

# STEPHANE JORDI, M.Sc.

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## GOALS

Work in a high tech, research driven, challenging environment where the competencies can be shared with individuals and positively impact their lives, such as data processing shaping medical decisions, saving lives by reducing risks, raising awareness and increase educational levels.

Cross-platform development promotion and architecture.

Leading a team and defining the products roadmap, as well as coding.

Specialized and interested in "data crunching" and data oriented processing/innovation.

## WHAT I LIKE AND DO

Specialized in native cross platform application development (iOS, Android, OS/X, Windows) using C++ and Delphi Object Pascal as my main tools.

Highly experimented in developing software in data acquisition, analysis and representation.

I have been involved in number crunching and software development since the early 90s. I love to be involved in requirements, design and development processes.

Preferably writing applications in C++/Delphi and OOP (Object Oriented Programming), I can extend my knowledge using more than 15 different languages.

My main motivation is my passion: scientific environments and/or software projects are driving me.

My career brought me to work in several countries (USA, Guatemala, Nicaragua, Indonesia, Philippines, Japan, Europe) and in several industries, non-profit organizations, international partners.

## EDUCATION

### Geophysics, Master of Science

1993

University of Geneva, Switzerland

Volcanology option.

Data Acquisition and Analysis methods and related software solution development.

Specialized in data acquisition, data processing, data analyzing and data presentation.

Master of Science developed and applied to the surveillance of a volcano complex set in Guatemala in cooperation with the Swiss Disaster Relief Unit.

### Earth Sciences, Bachelor of Science

1990

University of Geneva, Switzerland

Main Science education, including teaching computing for Geologists.

### Baccalauréat Scientifique Français

1985

French Scientific Baccalaureat, Institut Valcreuse, Lausanne, Switzerland

### Baccalauréat Technique

1984

Technical Baccalaureat, Gymnase de Chamblandes, Lausanne, Switzerland

### Software Skills

Adobe  
Dreamweaver  
Adobe Photoshop  
Act!  
Canvas  
Eclipse IDE  
MS Office Suite  
MS Project  
PaperPort  
Video Edition  
WordPerfect Office

### Development Skills

Assembler  
Basic  
C  
C++  
Clipper  
ColdFusion  
Delphi  
Forth  
Fortran  
Lisp  
ObjectPAL  
PHP  
Perl  
Pascal  
PostScript  
Prolog  
VBA Office

### Technology

AJAX  
CSS  
HTML/XHTML  
JavaScript  
Shell scripting  
SQL  
XML  
  
MySQL  
  
Linux/UNIX  
Windows Vista/XP  
Macintosh  
Novell Netware  
Apache/Tomcat

## EXPERIENCE

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**Certifications**  
Novell SUSE Linux  
Rational Rose UML

### **Specialized Computing Architect Engineer**

June 2008 - Present

**City of Geneva, Switzerland**

Linux systems and servers (administration, setup and maintenance, security strategies).

Lotus Notes Domino servers (administration, setup and maintenance, deployment, archiving solutions, project management).

Novell networks (administration, ConsoleOne, iManager and OES migration).

MySQL servers (administration, setup, maintenance, security).

ServiceNow ticketing service administration.

Alfresco solutions.

ownCloud Manager and Integrator.

### **Invited Scientific Lecturer**

April 2008

**Webster University, Geneva, Switzerland**

Invited lecturer at the Webster University at the Geneva campus, Switzerland, for a 2 week class on applied computing (computerized volcanic risks monitoring).

### **Senior Software Developer and Architect**

June 1999 – June 2008

**City of Geneva, Switzerland**

Software architect, Software Solution in Delphi, C++, PHP.

Requirements analysis, software design, development, and documentation.

Geographical Information System administrator.

Project Manager.

Student supervision.

### **Senior Software Architect for Data Analysis, Scientific Software**

Nov 1999 - Present

**TiltSoft, Switzerland**

Cross-platform native application development for Windows, Mac OS/X, iOS (iPhones/iPad) and Android in both C++ and Delphi (with 1 unique codebase to maintain).

Specialized in scientific data acquisition, processing, analysis and representation.

Creation of my own company, specialized in computerized scientific solutions, as well as geophysical and volcano monitoring techniques and answers.

The competence offered is broadly covering scientific requirements, budget estimations, compliant software solution developments, data acquisition, data processing, data analysis, data interpretation and data representation (graphically) as well as advising civil defense and civil protection in risk prone areas worldwide (mainly natural threats like eruptions and earthquakes).

Cooperates closely with:

- PHIVOLCS, Philippines
- US Geological Survey, USA
- Data Environment, France
- University of Grenoble, France
- Merapi Volcano Observatory, Indonesia
- Delairco Ltd., Australia
- Mitsubishi, Japan
- Japan Weather Association, Japan

See [www.tiltsoft.com](http://www.tiltsoft.com) for more information.

**Speaker, Senior I/T Specialist**

May 2004

**Dubai**, United Arab Emirates

Representing the City of Geneva. Introduced "Geographical Information Systems as a Help to Manage a City Like Geneva" to the city of Dubai and invited sister cities attending the conference.

**Senior Software Developer**

January – May 1999

**MMD**, Lausanne, Switzerland

Software development engineer in the multimedia field and web information distribution.

Tools used were ColdFusion and ASP.

**Senior Software Developer and Architect**

1998

**Kinometrics Inc.**, Pasadena, California, USA

Software development engineer in Nuclear Power Plant seismic monitoring.

Development of a fully integrated surveillance and analysis system to trigger alarms in case of earthquakes.

Also in charge of the Novell network administration.

**Senior Software Developer and Architect**

1994-1997

**Kinometrics SA.**, Prévèrenge, Switzerland

Software development engineer in Nuclear Power Plant seismic monitoring.

Development of a fully integrated surveillance and analysis system to trigger alarms in case of earthquakes.

**Software Developer**

1994-1995

**University of Geneva**, Switzerland

Creation of an automatic data acquisition system at the Dpt of Physiology, on a Macintosh-based platform to control a robot that prepares neuronal receptors for nicotinic reactions, injects drugs into them and then acquires physiological data. A built-in data graphical processing tool has also been developed (1994-1995).

**Invited Scientist**August 1st – November 4<sup>th</sup>, 1994**Cascades Volcano Observatory - USGS**, Vancouver, WA, USA

Creation of an RSAM seismic data processing Windows application.

Participation in emergency volcanic disasters seismic equipment setup (for Rabaul volcano, Papua-New Guinea).

**Miscellaneous**

1980-1994

Research Assistant to the University of Geneva (Geophysics).

Software Development for a database used by the European Society for Engineers.

Software Development for the Swiss Geophysical Commission.

In charge of the computer center for the Press & Information services at the Swiss Federal Institute of Technology, in Lausanne (EPFL), Switzerland, 1987-1995.

Junior Developer for the main computer center at the Swiss Federal Institute of Technology, in Lausanne (EPFL), Switzerland, 1980-1984.

Platforms involved: Cyber, Eclipse, Norsk Data, VAX, Cray, PC (MS-DOS & Windows), NeXT and SUN workstations.

## MISC. ACTIVITIES

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Member of the **Swiss Disaster Relief Unit** since 1993. Specialization in seismic and volcanic risks, in the prevention group (population awareness, preparedness and evacuation strategies).

Member of the Directorial Comity for the **Territorial Information** of the City of Geneva (SITV), which gathers all competencies in GIS (Geographical Information Systems).

Member of the **Society of Volcanology** of Geneva, Switzerland.

Member of the **American Geophysical Union** since 1991.

Successful completion of the **USGS' "Helicopter & Airplane Safety"** required to fly with USGS teams.

## PUBLICATIONS/PRESENTATIONS

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Jordi, S., Kessler, M., et al., 1990, *Le Volcanisme de la Taupo Volcanic Zone (TVZ) - Nouvelle Zélande*, Geneva, Switzerland, 17pp.

Jordi, S., 1991, *L'évolution du Vésuve depuis 1850*, Geneva, Switzerland.

Jordi, S., 1993, *Seismo-volcanic Acquisition and Analysis of the Fuego-Acatenango Complex (Guatemala): An Automated Approach*, University of Geneva, Master of Science Collection, Switzerland.

Wagner, J.-J., Gong, G., Sartori, M. & Jordi, St., 1999, *A catalogue of physical properties of rocks from Swiss Alps and nearby areas.*, in *Matériaux pour la Géologie de la Suisse, série géophysique*, 32, 80pp..

Jordi, S., 2001, *Volcano Monitoring*, in *Dr. Dobb's Journal*, 322, 64-70, USA.

Jordi, S., 2004, *Geographical Information Systems as a Help to Manage a City like Geneva*, Dubai, UAE Conference.

Jordi, S., 2008, *Computerized Volcano Monitoring, Prevention and Prediction*, Webster University, 8h class.

## PERSONAL INFORMATION

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Date of birth: Nov 1, 1964  
Citizenship: Swiss  
Status: In couple. One daughter.  
Languages: French (mother tongue)  
English (written, spoken, fluent)  
German & Spanish (good basis)  
Greek (currently learning)

## WORLDWIDE SCIENTIFIC MISSIONS

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### Guatemala

Scientific support mission for the SDRU in Guatemala (March-April 1993) to set up and install a volcanic-seismic data acquisition and processing network for the Fuego-Acatenango and Pacaya volcanoes. Creation of a seismic data processing and graphical information presentation application (MS-Dos platform).

Scientific support mission for the SDRU in Guatemala (3 weeks) in November 1993 to upgrade software and hardware at the volcano observatory. Attending an IDNDR international conference on volcanic risks of the Santa Marià volcano.

Scientific support mission for the SDRU in Guatemala (Oct. 1994). Installation of a new computer-based seismic data acquisition.

Scientific support mission for the SDRU in Guatemala (Nov. 1994). Seismic data acquisition update.

Scientific support mission for the SDRU in Guatemala (Apr. 1995). Seismic data acquisition system update. Support of a Swiss National TV team reporting on volcanic hazards and risks monitoring (scientific magazine "Telescope").

Scientific support mission for the SDRU in Guatemala (Sept. 1995).

Scientific support mission for the SDRU in Nicaragua (Nov. 1996). Teaching at a GIS meeting held in Managua for the volcanology departments and the civil defense units of both Nicaragua and Guatemala. Theme: advanced managing volcanic risks (Montserrat Volcano, West Indies) with the help of GIS.

Scientific support mission for the Swiss Disaster Relief Unit (SDRU) in Guatemala in Nov. 1996. Installation of a new computer network and upgrade of the volcano-seismic analysis tools at the Volcanology Department of Guatemala City.

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### Nicaragua

Scientific support mission for the SDRU in Managua, Nicaragua (Nov. 1994). Fine tuning of all seismic data acquisition parameters. Teaching of seismic data processing at INETER.

Scientific support mission for the SDRU in Nicaragua (2 weeks in September 1994) to install a complete volcanic-seismic data acquisition and processing system (same as the one in Guatemala) at the INETER (National Institute of Territorial Studies).

Scientific support mission for the SDRU in Managua, Nicaragua (Apr. 1995). Installation of a RSAM-based seismic system at INETER.

Scientific support mission for the SDRU in Nicaragua (Sept. 1995). Teaching at a GIS meeting held in Managua for the volcanology departments and the civil defense units of both Nicaragua and Guatemala. Theme: managing volcanic risks at Concepcion volcano (Ometepe Island, Nicaragua) with the help of GIS.

Emergency support for Cerro Negro eruption in Nicaragua, for two weeks, in Nov-Dec 1995.

Scientific support mission for the SDRU in Nicaragua (Nov. 1996). Teaching at a GIS meeting held in Managua for the volcanology departments and the civil defense units of both Nicaragua and Guatemala. Theme: advanced managing volcanic risks (Montserrat Volcano, West Indies) with the help of GIS.

USA

Assistance support for Cascades Volcano Observatory (USGS) at Augustine volcano, Alaska, Aug. 1996, for GPS deformation system installation and programming.

Mission to USGS, November 2004. Finalization of thermal monitoring and charting tool specifications. CVO, Vancouver, WA and AVO, Anchorage, Alaska.  
Instruments added to the St Helens' dome.

Elaboration of the specifications for a personalized version of the TiltSoft software for the USGS, to be used worldwide in the different observatories where they operate. Sept, Oct. and Nov. 2003 at the Cascades Volcano Observatory, Vancouver, WA, USA.

Support to a Swiss TV team in Pasadena, CA, to help them direct a documentary on earthquakes. Directly participating in the show. 1998.

Indonesia and France

Scientific mission to the Indonesian Volcano Observatory in the Kelut Volcano in Indonesia, and support to the Institut of Earth Physics from Grenoble (France) and the University of Chambéry (France).

Adaptation of my Tiltmeters application (running at the Merapi volcano), September 1998.  
That particular software version is a customized technological solution covering rain gauges, RSAM, SSAM, seismic data, wind, lahars, gaz and deformation (GPS and tiltmeters).  
The application is now multilingual.

Philippines, Australia and Japan

Complete elaboration of the data interpretation and charting software for the PHIVOLCS project. Training of the team in Manilla for the hardware installation, volcano monitoring methods, as well as the software use. Nov 2002 and Jan 2003.

Scientific mission in Manila, Philippines, in the frame of a volcano monitoring project with PHIVOLCS about volcanic deformation measurement. The project was financed by the Japanese Humanitarian Aid Fund and led my Mitsubishi.

Contracted by an Australian company. Definitions of the needs and methodology to be used. July 2002.

