

# Statistician and Computer Scientist Quantitative Finance

## Vincent ZOONEKYND

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# Employment

## 2007–2011

Strategist, Vice President, Goldman Sachs Securities Lending (London, Tōkyō)

My work included modeling the fee clients (hedge funds) pay when they borrow stocks to sell them short, based on supply and demand; computing the P&L of the Securities Lending group, decomposing it to explain where it comes from, why it changes and to identify inefficiencies; computing various measures of "market colour" (changes and forecasts of supply and demand); and miscellaneous IT (rather than quant) tasks, such as data management, building GUIs or automating PDF reports.

## 2004-2007

Research Analyst, State Street Global Advisors Absolute Returns Strategies (London)

My research focused on: digital signal processing (Kalman filter, Hilbert transform); tick data; bayesian methods, mixed models; stock clustering, Kohonen maps; statistical arbitrage; diversity investing; machine learning; etc.

My responsibilities included: alpha computations and portfolio construction for our European and Japanese equity long-short strategies; generation of daily risk and performance attribution reports; interactive and graphical visualization of what happened to a stock (in R, for the portfolio managers); strategy backtests.

I also managed the trainees we had every summer and provided them with research subjects.

**2004** Bioinformatics scientist, BioRet (a start-up in biotechnology, Évry, France) Design and implementation of image analysis algorithms (mathematical morphology) for biological tests

High school teacher, Lycée Eiffel (Gagny, France)

1997–2002 Mathematician, Universities of Marne-la-Vallée, Paris 5 and Évry (France)

1997–1999

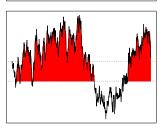
2002-2003

Computer science and math teacher in "classes préparatoires" Lycée Lakanal (Sceaux, France)

### Education

2004 Master in bioinformatics (Clermont-Ferrand, France)
2001 PhD in Mathematics (Paris 7, France)
1993–1997 Student at the École Normale Supérieure de Cachan (France)

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Skills
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**1993–1997** Student at the École Normale Supérieure de Cachan (Fran

## Languages Fluent in French and English, notions of Japanese.

**Statistics** Broad but non-academic knowledge. Contrary to most quants, my skills do not lie in stochastic processes and option pricing, but in statistics and data visualisation. The book reviews I write should give an overview of my centers of interest.

**Finance** Passive, active, long-short strategies, alpha sources; risk models; portfolio optimization; back-tests; performance attribution.

### **Operating Systems** Linux

**Programming Languages** R (I had a 1000-page long book project on *Statistics with R*), Python, Perl, C, C++, Java, Haskell, Oz, etc.

**Information Technology** Databases (traditional SQL databases and column stores, such as Sybase IQ), Web development (Php, MediaWiki), etc.

I used to write about those topics on my blog or my old web page.

## Miscellanies

**Mathematics** Co-founder of Hubris, the mathematical journal of the students of the ENS Cachan.

Hobbies Photography, running

