HPC systems also implement dozens of HPC clusters for scientific modeling in areas as Physics, Chemistry, Biology and Engineering with hundreds of users (including GPU solutions)
- Establish a network of hardware and software suppliers
- Build of a good relationship network with researchers of several knowledge areas
- Development of a virtual system for HPC clusters that allowed easy manutencion and recovery. The virtualization system has great impact on cost reduction for the company
- Sell of several HPC solutions for universities, ex: USP, UNESP, UFRJ, UFF, UFLA, UFOP, IME, UFRN etc
- Implementation of GPGPU solutions using NVIDIA GPUs that includes:
 - attract clients on scientific meets presenting some Abax in-house test with general GPGPU gains,
 - help clients to implement changes in their codes with NVIDIA or PGI OpenACC Compilers
 - selling solution.
- Short courses and workshops on High Performance Computing as in The International Microwave and Optoelectronics Computational Conference
http://www.imoc2011.ufrn.br/images/IMOC%202011_Short_courses_Programa_051011_15h30m.pdf

Researcher and HPC Manager, University of Campinas

Campinas, SP — 2013-today

Researcher on Photonics and Optics on the Quantum Electronic Department belong to the Physics Institute. Manager of the Fotonicom (Photonics Research Center) HPC facilities and TI.

Accomplishments

- Implementation of a hybrid CPU and GPU cluster.
- Development of a FDTD software for microwaves and photonics using NVIDIA Cuda development platform
- Publication of articles on journals and conferences (Academical Resume)

Academic Resume <http://lattes.cnpq.br/7336210463093353>

Graduation

Degree — 2000-2004

Bach. Physics - Federal University of Santa Catarina

Graduation

Degree — 2016-today

Control and Automation Engineering - University of Campinas

Master Degree

Degree — 2005-2006

Physics - Federal University of Santa Catarina

Ph.D

Degree — 2006-2010

Physics - University of São Paulo

Post-Doc

Degree — 2010-2011

Engineering - University of Campinas

Publications

Articles on Scientific Journals

- Oliveira Filho, Fleury J ; Faria, Maicon S ; Vieira, André P . **Strong-disorder renormalization group study of aperiodic quantum Ising chains**. Journal of Statistical Mechanics, v. 2012, p. P03007, 2012.
- FARIA, Maicon S.; Ribeiro, D J ; Salinas, S R . **Critical behavior of a contact process with aperiodic transition rates**. Journal of Statistical Mechanics. Theory and Experiment, v. 2008, p. P01022, 2008.
- FARIA, Maicon S.; Branco, N. S. ; Tragtenberg, M. H. R. . Nonuniversal behavior for aperiodic interactions within a mean-field approximation. Physical Review. E, Statistical, Nonlinear and Soft Matter Physics, v. 77, p. 041113, 2008.

Complete works published in proceedings of conferences

- CASTANEDA S., ZADY ; FARIA, MAICON ; HERNANDEZ-FIGUEROA., HUGO E. . **Three dimensional devices electromagnetic simulation using parallelism on GPUs**. In: 2013 SBMO/IEEE MTT-S International Microwave and Optoelectronics Conference (IMOC), 2013, Rio de Janeiro. 2013 SBMO/IEEE MTT-S International Microwave & Optoelectronics Conference (IMOC). p. 1.
- FARIA, Maicon S.; Ferrera Adriano ; SILVA-SANTOS, C. H ; Castañeda S. Zady ; Hernandez-Figueroa. Hugo E. . **One and two dimensional**

devices electromagnetic simulation using parallelism on GPUs. In: 2011 SBMO/IEEE MTT-S INTERNATIONAL MICROWAVE AND OPTOELECTRONICS CONFERENCE, 2011, Natal/RN. SBMO/IEEE MTT-S International Microwave and Optoelectronics Conference (IMOC 2011), 2011. p. 924-927.

SKILLS

- Seven years experience on HPC clusters
- Five years HPC selling experience
- Advanced CUDA and OpenACC development skill
- Strong scientific communication skills
- Experience on Brazilian regulations and public bureaucracy
- Ten years experience on managing Linux clusters
 - Strong knowledge on linux systems, Networks and virtualization
 - Advanced programing skills on Shell Script, C, Fortran, CUDA, MPI, OpenACC, GSL, MKL
 - Extensive experience Job manager PBS Torque and Maui
- Skills on Mathematica, Latex, Python
- Skill on cloud services like the Amazon AWS and Rescale
- Fluent in english and portuguese, average spanish

REFERENCES

Available upon request.