

Romain Vernoux

Computer Scientist

Contact

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Languages

French: mother tongue
English: fluent
German: academic

Programming

Java & Android
OCaml & Coq
C & C++
HTML5 & CSS3 & PHP

Education

- 2012–Now **Master** of Computer Science Ecole Normale Supérieure de Cachan, Paris, France
Master Parisien de Recherche en Informatique (MPRI)
Specialization in theoretical Computer Science
- 2011–2012 **Bachelor** of Computer Science Ecole Normale Supérieure de Cachan, Paris, France
With Honors, specialization in theoretical Computer Science
- 2009–2011 **Classes Préparatoires aux Grandes Écoles** Lycée du Parc, Lyon, France
Preparation for national competitive writing/oral exams for leading French “grandes écoles”, specialization in Mathematics, Physics and Computer Science
Ranked in the Top 25 in the national competitive exams
- 2009 **French Baccalauréat S.** Lycée Paul Langevin, La Seyne-sur-mer, France
With Honors, specialization in Mathematics and Physics

Experience

- 2013–2014 **UCSD** San Diego, California
Researcher
Maintained the codebase of the backend of the FORWARD project and extended its SQL++ query processor towards supporting semi-structured features and integrating non-relational datasources. Introduced SQL++ as a unifying data model and query language for NoSQL, NewSQL and SQL-on-Hadoop databases and classified the query capabilities of 11 of them, including MongoDB, Couchbase and Hive, in terms of SQL++. Also contributed in the development of a distributor that decomposes federated queries into efficient subqueries and delegates them to NoSQL/NewSQL query processors with limited capabilities.
- Summer 2013 **UCSD** San Diego, California
Research Intern
Designed and implemented an asynchronous SQL++ query processor for FORWARD. Introduced the concept of Approximation Queries, that first return approximate results with low latency using client-side query computation and caches, then asynchronously update them as soon as more precise data coming from more expensive computation on the server side becomes available.
- Summer 2012 **SpacialDB** Berlin, Germany
Software Engineer Intern
Designed and developed the mobile API and Android SDK of SpacialDB, a cloud-based service providing geographical databases. It enables Android developers to efficiently create location-based applications using only high-level constructs for GPS, Cell-ID and WiFi-based location, user tracking, geo-fencing, and push notifications.
- 2011–2012 **Student's Union** Ecole Normale Supérieure de Cachan, Paris, France
Vice-President
In charge of sponsors and communication. Managed existing relationships and created new partnerships with private companies. Raised fundings for students social events.

Publications

The SQL++ Unifying Semi-structured Query Language, and an Expressiveness Benchmark of SQL-on-Hadoop, NoSQL and NewSQL Databases

Kian Win Ong, Yannis Papakonstantinou, Romain Vernoux

report, 2014

Holistic Data Access Optimization for Analytics Reports

Yupeng Fu, Kian Win Ong, Yannis Papakonstantinou, Romain Vernoux

report, 2013

Creations

Android **Developed and released two Android apps on Google Play**

- AES Crypto, a cryptographic application
- OCaml Toplevel for Android, a tiny IDE for OCaml

Web **Personal Webpage**

<http://vernoux.fi>

Photo **Photography Portfolio**

<http://vernoux.fi/photography>

Interests

Professional: programming, software design, databases, big data, compilers

Personal: photography, writing, philosophy, chess, cinema, motorsports, racket sports, skiing, mountain biking