The EUROPEAN MAGNETISM ASSOCIATION

A voice for Magnetism in Europe

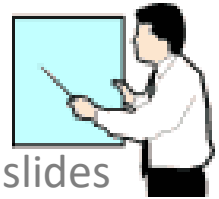
The European School on Magnetism

Round table on training and careers

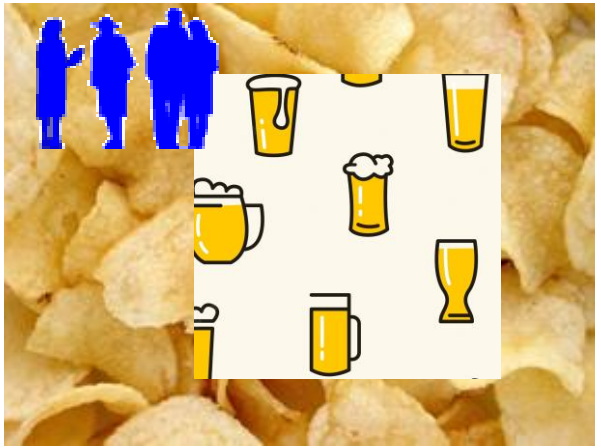
Olivier Fruchart

THE EUROPEAN SCHOOL ON MAGNETISM

WHAT WILL WE DO ?



- Quick warm-up with slides



- Small-groups discussion to address specific topics
  Online & Onsite groups welcome

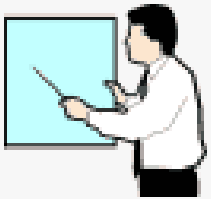
- Feedback

THE DAILY WORK AND MISSION OF A RESEARCH SCIENTIST

Conduct research

- Search and read literature
- Advance knowledge

Disseminate



- Write publications
- Communication: conferences, seminars…

Expertise in the academia

- Peer-review
- Grant evaluation
- Hiring / Promotion committees

Collect funding

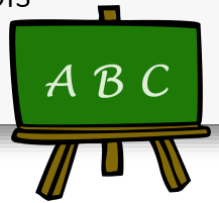
- What: grants, equipment, networking
- From: institutions, French funding agency ANR, Europe, bi-national etc.
- How: projects, grant management, reports

Management

- Labs and teams
- Networks, research schools
- Science and education policy

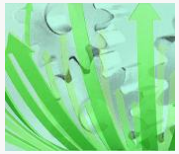
Train via research

- Advise PhDs and post-docs
- Teach: universities, research schools
- Write books



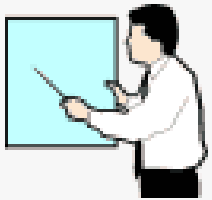
Contribute to innovation

- Write patents
- Provide expertise
- Research projects with companies
- Create start-ups



TRAINING BY RESEARCH – ASSETS FOR A CAREER

Expertise



- Science
- Technology
- Instrumentation and programming

Personal development

- Face adversity, solve the unknown
- Project/Time management
- Mentoring (students)
- Teaching
- Practice English
- Communicate

Team work

- Conduct meetings
- Reporting
- Seek and provide assistance

PhDs develop abilities to tackle and solve complex problems. They can implement this in a company from scratch, without the need for further training, unlike engineers and students just graduating from the university

PROMOTE YOUR OWN CAREER DEVELOPMENT. CONSIDER…

Skills

- Teaching opportunities
- Active contribution to the writing of manuscripts
- Share responsibility to write
  - Proposals, reports, manage projects
  - About: research, beamlines, mobility

Networking

- Secondments in other labs (typically a few months). Provides:
  - International exposure
  - Build your network

CAREER DEVELOPMENT TRAINING DURING THE PHD

Who may offer training

- The university responsible for your PhD
- Your employer (if different from the university)
- Your host lab
- Your advisor
- Research contracts (e.g. MSCA projects)

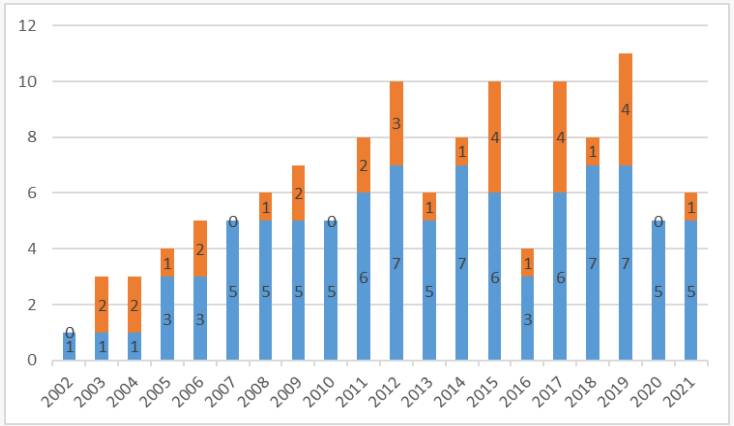
Examples of training

- Time & Project management
- CV writing and job hunting
- Identify your competences
- Language practice
- Write / Oral skills

SPINTEC – PhDs in the lab (2002-2021)

125 PhDs graduated

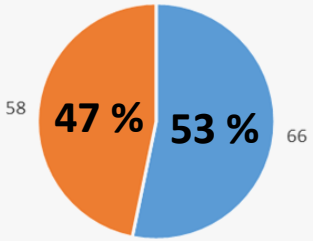
- 34 Women (25%) & 92 Men (75%)

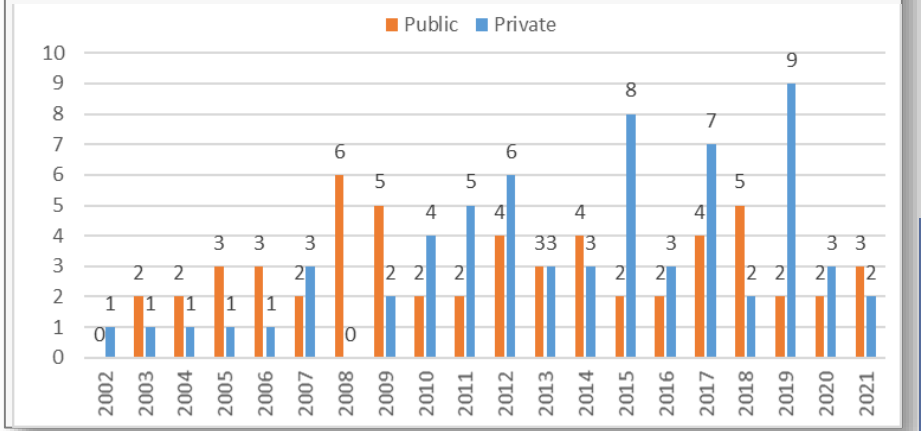


- 3 theses not completed
- 34 on-going PhD theses

An average of 8 defences per year

Now working in Academic / Private

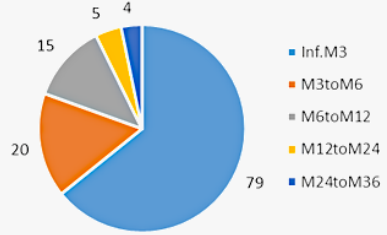




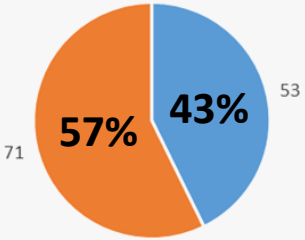
SPINTEC – Doctors after defense (2002-2021)

First professional experience

- Job-hunt duration



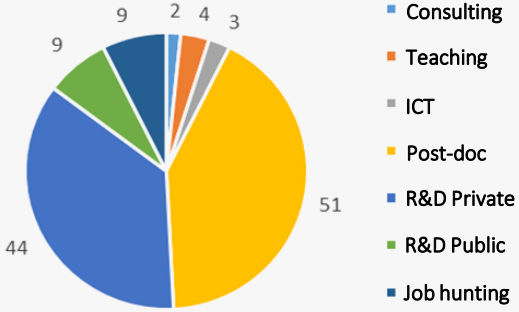
- Academic *vs.* Private



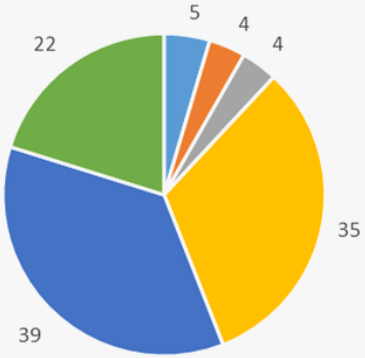
4 Months in average

93% employed at M12 [*81% at M6*]

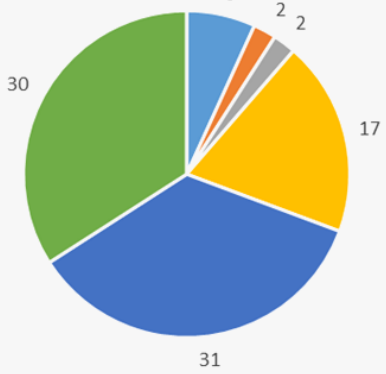
- Job profiles

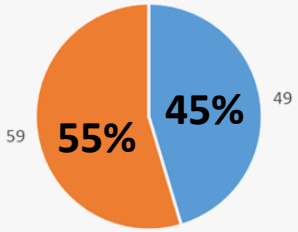


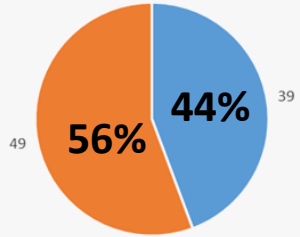
Status after 3 years



After 5 years







- Transverse mobility : A to P (20); P to A (15)

SPINTEC – Comparison to National statistics (MESRI 2018)

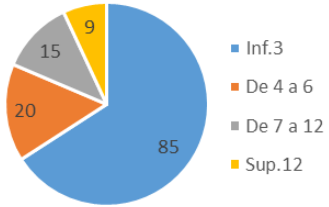
Situation d'emploi des docteurs par discipline 12 et 36 mois après leur diplôme

Docteurs diplômés en France en 2014

	Taux d'insertion des docteurs (en %)		Part des docteurs en emploi stable (en %)		Part des docteurs dans le secteur académique (en %)		Nombre de mois
	36 mois après le diplôme	12 mois après le diplôme	36 mois après le diplôme	12 mois après le diplôme	36 mois après le diplôme	12 mois après le diplôme	passés au chômage
Sciences et leurs interactions	91,9	86,9	68,6	51,7	43,9	49,8	5,4
Mathématiques et leurs interactions	93,8	91,8	65,0	46,6	58,3	61,6	3,6
Physique	90,0	84,8	59,2	44,4	48,4	51,0	5,7
SPINTE	**100**	**93**	**64**	**50**	**55**	**54**	**4**

c Professional experience

- Job-hunt duration



4 months in average

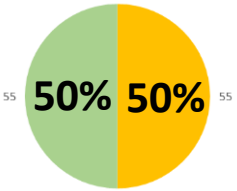
81% employed at M6

93% employed at M12

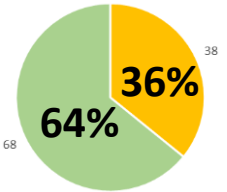
100% employed at M36

- Short *vs.* Long-term contract

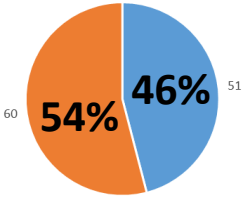
After 12M

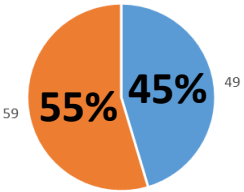


After 36M



- Academic *vs.* Private



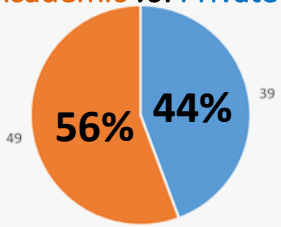


SPINTEC – Doctors after defense (2002-2021)

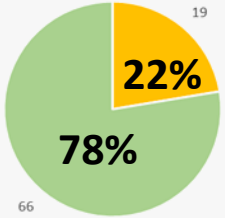
Professional experiences

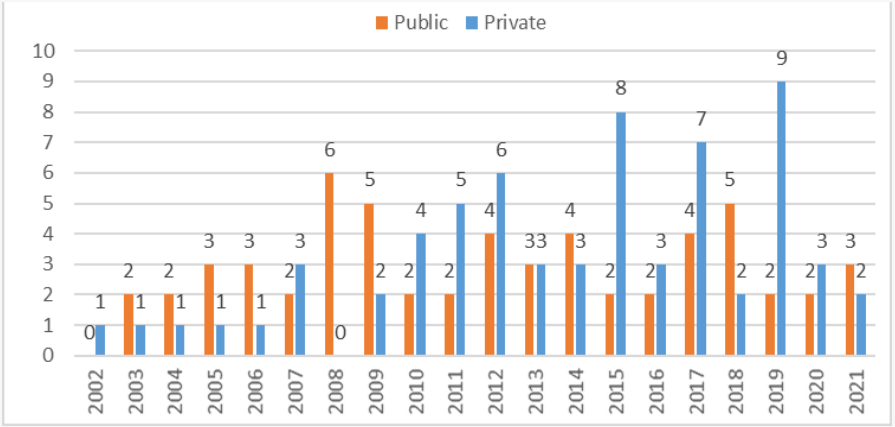
After 60M

Academic *vs.* Private

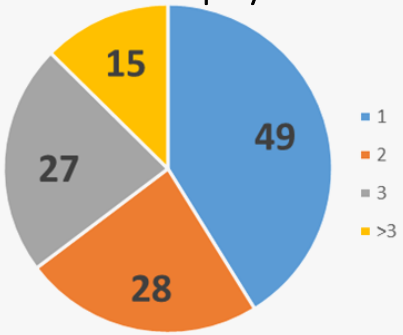


Short *vs.* Long-term contract

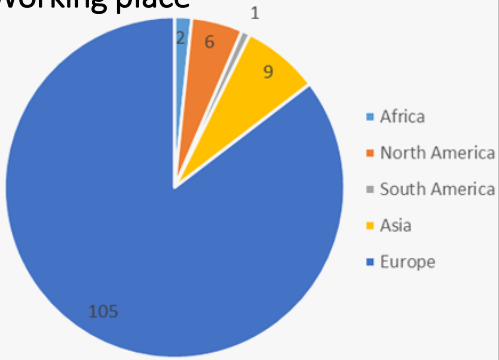




Number of employers



Working place



POSSIBLE TOPICS FOR SMALL-GROUP DISCUSSION

Self-organize in small groups, each with a topic, agree on a spokesperson for a 2min feedback in front of full ESM audience.

- Fields and types of positions in the private sector after a PhD
- Practical actions in the PhD to prepare your career (besides daily research)
- Assets for a career in the academia – Content of a CV
- Assets for a career in the private sector – Content of a CV
- What can ESM and EMA do better or more for your career development ?
- Actions and expectations of the advisor, the lab, the university
- Gender and other balances in the career
- Balance with the private life in a career
- Possibility and time (delay) to get a position in the academia

Feel free to suggest add another topic

Online groups are welcome