

***"The way forward for the Eurocodes implementation in the Balkans"***

***10-11 October 2018, Tirana***

# **Opening access of JRC Physical Research Infrastructures to external users**

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*The European Commission's science and knowledge service*

***Joint Research Centre***

JRC hosts 37 physical research infrastructures  
with a potential of opening to external users  
(out of a total of 57 facilities)



# Potential demand from users to access JRC RIs

- Fair and transparent method for allocating access
- Make JRC RIs available to external users /limited resources now existing in Europe
- Provide capacity building to Enlargement and Integration countries
- Bridge the gap between science and Industry
- Dissemination of knowledge, education and training, foster collaboration in Europe



# Opening access of JRC RIs to external users is part of the JRC Strategy 2030

- Expand JRC networking capabilities
- Enter into new key areas of research
- Maintain JRC scientific excellence
- Raise the value and visibility of JRC RIs



# Framework of Access to Research Infrastructures

Based on the Charter of Access to RIs of DG RTD

Principles and guidelines when defining Access policies for RIs

## Access Modes

- Relevance-driven
- Market-driven

## Open to:

- EU Member States
- Candidate countries and countries associated to the EU Research Programme Horizon 2020



# Relevance driven

- Users submit an application following a **call for proposals**
- **Peer-reviewed** transparent selection process:
  - ✓ Scientific implementation, collaboration and access to new users, strategic relevance to the JRC, strategic importance for Europe.
- Access mainly granted to **universities and research institutions, public institutions, and SMEs**, in association with industry
- Users are only charged the **additional costs** (18% overheads)  
(free of charge for nuclear facilities)

# Market driven

- Defined in agreement between the user and the JRC RI
- Projects **selected by the JRC** with emphasis on strategic importance at EU level and on the uniqueness of the JRC facilities providing access
- Access mainly targeted to **industry and private institutions**, as well as to, or in partnership with research institutions
- Users charged the **full costs** (70% overheads)

# Research Infrastructure Access Agreement

## Rights and obligations of JRC and the user(s) concerning

- Health and safety
- Security rules
- Data protection
- Confidentiality
- Liability and financial aspects
- User access assessment





# Intellectual Property

## Relevance-driven access mode

- Open access to data following an embargo period (typically 18 months) to allow publication in peer-review journals
- Extension of embargo period in case open access jeopardizes commercial exploitation

## Market-driven access mode

- Data is not disseminated via open schemes, but it can be used by the JRC for internal purposes.

# In-kind contributions

- Human resources, i.e. for running all or parts of the experimental work or assisting the experimental campaign
- Provision of consumables and equipment



# Dedicated portal at JRC Science Hub

- **All supporting documents:** Framework and related annexes (template for proposals, agreement documents, IP rules, etc.)
- Composition of the **User Selection Panel**
- **Eligibility Criteria**
- **Call for proposals** per Research Infrastructure
  - ✓ Estimated total number of Access Units allocated to the call
  - ✓ Estimated additional costs per Access Unit
  - ✓ Priority topics of the Research Infrastructure
- **Selected Projects**
- **User Access Report** / link to databases (after embargo period)

# Calls for access at the JRC Science Hub (1/2)

## Nanobiotechnology laboratory [Open](#)

**JAN 22 2018** **APR 13 2018** **Ispra, Italy.** The Nanobiotechnology Laboratory features state-of-the-art equipped facilities designed to foster interdisciplinary studies. A special emphasis lies on characterisation of nanomaterials, nanomedicines, advanced materials and their interactions with biological systems, as well as on the detection, identification and characterisation of nanomaterials in food and consumer products.  
[Details of the call #2018-1-RD-NanoBiotech](#)



## Reaction Wall, European Laboratory for Structural Assessment (ELSA) [Open \(extended\)](#)

**SEP 18 2017** **JAN 31 2018** **Ispra, Italy.** The central feature of the European Laboratory for Structural Assessment (ELSA) is the Reaction Wall. It consists of a reinforced concrete vertical wall and a horizontal floor rigidly connected together to test the vulnerability of buildings to earthquakes and other hazards.  
[Details of the call #2017-1-RD-ELSA-ReactionWall](#)



## HopLab, European Laboratory for Structural Assessment (ELSA) [Closed](#)

**JUN 26 2017** **OCT 20 2017** **Ispra, Italy.** The Hopkinson Bar facility (HopLab) is used for the study of materials and of structural components to very fast dynamic loads, such as those due to blasts and impacts, where knowledge of the material behaviour under high strain-rates is necessary.  
[Details of the call #2017-1-RD-ELSA-HopLab](#)



## Nanobiotechnology laboratory [Closed](#)

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[Details of the call #2017-1-RD-NanoBiotech](#)



## GELINA, Neutron time-of-flight facility for high-resolution neutron measurements [Open](#)

**DEC 7 2017** **MAR 7 2018** **Geel, Belgium.** GELINA is a 150 MeV electron accelerator serving as strong white neutron source for high resolution neutron time-of-flight measurements.  
[Details of the call #2017-1-RD-EUFRAT-GELINA](#)



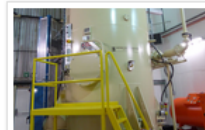
## HADES, Underground laboratory for ultra-low level gamma-ray spectrometry [Open](#)

**DEC 7 2017** **MAR 7 2018** **Geel, Belgium.** JRC operates a laboratory for ultralow-level radioactivity measurements inside the 225 m deep underground laboratory HADES, which is located at the premises of the Belgian Nuclear Research Centre. In HADES, the muon flux (secondary cosmic rays) is a factor of 5000 lower compared to above ground and the flux of protons, neutrons and electrons is reduced to an insignificant level.  
[Details of the call #2017-1-RD-EUFRAT-HADES](#)



## MONNET, Tandem accelerator based fast neutron source [Open](#)

**DEC 7 2017** **MAR 7 2018** **Geel, Belgium.** MONNET is a high-intensity quasi mono-energetic fast neutron source, driven by a vertical 3.5 MV Tandem accelerator producing either continuous or pulsed beams of protons, deuterons or helium ions.  
[Details of the call #2017-1-RD-EUFRAT-MONNET](#)



## RADMET, Radionuclide Metrology laboratories [Open](#)

**DEC 7 2017** **MAR 7 2018** **Geel, Belgium.** The Radionuclide Metrology laboratories (RADMET) are equipped with a broad set of instruments used for nuclear decay measurements, determination of related nuclear data and radiological characterisation of samples and materials.  
[Details of the call #2017-1-RD-EUFRAT-RADMET](#)



# Calls for access at the JRC Science Hub (2/2)

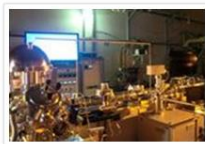
Nuclear calls: Actinide User Laboratory (ActUsLab)

## **PAMEC**, Properties of Actinide Materials under Extreme Conditions (ActUsLab) [Open](#)

APR 27 2018  
AUG 31 2018

**Karlsruhe, Germany.** The Properties of Actinide Materials under Extreme Conditions (PAMEC) facility consists of an ensemble of state-of-the-art installations designed for basic research on behaviour and properties of actinide materials under extreme conditions.

[Details of the call #2018-1-RD-ACTUSLAB-PAMEC](#)

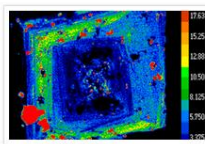


## **FMR**, Fuels and Materials Research (ActUsLab) [Open](#)

APR 27 2018  
AUG 31 2018

**Karlsruhe, Germany.** The Fuels and Materials Research (FMR) laboratory is situated at the Joint Research Centre of Karlsruhe (Germany). The Nuclear Fuel Safety Unit provides the scientific basis for the objective assessment and modelling of the safety related behaviour of nuclear materials.

[Details of the call #2018-1-RD-ACTUSLAB-FMR](#)



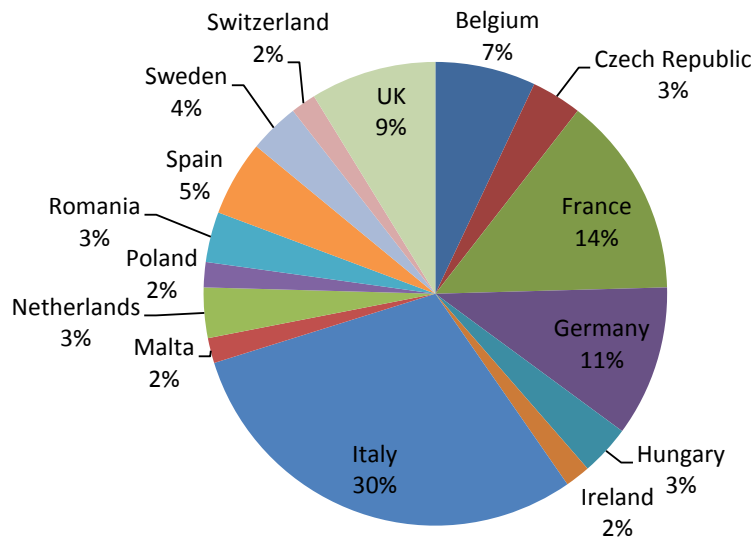
End of 2018

- Energy Storage (Petten)
  - ✓ BESTEST, FCTEST, GASTEST
- INS3L (Ispra)
  - ✓ ITRAP

# Summary of calls

**57 eligible calls received**

## Lead User Institutions



## Other countries as User Institutions

- Bulgaria
- Denmark
- fYRoM
- Greece
- Poland
- Portugal
- Romania
- Slovenia
- Spain
- Ukraine
  
- CERN

# Open Access to ELSA

- **HOPLAB** (large-scale Hopkinson's bar)  
Shock and explosion effects on materials and assemblages

 **Protection of Public Spaces**

- **REACTION WALL**  
Earthquake and wind effects on large-scale buildings bridge models / Structural Health Monitoring (SHM)

 **Disaster Risk Management – Prevention**

# Priority topics of 2017 calls

## HOPLAB

1. Security of buildings and **protection of soft targets** against explosion loads
2. Material/structural component testing at high loading-rate conditions (blast, impact)

## REACTION WALL

1. Design and retrofit for **resilience**
2. Safety of building infrastructure against **multiple hazards**
3. Multi-functional **building envelopes**
4. Structural glass

**11 proposals submitted / 4 selected**  
**From 13 different countries**

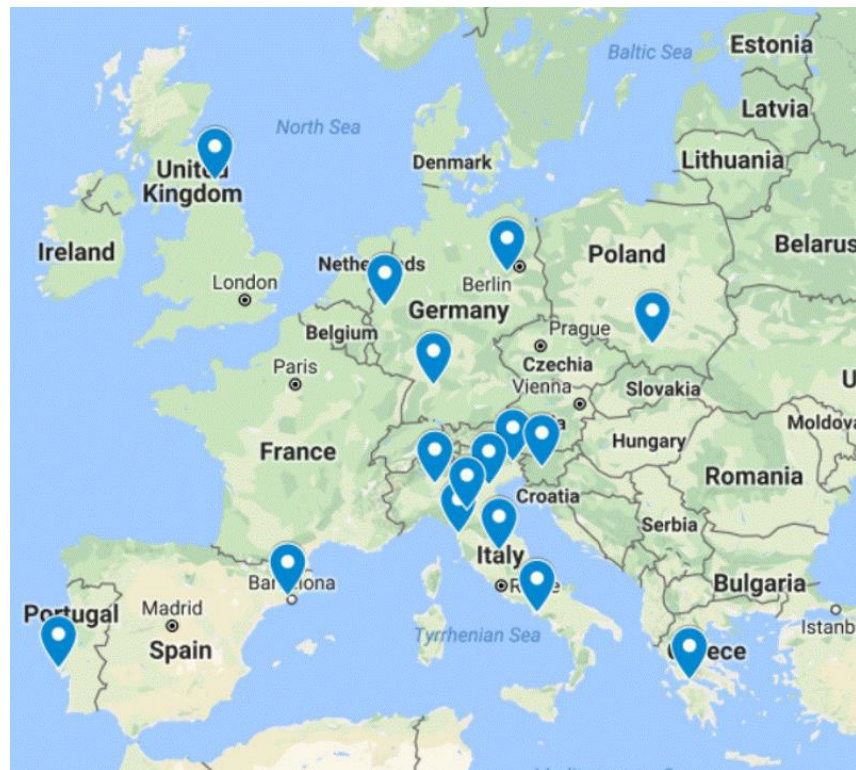


# ELSA Reaction Wall 2017 call for proposals

## Selected Proposals

1. A new generation of steel reinforcing bars for concrete structures
2. Haunch innovative retrofit for European seismic design

- ✓ **8 countries**
- ✓ **26 users**
- ✓ **16 organisations**



# ELSA HopLab 2017 call for proposals

## Selected Proposals

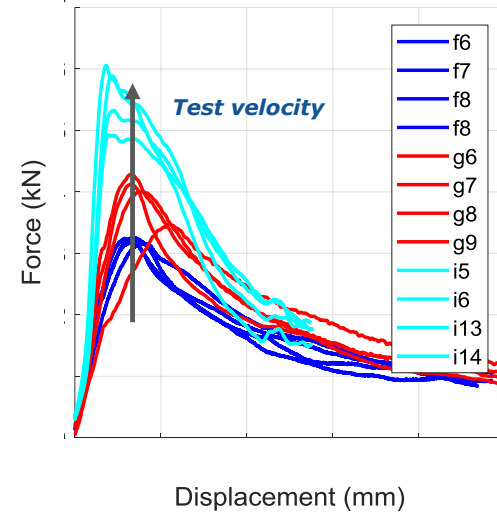
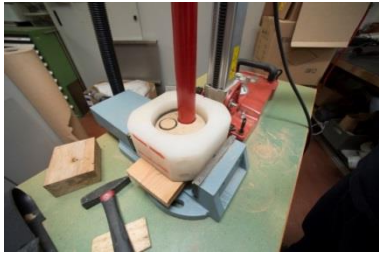
1. The Dynamic Performance of Adobe masonry components
2. Steel Under Severe High Impact

- ✓ **8 countries**
- ✓ **xx users**
- ✓ **xx organisations**



# HOPLAB – Reinforced Adobe Masonry

Strain-rate sensitivity of adobe and the influence of water and fiber on the mechanical behavior to absorb energy (explosions, impacts, etc.)



# New Calls, Drivers and Priority Topics

**2017 call  
(July)**



**2019 call  
(October)  
Horizon Europe**

**Selection → Testing → Exploit results → New Priorities – Selection → ...**

**2018 call  
(October)**

# Revision of the Framework 2019

- Allow the JRC to **cover travel and accommodation** of Users accessing JRC Research Infrastructures, as well as to **waive the additional costs** of access in the relevance-driven mode.
- Possibly to Users from User Institutions from the **RTD Spreading Excellence and Widening Participation** list of countries (all countries associated to H2020 are included).
- The Lead User Institution, and at least 2/3 of the Users Institutions must be **from the RTD list**
- The calls are in **competition with EU Member States**

# Training and Capacity Buildings at JRC RIs

- Addressed to groups of Users from **universities, research or public institutions, or from a Small-Medium-Enterprises (SME)**
- Preferably with existing or under construction RIs to those of JRC
- Calls opened under the **JRC Enlargement and Integration Action**
- User Institutions from countries associated to the EU Research Program **Horizon 2020**
- The JRC covers the costs of **travel and accommodation** of Users
- Stays at the JRC will comprise a **full week**, with the participation of groups from several institutions and countries

# Calls on Training and Capacity Buildings

- First calls to be opened in October 2018 on a pilot basis at the Nanobiotechnology laboratory, located in Ispra



# Stay in touch



<https://ec.europa.eu/jrc/en/research-facility/open-access> (EU Science Hub)



Twitter: **@EU\_ScienceHub**



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LinkedIn: **Joint Research Centre**



YouTube: **EU Science Hub**