

# ERIC NICOLAS

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36-year old  
French citizenship

## Equity & derivatives front office 12-year experience

### Key skills

**Equity & Derivatives:** quantitative analysis, vanilla and exotics options pricing, trading strategies, market making, risk analysis.

**Management:** Recruitment, team management and motivation, project management.

**Software architecture and development:** Object oriented design, distributed systems, databases, real-time systems. Electronic trading system architectures. C++ and Java expert. Functional programming (C, VB), web (HTML, XML, CSS)...

### Professional experience

2007..

#### **BNP Paribas Paris, Harewood AM, Risk Controller**

Engineering of the independent pricing system for funds with exotic payoffs. Fully automatic market data integration from major providers (Bloomberg, Reuters, Totem...). Monte Carlo engine integration and validation.

Analysis and implementation of new pricing models: hedge funds and commodities underlyings, dynamic basket optimization using efficient frontier techniques...

Analysis and implementation of an automated daily analysis of regulatory and contractual investment limits. Notification of all limit breaches to the fund managers, follow up of actions.

Participate in investment board and risk control board. Registered with the french financial authority (AMF). Management of one risk control assistant.

- 2005..2007 **BNP Paribas, Tokyo, Equity & Derivatives Trading**
- Responsible for an automated options trading platform for Korean market. Historical market data collection, implementation of various trading strategies and validation via back testing techniques.
- Trading on the market making desk, Korean KOSPI200 options and futures market.
- 2003..2005 **BNP Paribas, Paris, Equity & Derivatives Research**
- Responsible for the worldwide architecture of front office softwares within a 30-people research team. Specification, implementation and optimization of shared components (connection to real time feeds, order routing, proprietary middle ware based on Tibco Rendez-vous, Corba integration, ...), integration of innovative technologies (ACE/TAO, QT, distributed computing).
- In parallel to this transversal role: responsible for an automated strategy software platform as well as some dedicated stocks and derivatives arbitrage strategies, in cooperation with traders and research.
- 2002..2003 **BNP Paribas, Paris, Equity & Derivatives Research**
- Responsibility for the market making applications suite for France, United Kingdom, Netherlands, Japan and Hong-Kong trading. These software modules (front office integration, order routing, real-time graphical front end) are used by many traders, with a failure rate extremely low.
- 2001..2002 **Next generation market, Paris, CTO**
- Co-founder, core shareholder and chief technology officer responsible for the technology strategy of the company. Development of all interfaces to the core computation library (Ms Excel, PHP, ASP.Net) and of all the web aspects (commercial web site, business web front ends). Consulting work: C++ development, SQL, Web, MsExcel, real-time data integration.
- 2000..now **Aventures Intérieures, Paris, Partner**
- Co-founder, core shareholder. A.I. markets multimedia contents in the area of DVD and Music, such as the full database of existing DVDs in France (visible on <http://www.dvdf.com/>).
- Responsible for the technical infrastructure, integration of B2B flows with customers, financial advising, strategy. The company is growing quickly since 2002 (3 full time employees, € 170k gross earning).

2000..2001

**BNP Paribas, Londres, head of fixed-income e-commerce**

Business area: foreign exchange, interest rates derivatives, credit. Clients: 700 market operators worldwide; Budget: € 12M. The role includes creating an Intranet and Internet transactional and non-transactional services offering and connecting ten external electronic trading platforms to the bank's legacy systems (order routing and straight-through processing).

Selecting appropriate technologies to meet the objectives (The transactional core is built from C++ and Java components over a Corba middleware. Front ends are Java graphical user interfaces and web technologies —ASP, VBScript, COM, DCOM, SqlServer). Growing and managing a team from one to thirty people over a six month period. Projects portfolio management, reporting, and quality control techniques within the team.

Deliveries after a year:

- Foreign exchange web transactional suite (online order placing transactions...) accessible from Intranet and Internet
- About ten small communication applications integrated in a business Intranet together with internal news and real-time feeds.
- Financial research web site (categorised document repository) accessible from Intranet and Internet.
- A transactional “eRouter” backbone connected to three external etrade platforms (Eurex Bonds, BondClick, FxAll) and to internal front-office systems, both in London and New York.

1996..2000

**BNP, Paris, Fixed Income quant research**

IT project manager during a front-office pricing software rewrite. Business coverage: interest rates derivatives. Selection of new technologies (C++, Design patterns, Generic programming...), design and implementation of the software's object oriented framework, introduction of new VB/MsExcel interfacing techniques, distributed computing on heterogeneous cluster.

Technical expert of the team, technical support to the other team members. Software engineer in charge of porting a C front-office pricing software to Windows NT. Interface to Microsoft Excel. Administration of a Windows workstations network and its Windows NT server. Installation of an intranet Web server.

1995..1996

**Conscription, CEA, Grenoble, Software engineer**

Military conscription in Grenoble's CEA (Commissariat à l'Energie Atomique). Automatic detection of breast cancer using image analysis techniques (co-author in a published research paper). Assistant to the UNIX network administrator (SUN Solaris workstations and servers).

## Education

	Graduated from <b>Ecole Supérieure d'Optique Paris</b> (French leading engineering school in advanced optics), specialised in Image Processing.
Languages	<b>French</b> : native language. <b>English</b> : fluent. <b>Spanish</b> : academic. <b>Japanese</b> : basics.
Others.	Driving license. Asset mamangement : the risks and the controls (AFG). Participative management (BNP Paribas). Object oriented design (Orsys). Project management (Axime). Money Market Risk Management (IFF London).

## Hobbies

### **Photography :**

Photo blog on <http://erik-n.blogspot.com/>

Flickr profile on [http://www.flickr.com/photos/erik\\_n/sets/](http://www.flickr.com/photos/erik_n/sets/)

Photo books published on [http://stores.lulu.com/erik\\_n](http://stores.lulu.com/erik_n)

**Movies, DVD** : Creator of <http://www.dvdfre.com/>, 1<sup>st</sup> independant french information web site about DVD (600k pages viewed a month).

**Music** : Gold Medal of French Flûte in 1990. 1<sup>st</sup> flûte in a Paris University Symphonic Orchestra in 1994 and 1995.

**Computing** : Use and development of open source software.

EasyXLL <http://erik-n.net/software/easyxll/>

iFindSpace <http://erik-n.net/software/iFindSpace/>

Conjugue <http://erik-n.net/software/conjugue/>

Sword <http://erik-n.net/software/sword/>

**Travel, reading**