



Google Paris & University Relations

Presentation to ENS - 23-24 Sept 2014

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**University Relations Manager
for France**

- Former student of Telecom ParisTech (Paris),
- PhD in Image Processing at Telecom ParisTech (1984),
- Worked for IBM, EPFL and HP in various positions (R&D, Assistant Prof., Sales, M&A, Management)
- Joined Google early 2011, member of University relations team in EMEA



Vincent Simonet vtst@google.com

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**Engineering Manager for YouTube
in Paris**

- Former student of École normale supérieure (Paris),
- PhD in Computer Science at INRIA (2004),
- Worked during 7 years at AREVA for the design of safety-critical computer systems,
- Joined Google in 2011, at the opening of Paris engineering center.

Outline

- Google Paris
- Research Programs
- Student Programs



Foreword

Google's **engagement with universities** stems from our mission to organize the world's information and make it universally accessible and useful.

Our university programs are rooted in our mission and engineering culture, and are designed to **meet the needs of, and leverage capabilities of, both Google and the universities.**

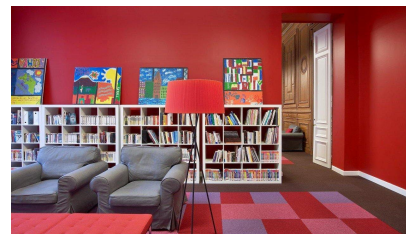
In partnership with universities, we help advance the social contract through:

- **educating** the next generation of engineers
- **innovation** in products and service through research
- **engaging** with the community

Google Paris

Google Paris

- Google opened an office in Paris in **2004**. Engineering center and Cultural Institute were created in **2011**.
- Beginning of **2014**, around 550 Googlers in Paris:
 - Headquarters of Google for France and SEEMEA,
 - Around 100 engineers for the Engineering Center and Cultural Institute.
- Office located 8 rue de Londres, next to Gare Saint-Lazare.



Google Paris Engineering Center

- Around **100 engineers**, from France, Europe and abroad
- Working for **4 main product areas**: Chrome, Cultural Institute, YouTube, and Research
- Working for Google global products, as part of Google worldwide engineering organization.



Chrome in Paris



Chrome Android and iOS

All the features of Chrome: *fast, simple, secure*

New mobile challenges: *low RAM, slow CPUs, poor connectivity, limited power*

Paris teams: *UI features, performance, networking, infrastructure*

Cultural Institute



- **google.com/culturalinstitute:** More than 400 prestigious partners (MoMa, MET, ...) available online, with indoor streetview.
- **google.com/opengallery:** An open platform for *any* cultural institution to share their content online and narrate the underlying stories.
- **Digitization technologies:** Streetview, Gigapixel and 3D scanning.

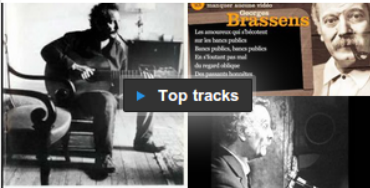
User experience, JavaScript, 3D, scalable infrastructure, data mining.



YouTube in Paris



Georges Brassens
Music






▶ Top tracks

Top tracks Albums

| | |
|--|------|
| Le Pornographe | 3:42 |
| La Mauvaise Réputation | 2:36 |
| Les Amoureux des Bancs Publics | 3:05 |
| Les Passantes | 4:11 |
| View all | |

Related Artists

| | | |
|--|---|--|
|  Jacques Brel |  Georges Moustaki |  Michel Sardou |
|--|---|--|

We develop algorithms and infrastructure for understanding what videos and channels are about. We create YouTube House Channels (like youtube.com/sports or youtube.com/music).

Algorithms, machine learning, data mining, large scale processing and infrastructure, natural language processing.

Research in Paris: Google's Optimization team



We use mathematical techniques to speed up Google services:



- Routing Street View cars through all the streets in the world
- Maneuvering high-altitude balloons to provide Internet access
- Removing jitter from YouTube movies
- Speeding up Google Search
- Improving the performance of the Linux kernel
- Developing open source, best-in-class optimization solvers
- ...and about a dozen other projects

Constraint programming, linear/integer programming, flow & graph algorithms.

All Engineering Roles are represented in Paris

- Software Engineers
- Product Managers
- UX Designers
- Technical Lead Managers

Research Programs

University Relations in a nutshell

- **Goal:** Broadly to support research, teaching & learning, community outreach, recruitment
- **Programmes of support:** mostly open to all universities, highly competitive, looking for out-of-the-box projects and ideas
- Designed to be **impactful**, and to generate **measurable outcomes**
- **Bottom-up:** connecting academics and Google engineers/researchers
- Building **long-term, sustainable partnerships**
- University Relations team works with a **set of partner universities**

Research Programs: supporting world-class research

Faculty Research Awards

- open competition (2 calls a year)
- award to support for PhD for one year (gift)
- engineers engaged: fostering links, reviewing, sponsors



Google
Faculty Research Awards

Focused Awards/Programmes

- by invitation with established partners
- focused on mutually interesting, strategic topics
- 2-3 year awards (gift)

European Doctoral Fellowships

- 3-year fellowship in nominated areas
- by invitation and competitive (~ 15 per year across Europe)
- engineer mentors

Faculty Research Awards

Purpose:

- Support [world-class](#), full-time academics pursuing research in [areas of mutual interest](#).
- Critical factors for receiving award:
 - strong research group with [excellent track record](#)
 - research proposed of [relevance/interest](#) to Google
 - sound proposal with [clear objectives and measurable outcomes](#)
 - [Google sponsor](#) (Eng) supportive of the research, and interested in outcomes

Process:

- Desirable to have Google sponsor as early as possible
- Check details of Research Awards at [this site](#)
- Things to note:
 - Budget up to \$US150K but typically order of \$US50-100K
 - One year Gift (Direct costs only, no overheads)
 - Deadlines: 15th April, 15th October

Faculty Research Awards: Topics

Computational neuroscience

Economics and market algorithms

Geo/maps

Human-computer interaction

Information retrieval, extraction, and organization

Machine learning and data mining

Machine perception

Machine translation

Mobile

Natural language processing

Networking

Online education at scale

Physical interactions with devices

Policy and standards

Privacy

Robotics

Security

Social networks

Software engineering and programming languages

Speech

Structured data and database management

Systems (hardware and software)

Recent Faculty Research Awards in France

2014:

- H. Afsrar/Uni Troyes - Ride sharing: An optimization tool through Google Maps API

2013:

- Marc Shapiro/INRIA - Optimal and correct replicated datatypes: lists
- Hoetech Wee/ENS - On the security of TLS
- Maks Ovjanikov/INRIA-LIX - Joint Analysis of Images and 3D shapes
- Olivier Temam/INRIA-ByMoore - Exploring Neuro-Inspired Hardware Accelerators

2012:

- Francis Bach/ENS-SIERRA - Large scale adaptive machine learning with finite data sets
- Joseph Sivic/ENS-WILLOW - Learning to annotate videos from movie scripts

2011:

- Derrick Kondo/INRIA-MESCAL - Predicting Idleness in Data Centers
- Jean-Daniel Fekete/INRIA-AVIZ - Data Visualization for the People
- Marie-Christine Durant/SciencesPo - Improvement of Graphics Representation

Focused Awards and Programmes

Purpose:

- Support **world-class**, full-time academics pursuing research in **areas of mutual interest**
- Critical factors for receiving award:
 - strong research group with **excellent track record**
 - exceptional research proposed **of key interest to Google as well as the research community**
 - sound proposal with **clear objectives and measurable outcomes**
 - **Google sponsor** (Eng team/project) ready to be involved during the duration of the project

Process:

- Preparation work of 6-12 months with the Google sponsor
- Check details and examples of Focused Research Awards at [this site](#)
- Things to note:
 - Budget typically order of \$US500K/year, sometimes split between several universities
 - Up to 3 years Gift (Direct costs only, no overheads)
 - No deadline

Transit Planning in Google Maps (FA 2012)

Get directions My places

San Diego Amtrak Station
Seaworld @32.763903-117.229457

Leave now 08/17/12 1:47pm

GET DIRECTIONS

Suggested routes

| | |
|-----------------|--------------|
| | 37 mins |
| 5:43am - 6:20am | |
| | 58 mins |
| 5:22am - 6:20am | Alert |
| | 47 mins |
| 5:28am - 6:15am | |
| | 1 hour 1 min |
| 5:09am - 6:11am | |

Transit directions to Seaworld

San Diego Santa Fe Depot

America Plaza Trolley Station Stop ID: 75085
Blue Line Light rail towards Old Town
 5:43am - 5:55am (12 mins, 4 stops)

Old Town Transit Center Stop ID: 94020
Bus towards A Pacific Beach
 6:00am - 6:09am (9 mins, 7 stops)

Ingraham St & Perez Cove Wy Stop ID: 12650
Walk to Seaworld
 About 11 mins (0.6 mi)

[Prof Dorothea Wagner \(KIT\)](#)

Google Focused Award in 2012

Topic: Next Generation Route Planning

Google Sponsor: Geo team

Speech at 10Y Google Zurich event

Web Alter Ego (FA 2013)

Focus: The Web-Alter Ego project aims to identify a social Web user's alter egos, i.e. user profiles exhibiting similar interests in their internet browsing, in real time and with a very strong, dynamic presence. The aim is to identify a personalised "slice" of the web associated with each user with a view to personalising a number of services, from recommendation to browsing and searching for information.

There are plenty of practical and theoretical challenges, and the project focuses, in particular, on:

- managing and representing heterogeneous interests so as to calculate similarities between user profiles in a multi-application context.
- upscaling of the underlying infrastructure, potentially involving Cloud servers and user machines to manage interests and ever more dynamic content flows.
- enabling users to control their own data, in order to take privacy and anonymity concerns into account.

PIs:

Anne-Marie Kermarrec, [INRIA](#)

Rachid Guerraoui, [EPFL](#)

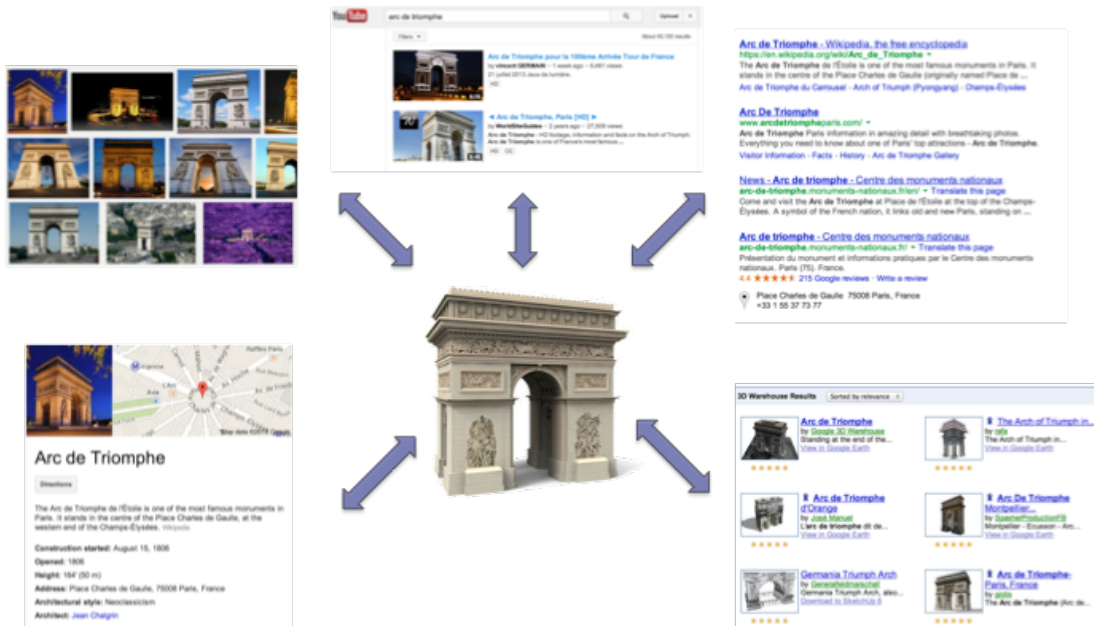
Google Focused Award in 2013

Topic: Establishment of an original architecture for personalising web services

Google Sponsor: Social team

3D (Focused Award 2014)

'Our ultimate aim is to lift 3D models from the material world to the information world'



PIs:
 Maks Ovsjanikov (EP & INRIA)
 Leo Guibas (Stanford)
 Daniel Cohen-Or (Tel Aviv University)

Google Focused Award in 2014

Topic: Making 3D Data Universally Accessible and Useful

Google Sponsor: 3D Team in MTV

European Doctoral Fellowship Programme

General Objectives:

- Build and improve relationships with the top CS research universities
- Support high quality research
- Funding the best PhD students

The Fellowship is intended to support the:

- **best** (research) **students** supervised by the
- **best academics** in their field, on projects that can deliver
- **research** with the **highest impact and originality**

The reviewing process has been developed to achieve this three part aim.

Additionally, we are looking for evidence that the **PhD student and the research topic is interesting for Google & that the student has right background for a Google Engineering internship.**

European Doctoral Fellowship Overview

Eligibility Criteria - Students must meet the following criteria:

- Must be a PhD student at any stage of research in the areas of expertise represented by the fellowships
- Must attend a full-time PhD position at one of the selected universities
- Must be nominated by their department / university
- Cannot be employed by Google (except as an Intern)

Award (for up to three years)

- Yearly bursary towards stipend / salary, health care, social benefits, tuition and fees, conference travel and personal computing equipment. In France: 65k\$
- Google Research Mentor
- Opportunity to apply for a paid internship

European Doctoral Fellowship Application (by invitation)

- 35 - 40 Universities are invited - usually Computer Science Departments across Europe and Israel are invited to nominate 2 applicants each
- 55 - 65 Applications received
- 12 - 15 Fellowships will be awarded

[Doctoral Fellowship Call](#)

[Previous Recipients](#)

Blog Post Series with previous fellows: [Ian Zerny](#), [Cynthia Liem](#), [Ian Goodfellow](#)

Application content

Student CV, Transcripts, Research / Dissertation proposal, 2 - 3 Letters of Recommendation, CV from the proposed supervisor, Name of fellowship for which the student is being considered

Recent European Doctoral Fellowships in France

- 2010: Marek Zawirski, Distributed Computing, student of Marc Shapiro (INRIA)
- 2011: Tobias Grosser, Efficiency Computing, student of Albert Cohen (ENS/Parkas)
- 2012: Fragkiskos Malliaros, Graph Mining, student of Michalis Vazirgiannis (EP)
- 2013: Robin Morisset, Operating Systems, student of Albert Cohen and Francesco Zappa Nardelli (ENS/Parkas)
- 2013: Annelie Heuser, Privacy, student of Olivier Rioul (Institut Telecom)

Knowledge Transfer Programmes

Visiting Faculty

- visiting positions in research/engineering
- 6 -18 months
- paid positions

Faculty Summits or Focused Summits

- annual events, academics from across EMEA or across the world
- technical talks, demonstrations, roundtables, networking
- either general event or topic-specific (eg. NLP, [Speech](#), Compilers, MP, [MOOCs](#))

Events, Visits and Talks

- tech talks, workshops
- sponsoring of research conferences like WWW, ICIP, [Interspeech](#), or [ECCV](#)

Student and Outreach Programs

University Tech Talks

- Tech Talk by a (tech) Googler on the campus from the school, in general followed by a short buffet / discussion so that students can connect directly with Googlers
- Typically once or twice a year
- Purely engineering topics, or broader topics like product management or user experience
- Support needed from university: room + advertising + invitation list.

Google Anita Borg Scholarship

www.google.com/anitaborg/emea

- Committed to advancing computing and technology through faculty research grants
- Provide scholarships to encourage students to excel in their studies
- Remove barriers that keep women from entering computing and technology fields
- Encourage students to become active role models and leaders in their community

Anita's Vision: *"50/50 by 2020": women earning computing degrees would be 50% of the graduates by year 2020.*



Google Anita Borg Scholarship

www.google.com/anitaborg/emea

- Eligibility: Female students pursuing Bachelors, Masters or PhD and studying Computer Science, Computer Engineering, Informatics, Applied Mathematics, or closely related fields
- Criteria: Good academic performance, Leadership experience, and Passion for CS
- Award:
 - 7000 Euros to be used towards tuition, books, travel, conferences, etc.
 - Part of a Google community of women in technology
 - Invitation to attend a retreat in a Google European Office
 - Participation in a one-year Google development program
 - Google ambassador for outreach activity in local community

Programming contest



- Programming competition for students, academics and professionals in France
- 750 applications, 200 participants in 2014
- 2nd edition planned in 2015 Q1 (with an online qualification round)



Google Europe Scholarship for Students with Disabilities

www.google.com/studentswithdisabilities-europe

- Vision: to ensure that a disability is no longer a barrier to studying Computer Science and making an impact in the field.
- 7000 Euro Scholarship
- Applications for 2014 close 17 February 2014



MOOC: [Introduction to Web Accessibility](#)

Internships

- **Full-time paid positions:**
 - In Paris office, and all other Google Engineering Offices,
 - Minimum of 3 months,
 - Typically for L3, M1/M2 and PhD students in Computer Science,
- **Learning about Google-scale engineering:** typically develop production SW, some research-oriented work also possible.
- **Hiring process:**
 - Application via www.google.com/jobs/students,
 - Qualification interviews by phone (common to all EMEA offices),
 - Matching with positions offered by the different engineering teams.

Full time positions

- **Google is hiring talented engineers:**
 - Best place to work,
 - Recruit all year around,
 - In Paris, and other engineering offices.
- **Hiring process:**
 - Application via www.google.com/jobs/students,
 - Hiring process consisting mainly of technical interviews (some similarity to the "oraux" of French engineering schools),
 - See [tip and tricks](#) and [video](#) about preparing an application,
 - We would like to engage with students early, how to prepare themselves.

Contact Info

- Google portals:
 - For students: www.google.com/edu/students
 - For teachers: www.google.com/edu/teachers
 - Research programs: research.google.com/university/
- Contact persons:
 - Michel Benard: benard@google.com
 - Vincent Simonet: vtst@google.com