

# Laboratory of Informatics of Grenoble (LIG)



## LIG in short...

- ▶ Tutelles : CNRS / UJF / Grenoble INP / UPMF
- ▶ Partnership with Inria (7 EPC) and Stendhal
- ▶ About 500 members / 8 locations
  - 215 academics, 45 support staff
  - 150 PhDs
  - 90 Post-Doc and Engineers
- ▶ 5 research axis, 22 research teams
- ▶ About 200 contracts running for 8 M€
- ▶ AERES evaluation in 2010: A+

# Core Competences

Data and Knowledge Processing  
at Large Scale



## Teams

*AMA, EXMO, GETALP, HADAS, MRIM,  
STEAMER*

## Keywords:

Analysis and mining of complex data, Distributed management of big data, Geomatics, Knowledge extraction and representation, Machine learning, Multimedia Information Retrieval and Modelling, Natural Language Processing, Semantic web, Social networks, Speech analysis and processing

Formal Methods, Models,  
and Languages



## Teams

*CAPP, CONVECS, TYREX*

## Keywords:

Concurrent systems, Dependability, Embedded systems, Formal specification and verification, Models and programming for the Web, Models of computation, Programming languages and static analysis

Software and Information  
System Engineering



## Teams

*ADELE, SIGMA, VASCO*

## Keywords:

Dynamic middleware, Model-Driven Engineering, Security, Test

Interactive and  
Cognitive Systems



## Teams

*e-MOTION, IIHM, MAGMA, MeTAH, PRIMA*

## Keywords:

Computer Vision, Human-Computer Interaction, Multi-agent systems, Robotics, Smart Spaces, Technology Enhanced Learning, Usage

Distributed Systems, Parallel  
Computing, and Networks



## Teams

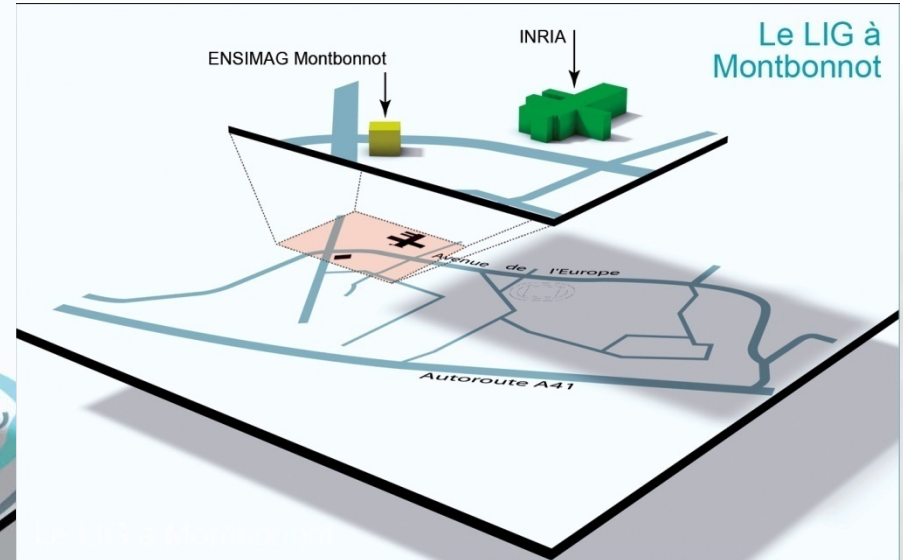
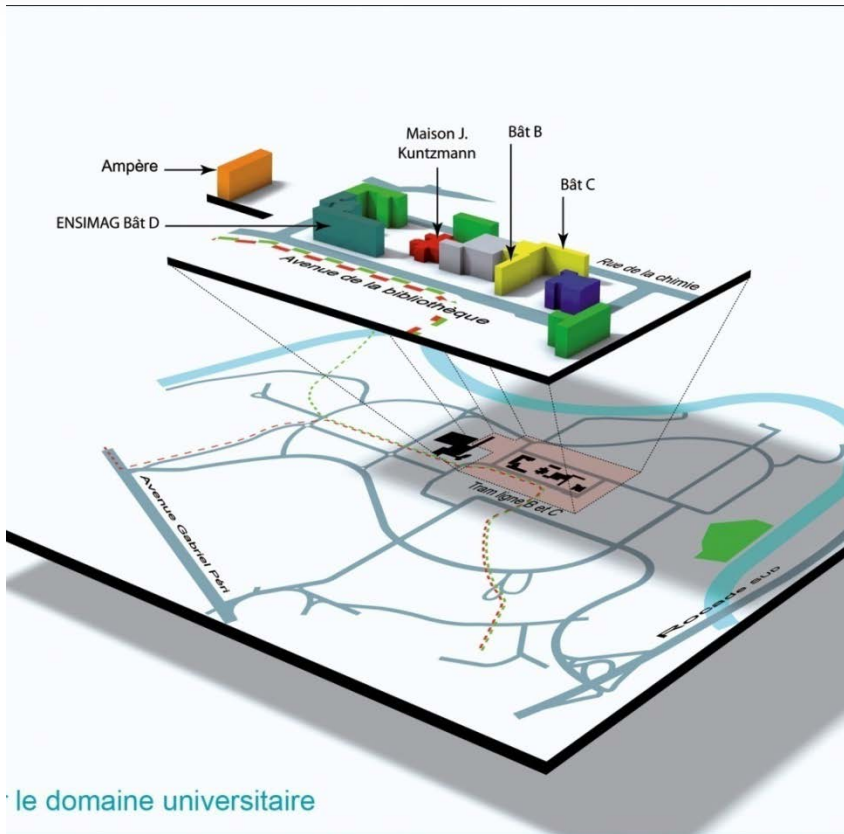
*DRAKKAR, ERODS, MESCAL, MOAIS,  
NANOSIM*

## Keywords:

Cloud Computing, Future Internet, Game Theory, Heterogeneous programming, High Performance Computing, Internet of Things, Multi-Core Programming, Parallel and Embedded Systems, Performance of Large-Scale Systems, Scheduling



# Grand jeu : retrouver les équipes dans les lieux de vie...



# Le labo est construit sur un Projet Scientifique

- ▶ *Evolution des STIC et de l'informatique*
  - Convergence du monde physique et du monde numérique
  - Science fondamentale au cœur des évolutions de nombreuses disciplines
  
- ▶ *Forces du LIG*
  - Génie Logiciel et Systèmes d'Information
  - Méthodes Formelles, Modèles et Langages
  - Systèmes Interactifs et Cognitifs
  - Systèmes Répartis, Calcul Parallèle et Réseaux
  - Traitement de Données et de Connaissances à Grande Echelle

# Si on voulait résumer en une phrase : Informatique ambiante et durable

- ▶ *Theory, models, algorithms, languages*
  - *Managing complexity*
    - Multi-scale, heterogeneous, dynamic, and autonomous
    - Safe, reliable, truthful, reconfigurable and evolutive
    - Multimodal, plastic, invisible or omnipresent interactions
    - Able to learn, understand, adapt and decide
  - *Green-inside*: with energy aware, security inside, ...
  - *Green-with-others*: multidisciplinary projects on environment, energy aspects, virtualization of services or processes...

# LIG organisation

- *Head team*
  - H. Martin
  - G. Calvary, E. Gaussier, MC Rousset, D. Trystram
- *5 Research axis*
  - Scientific cohesion
  - External visibility and internal exchanges
- *22 Research projects/teams at the core of the Lab*
  - Scientific focus and agenda
  - Various sizes and organisations (mutual support)
- *Transverse actions and facilities*
  - Scientific Life: Seminars, Keynote speeches, ...
  - Shared Platforms
  - Support teams: ADMINFI, MISI and PIMLIG
  - “Chargés de mission”

# Chargés de mission

## ► *Scientifique*

- Animation scientifique
- Doctorants
- Impacts sociétaux des TIC
- Axes scientifiques :

L. Besacier, D. Vaufreydaz, MC Rousset  
M. Villanova-Oliver, P. Mertikopoulos  
F. Prost  
A. Legrand, V. Quema, F. Prost, W. Serwe, S.  
Amer-Yahia, M. Amini, JP Chevallet, L. Du  
Bousquet, D. Rieu

## ► *International*

- Relations Europe
- Actions internationales

A. Duda  
J.L. Roch

## ► *Valorisation*

- Contrats, Valorisation
- Fablab
- Minalogic

Y. Falcone  
D. Donsez  
H. Garavel

## ► *Communication*

- Communication et web
- IST

G. Bisson  
G. Mounié , P. Reignier

## ► *Support*

- Infrastructures informatiques
- Support et qualité
- Immobilier

J.L. Richier  
N. Mandran  
P. Morat



# PIMLIG : Pôle d'Ingénierie Multidisciplinaire du LIG

## *Objectifs*

- ▶ Conception et le déploiement de plates-formes communes
- ▶ Développement des logiciels de recherche, maquettes et prototypes
- ▶ Conduite des expérimentations en lien avec les chercheurs

## *Exemples de Plates-Formes*

- ▶ Plate-forme Multicom
- ▶ Plate-forme fabMSTIC
- ▶ Plateforme "PlayGround"
- ▶ Plate-forme APAM : programmation d'applications dynamiques

# FABLAB MSTIC

- ▶ Responsables scientifiques : Didier Donzes / Vivien Quema
- ▶ CNRS : Contribution à la mise en place d'une FabLab pour le prototypage rapide d'objets innovants.



5000 euros



15000 euros

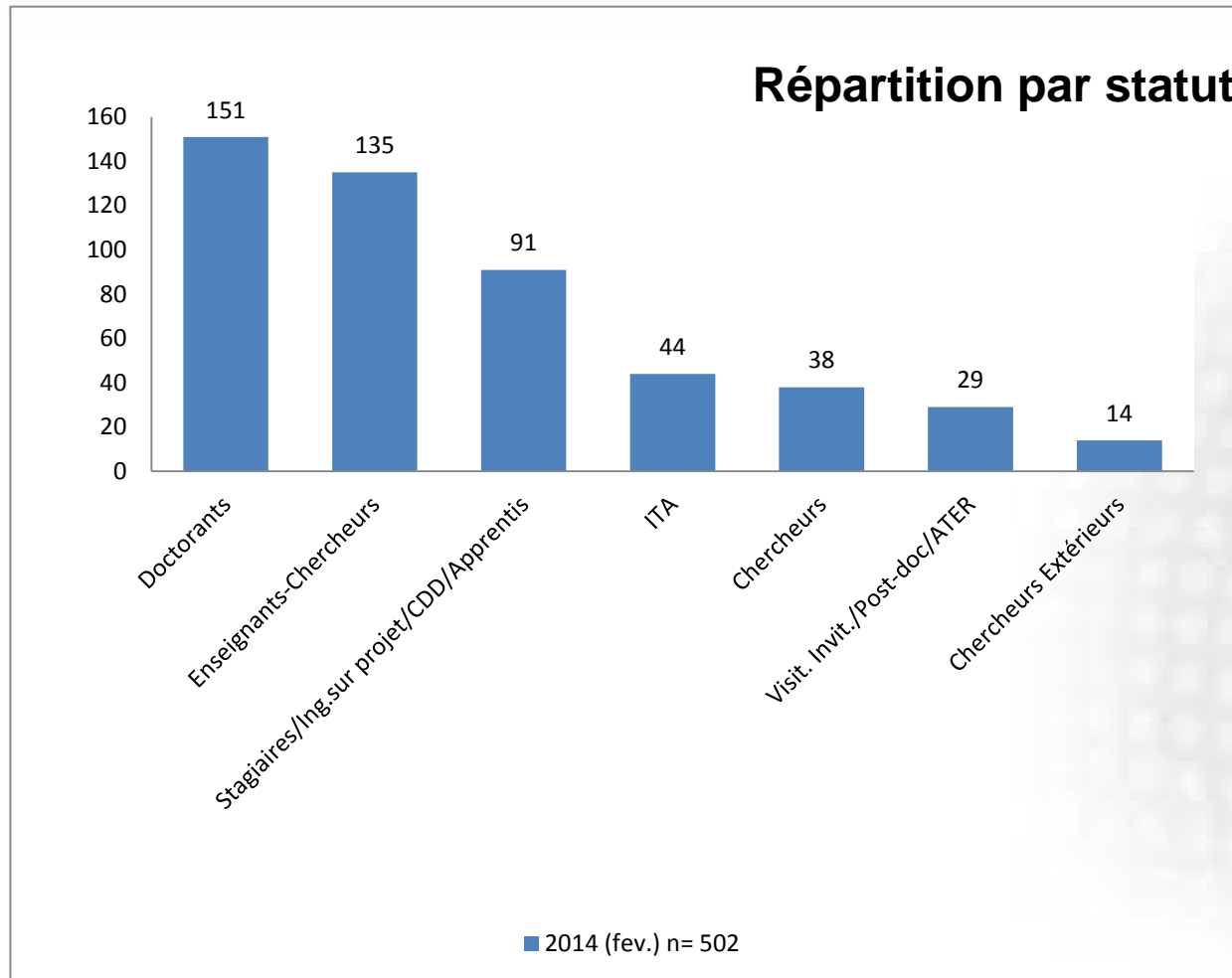
# PILSI - 2016



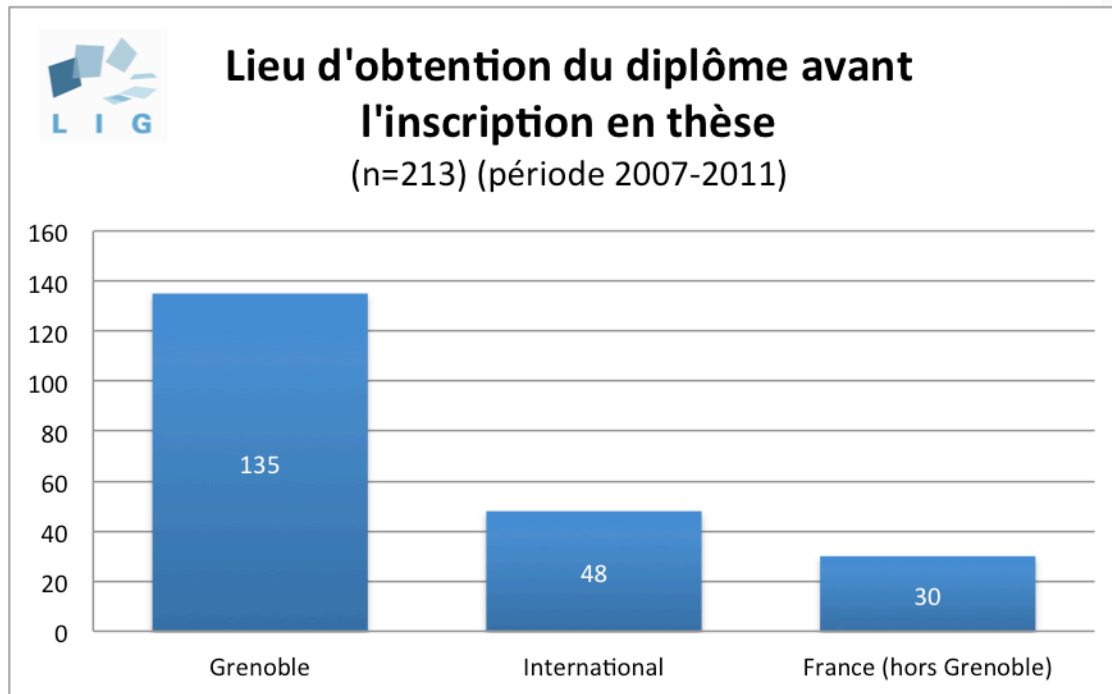
# Evolutions

- ▶ Génie des Logiciels et des Systèmes d'Information
  - ADELE, SIGMA, VASCO
- ▶ Méthodes Formelles, Modèles et Langages
  - CAPP, *CONVECS*, *TYREX*
- ▶ Systèmes Interactifs et Cognitifs
  - *E-MOTION*, IIHM, MAGMA, MeTAH, *PRIMA*
- ▶ Systèmes Répartis, Calcul Parallèle et Réseaux
  - DRAKKAR, ERODS, *MESCAL*, *MOAIS*, NANOSIM
- ▶ Traitement de Données et de Connaissances à Grande Echelle
  - AMA, *EXMO*, GETALP, HADAS, MRIM, STEAMER

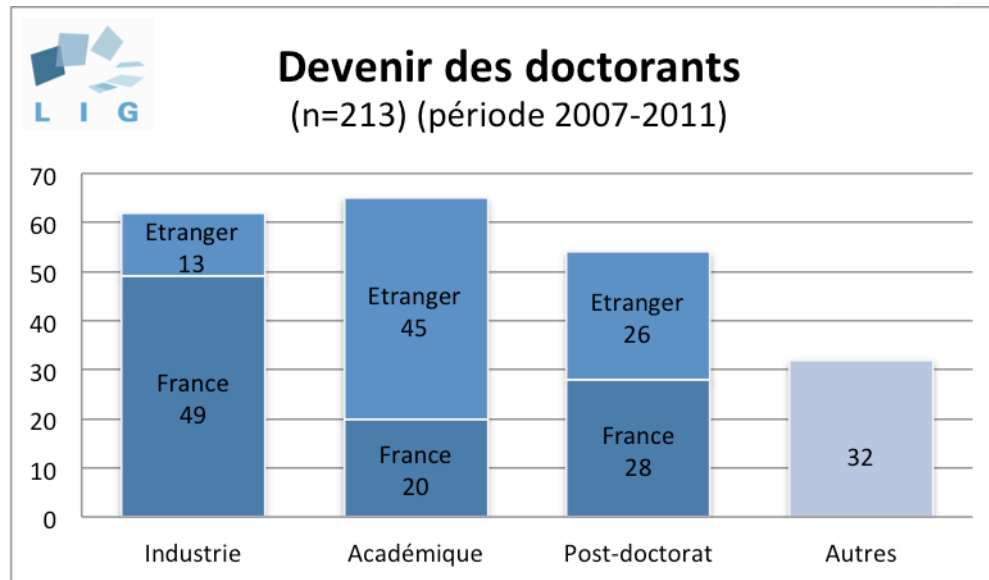
# Les 502 membres du LIG en février 2014



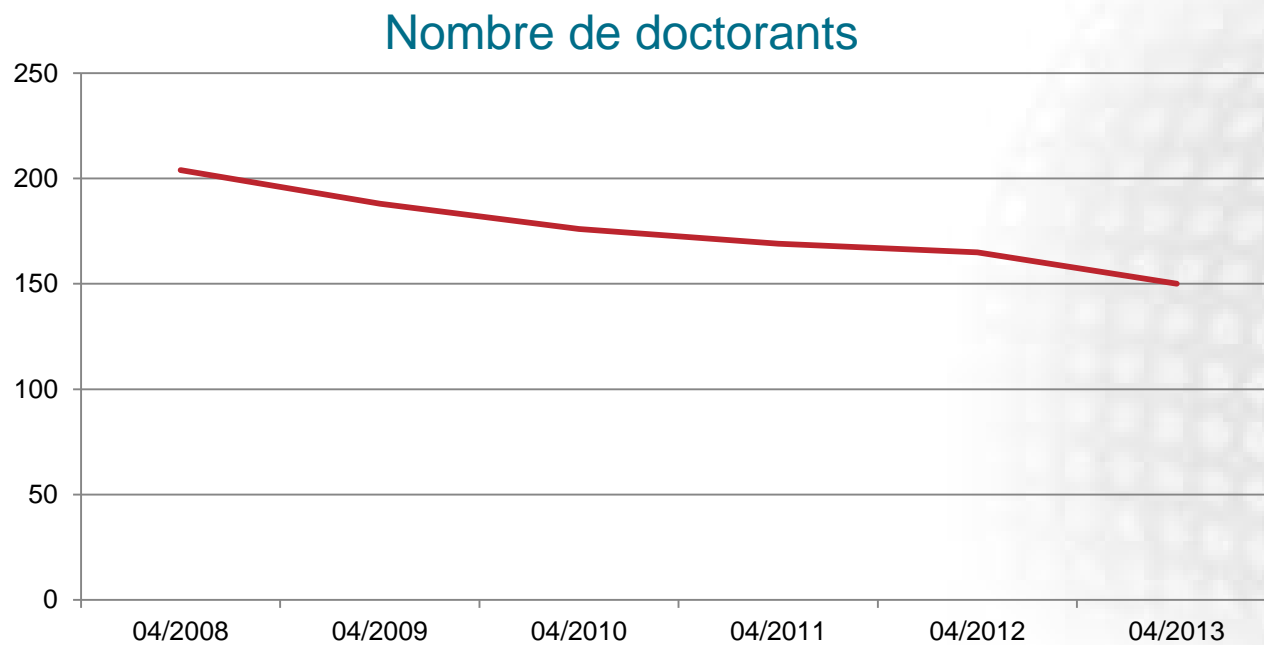
# Provenance des doctorants



# Devenir des doctorants



# Evolution du nombre de doctorants





# Ambassadeurs du LIG



- ▶ Thanks for your attention....
- ▶ More infos on Lili, [www.liglab.fr](http://www.liglab.fr) and on Twitter:

**@LIGlab**

