



International Collaboration and multilateral programmes at the FNR

What is the FNR?



The FNR is the National Research Fund for the Public Sector in Luxembourg!

- We are funding research projects in the public sector in LU, and
- individual researchers (PhD & Post-Doc) in the public and **private sector**!

The strategy of the FNR is implemented along 3 strategic objectives:

- Supporting researchers to build scientific quality and excellence
- Contributing to a favorable research environment
- Promoting scientific culture

Budget 2009: 32 M€



What is an ERA-Net?

« European Research Area Network »

The objective of the ERA-NET scheme is to step up the cooperation and coordination of research activities carried out at national or regional level through:

- the networking of research activities conducted at national or regional level
- the mutual opening of national and regional research programmes.

That means: it is a network of research funding organisations which provide researchers from the public with calls for research proposals

- In some cases the private sector may also benefit from financial support

Currently there are more than 100 ERA-Nets ongoing!

a dedicated webpage (NETWATCH) for a better overview is to be finalized by the end of the year: http://ec.europa.eu/research/netwatch/index_en.htm

The FNR is participating in 3 ERA-Nets in material science:

- MATERA
- MNT
- ICC



The main goal of the MATERA- ERA-NET Materials project is to create a durable cooperation platform for policy makers and managers having strategic activities in the field of materials **science and engineering** in Europe.

<http://www.matera.fi/>

Partners: 18 funding organisations from 16 countries

4 calls issued so far with slightly different research topics:

- 2 projects financed by FNR (11 projects europewide)
- 5 projects with LU participation under evaluation currently

- Next call to be issued in beginning of 2010



- **Project title: Wear Resistant Ductile Iron**
 - **Project Partners:**
 - Iceland: IceTec , Foundry of Thorgrimur Jonsson ehf
 - Luxembourg: Centre de Recherche Public – Gabriel Lippmann
 - Slovenia: University of Ljubljana – Centre for Tribology and Technical Diagnostics
 - **Project coordinator:** Birgir Johannesson (Rannis)

- **Project title: Defects in Chalcopyrites - advanced characterisation**
 - **Project Partners:**
 - Luxembourg: University of Luxembourg
 - Poland: Warsaw University of Technology
 - Finland: University of Helsinki
 - **Project coordinator:** Susanne Siebentritt (University of Luxembourg)



The thematic focus of MNT-ERA.NET includes :

- Actuators and sensors
- Energy (energy storage, photovoltaic, fuel cells, batteries)
- Instrumentation (AFM, holographic instruments, calibration)
- Manufacturing (machining, LIGA, lithography, structuring, tribology)
- Materials (e.g. functionalisation, surface structuring, replication, composite)
- Medical devices (e.g. stents)
- MEMS, MOEMS, NOEMS, NEMS
- Microsystems for integration of nanobiotechnology (e.g. delivery systems, sensors, Lab-on-a-chip)
- Nanoelectronics
- Optical devices
- Simulation modelling
- System integration

24 funding organisations from 21 countries (<http://www.mnt-era.net/MNT/>)

4 calls so far: FNR supports 2 projects

6 Next call not yet fixed, not before late 2010



Project title: ADYMA: Advanced dynamic modelling of adaptive multifunctional materials and structures

Project Partners:

Luxembourg: CRP Henri Tudor, Eurocomposites SA (LU), Saint-Gobain Abrasives (LU)
Latvia: Riga Technical University,

Project coordinator: S. Belouettar CRP Henri Tudor

Project title: SIMS-SPM: Combined SIMS-SPM instrument for high sensitivity and high resolution elemental 3D analysis

Project Partners:

Luxembourg: CRP Gabriel Lippmann , plus other partners from private sector

Project coordinator: T. Wirz, CRP Gabriel Lippmann

Materials World Network



The Materials World Network is a diverse group of stakeholders from government, academia, and industry with a mission to foster international multidisciplinary cooperation in materials research,

i.e. the FNR provides funding for US-LU projects

1 call every year

Next call to be issued: August 2009

2 projects funded so far

NSF Materials World Network Projects



Project: Design, Growth and Properties of Boron-Based Thin Films for Electronics and Nanosized Electronics

Luxembourg partner: Dr. Nathalie Valle, Department Science and Analysis of Materials, CRP Gabriel Lippmann, Luxembourg

US partner: Prof. John G. Ekerdt, Department of Chemical Engineering, University of Texas at Austin;

Project: Growth, Kinetics and Morphology of multi-layered organic thin films via low-energy Secondary Ion Mass Spectrometry

Luxembourg partner: Dr. Tom Wirtz, Department Science and Analysis of Materials, CRP Gabriel Lippmann, Luxembourg

US partner: Prof. John Kieffer, Department of Materials Science and Engineering at University of Michigan



International Collaboration in Chemistry between US Investigators and their Counterparts Abroad

Topics: Analytical and Surface Chemistry, Inorganic Chemistry, Organic Chemistry, Physical Chemistry and Theoretical and Computational Chemistry

- Partner countries:
 - Germany, Austria, China, UK, France
- First call with LU participation to be launched in August 2009.

How to get funding?



- For the public research sector in Luxembourg:
 - Direct project funding through FNR, or
 - PhD and Post-Doc grants (AFR, also through FNR)
- For the private research sector in Luxembourg:
 - Direct project funding by the MECE, or
 - PhD and Post-Doc grants (AFR, through FNR)

European Networks: COST



- COST is an intergovernmental framework for funding networks of researchers from public and private sector (www.cost.esf.org)
- 9 key domains: more than 200 networks

Materials, Physical and Nanosciences

- New developments in industrial technology and technology driven projects: requiring the synthesis of new material. Materials science, physics and nanoscience or combinations thereof are supported from this domain.
- 52 networks within this field are supported
- At least 1 company from LU participates:
 - « It gives us the opportunity to stay informed about the newest developments in our sector of research »

COST provides funding for networking cost (i.e. travel, etc) for the public and private sector



Dr.-Ing. Oliver HECHLER

Project Manager Technical Advisory | SFI/EWE/IWE
ArcelorMittal

COST is interesting to me because it provides me with:

- access to innovations and partners in european countries (also smaller countries which are less linked to the european innovation system)
- the possibility to promote our technical solutions in these countries and thus access to potential markets
- possibilities to address research activities and to identify administrative hurdles for the company's solutions together with the COST partners

For more information



- Please contact the Fonds National de la Recherche (FNR) :

Dr. Carlo Duprel
Programme Manager
Tel: +352 261925-37
E-mail: carlo.duprel@fnr.lu

Christiane Kaell
Programme Manager
Tel: +352 261925-34
E-mail: christiane.kaell@fnr.lu

- Or our colleagues from Luxinnovation:

Jean-Michel LUDWIG
Senior Project Manager
Tel: +352 43 62 63 – 1
Jean-Michel.Ludwig@luxinnovation.lu