58th ESSC Plenary meeting

2 October 2019

F.R.S.-FNRS

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1. HIGHER EDUCATION IN WALLONIA-BRUSSELS (1)

Wallonia-Brussels (W-B) (French-speaking Community)

⇒ ~4.5 millions population

⇒ 6 research-based universities (PhD training); basic and applied research

⇒ 1 funding agency for basic and strategic research: F.R.S.-FNRS
1. HIGHER EDUCATION IN WALLONIA-BRUSSELS (2)

KEY DATA UNIVERSITIES W-B (data 2016-2017)

⇒ ~ 90,000 students (BA-MA)

⇒ ~ 11,600 new Master graduates

- 58.7% Social sciences and humanities
- 20.9% Exact sciences and engineering
- 19.8% Health
- 0.6% Art
1. HIGHER EDUCATION IN WALLONIA-BRUSSELS (3)

⇒ ~ 900 PhD graduated/year

- **46.6%** Social sciences and humanities
- **32.6%** Health
- **20.7%** Exact sciences and engineering
- **0.0%** Art
64% of international co-authorship in Wallonia-Brussels publications

Average rate of citations/publication in the European top 5
3. SOME FNRS MILESTONES SINCE 1927

- King Albert 1er
  - 1927

- 1928
  - Birth of the FNRS

- 1931
  - Upper atmosphere flight

- 2013
  - Nobel Prize Physics

- 1974
  - Nobel Prize Medicine & Physiology

- 1977
  - Nobel Prize Chemistry

- 2017
  - Balzan Prize exoplanets

- 2019
  - 32 GRANTS
4. F.R.S-FNRS : Facts and Figures 2018

200 millions €

90 % public funding

All fields of science

Basic research (excellence)

Strategic research (excellence and industrial/societal impact)

Funding of international mobility, equipments, collaboratives projects, …

2,300 researchers at different stages of their career, hosted in the universities

Quality of evaluation procedures
**STEP 1: Submission and external evaluation**

**Application**

- English preferred
- Application → fnrs → SEMAPHORE
  - https://applications.frs-fnrs.be/register/

**Peer review**

- Application → Scientific officer → External reviewers

- Criteria 1: the applicant (CV, track record, mobility, …)
  - A+ to C

- Criteria 2: the Project
  - A+ to C

- Criteria 3: the proposed research environment
  - A+ to C

Remote Evaluation report
5. F.R.S-FNRS: Evaluation procedure (2)

STEP 2: Panel meeting and Projects Ranking

- Remote Evaluation report
- Rapporteur: A+ to C
- Co-Rapporteur: A+ to C
- Scientific panel
- Final Ranking List
- FUNDING DECISION STRICTLYfollows the Ranking List

F.R.S-FNRS: Freedom to Research
FNRS growing database of ~12,000 international experts

~ 4,500 remote evaluations per year
“Our data add to a growing body of work about the changing science system, indicating that science policymakers who seek to enhance impact should prioritize international exchange” (Nature 550, 32-33 – Oct 2017)

Mobility Bilateral Agreements
Japan; China; Brasil; Argentina; South Africa; Czech Republic, Poland France

In & Out Mobility

ERA-Net and JPI’s
37 participations

Projects Bilateral Agreements
Quebec/Switzerland/Luxembourg

Supports/partnerships
CERN; Science Europe; CECAM; OECD GSF; ESSC;…
7. F.R.S.-FNRS and Space domain

- Based on descriptor **Physics and Engineering, PE9 : Universe Sciences** → Astro-physics/chemistry/biology; solar system; stellar, galactic and extragalactic astronomy, planetary systems, cosmology, space science, instrumentation
- Period of time: **2014-2018**
- **337 applications** to F.R.S.-FNRS instruments (2.9% of total)
- **3.1% of total funding**
- **4.7% of total budget for project funding**
- **74 mandates** (35 PhD students; 19 post-doc positions; 6 new permanent researchers; 13 promoted permanent researchers, 1 incentive grant for mobility)
- **5.6% of permanent researchers** (22/393, January 2019)
8. F.R.S.-FNRS and ESSC domains : success stories

- Astronomy and fundamental physics
  Michaël Gillon (ULiège), Exoplanets, Balzan Prize 2017
  Yaël Nazé (ULiège), Jean-Perrin Prize 2017, Fr. Society of Physics

- Solar system and exploration
  EOS project : ET-Home - Evolution and Tracers of the Habitability Of Mars and Earth
  Vinciane Debaille (ULB), coordinator
  Emmanuelle Javaux (ULiège), partner
  Véronique Dehant (UCLouvain), partner

- Earth science
  Eric Lambin (UCLouvain), 2009 Francqui Prize, 2014 Volvo Environment Prize, 2019 Blue Planet Prize
Thanks for your attention!

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