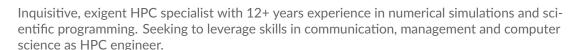
MARIO BURBANO

Researcher in molecular simulations

1983 August 10 - Married, 2 children

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EXPERIENCE

Associate Professor

University of Pau & Pays Adour

2010 - Ongoing

Pau, France

- Develop multi-scale computational strategies adapted to complex systems
- Develop and distribute data analyses libraries with Python
- Supervise research projects with Ph.D. and Master students
- Train UPPA users to HPC and programming languages using active learning

18 peer-reviewed articles, h-index 8, 200 citations

Research Engineer CEA DAM

2009 - 2010

Pruyères le châtel, France

- Used C and MPI to include Dissipative Particle Dynamics algorithms in a massively parallel program
- Parametrization of coarse grain models for molecular simulations

Ph.D. in physical-chemistry Université Paris Sud 11

2006 – 2009

Orsay, France

Theoretical study of photophysics properties of fluorescent proteins

- Produced molecular simulations of biological systems
- Used Fortran to write simulations and data analysis programs

PROJECTS

Energy storage materials – Li-ion batteries University of Pau & Pays Adour / RS2E

- Surface reactivity of cathode materials
- Coupled studies between quantum chemistry and experimental surface characterization
- Interfaces: structure, electronic properties and thermochemistry

Petroleum chemistry and complex matrices University of Pau & Pays Adour / C2MC

- Physico-chemical properties of asphaltenes: solubility, aggregation
- Molecular modelling and molecular dynamics simulations
- Molecular characterization of complex matrices (heavy crude oil)

Python Scientific Libraries University of Pau & Pays Adour

- Pymatgen: Python Materials Genomics (http://pymatgen.org/team.html)
- Mammoth: a molecular force field optimizer (https://mammoth_uppa.gitlab.io/)
- Mosaïca: a generator of nano-materials based on their intrinsic geometry

SKILLS

High Performance Computing	••••
Molecular Modelling	••••
Mathematics / Statistics	••••
Data Visualization	••••

Computer science

Python
Slurm
Linux/Unix/Bash
MPI
Fortran
C
Machine Learning
git

Java	Plotly	'Dash	HTML/CSS/PHP
Hugo	/Jekyll	Djang	
Visual	Studio (Code	

Simulations code

Lammps	VASP	Gromacs	Amber
Gaussian	Orca	VMD	

LANGUAGES

English	••••
Spanish	

EDUCATION

Ph.D. in physical-chemistry

M.Sc. in Physical-Chemistry

Magistère de Physico-Chimie Moléculaire

2003 - 2006♥ Université Paris-Sud 11ENS Cachan

CPGE in Physics & Chemistry

2001 - 2003 **♀** Lyc

♀ Lycée F. Arago Perpignan