

NUMERICAL AND SCIENTIFIC COMPUTING

From a maths-centered background, I focused on development and computer techniques, thus numerical analysis, and recently image and video processing.

I'm interested in implementation details, software quality, standards, portable and flexible techniques used in a scientific R&D context.

I'm also involved in independent Internet-related initiatives, for free tools and free communication. And I nearly feel at home in Japan.

EXPERIENCE

08 - ... • Development of an image processing suite

CMLA, ENS CAchan and MAP5, Paris5 Descartes University

- software architecture for the megawave suite
- quality control, development and distribution standards

05 - 08 • Numerical analysis and image processing

Jacques-Louis Lions Laboratory, Paris6 Pierre et Marie Curie University

- images and video (2D/3D) processing, restoration, enhancement
- geometry detection, interpolation, evolution
- Python/SciPy tools, meshes, curvature and level-set techniques

05 • Numerical quality control (internship)

LIP6, Paris6 Pierre et Marie Curie University

- stochastic control of the CPU rounding errors
- Matlab/C++ implementation of the Cadna library

01 • Numerical simulation (internship)

INSEE (national statistics office)

- numerical study of a large dynamic economic model
- developments on simulation and optimization techniques

00 • Back-office forex (investment funds)

Paribas Asset Management

99 - 06 • Computer science teacher, Paris6, Paris7 Universities and business school

Maths teaching assistant, Paris6, Paris1 and Montreal Universities

SKILLS

languages and tools

- general* • Python, C/C++, Fortran77/95, shell
- numerical* • NumPy/SciPy, BLAS/LAPACK, Cadna, Matlab/Scilab
VTK, MayaVi, ParaView
- utilities* • GNU tools, XHTML/CSS, microformats, LaTeX, SQL, PHP, XOffice

practice

- development* • Keeping reliability, standards and openness in mind
 - quality assurance (unit-tests, documentation, profiling)
 - version control, distribution, packaging
- system* • Administration of some personal servers
 - web, mail, backup, development, network services
 - mixed architecture (x86, HP-PA, ARM)

languages

- french* • Mother tongue
- english* • Fluent conversation, advanced reading and writing
International work experiences, daily use of technical and scientific english
- japanese* • Usual conversation and simple reading and writing, JLPT level 3
One year spent in Japan, daily use now

EDUCATION

- 05 - 08* • **PhD candidate in numerical analysis and computer science** (current)
Jacques-Louis Lions Laboratory, Paris6 Pierre et Marie Curie University
 - video and medical images processing : meshes, reconstruction, evolution
 - *mentors* : Pascal Frey and Simon Masnou
- 04 - 05* • **MSc in mathematics and computer science**
Paris6 Pierre et Marie Curie University
 - computation quality and reliability, numerical systems, parallel computing, meshes
 - *internship* : LIP6, implementation of stochastic error control in Matlab
- 00 - 01* • **MSc in mathematics, modeling and optimization**
Paris1 Pantheon-Sorbonne University
 - optimization, game theory, information and decision
 - *internship* : INSEE, study and numerical simulation of an economic model
- 98 - 00* • MSc in mathematics (first year), *Montreal University*
BSc in mathematics, *Paris7 Denis Diderot University*
 - dynamics, stability, numerical analysis, statistics, operational research,...
- 95 - 98* • High school diploma in science and special maths training classes

PERSONALITY

- community* • Board member and treasurer of Globenet (non-profit web host and ISP) since 2004
 - group organization and coordination
 - communication, documentation, technical support
 - law, ethics and use of the Internet

Member of FDN, Ouvatton, Apinc, Afpy, April and EFF
- japan* • Experience of the country, language and culture
 - several visits (18 months)
 - professional experiences and many contacts
 - interest in literature, history, popular culture, martial arts