

## **Postdoctoral fellowships N°1**

**Title:** Physicochemical characterization of discarded rocks as aggregates for concrete technology

### **General objective**

Physicochemical characterization of discarded rocks available in the Province of San Luis for possible use as aggregates in structural and non-structural concrete.

### **Specific objectives**

Characterization of size distribution, form and mineralogical properties of aggregates coming from milling operations on rocks (granites, various slabs, building materials degraded). Characterization of the chemical reactivity of the different aggregates following standard rules. Study of the resistance of concrete specimens made with the aggregates obtained with the use of different proportions. Physical characterization of longitudinal and transverse cuts specimens (adsorption, porosity, etc.) Extension of the methodology to other possible materials disposal (Demolitions).

### **Candidate profile**

A solid undergraduate and graduate background on materials knowledge is necessary for the physical and chemical characterizations of stone aggregates, solid waste, composites and cements, and for the interpretation of the results and the choice of the techniques. Graduate candidate will have followed, in preference, courses in Civil Engineering, Chemistry, Physics Degree, Engineering Mines, Materials Engineering, Environmental Engineering or similar, with Doctoral Training in Engineering, Physics, Chemistry, Materials or other related doctorates.

*NB: These plans are part of the Project Implementation Unit of the Institute Applied Physics San Luis - INFAP (UNSL-CONICET), call 2017.*

### **Characteristics of the internal grants under Postdoctoral EU Projects**

They are intended for candidates who have passed their doctoral theses, with in order to improve their education or specialty and develop tasks of scientific and technological research, within the framework a research project units.

The maximum length of internal Postdoctoral fellowships is twenty-four (24 months). The age limit for the nomination will be up to 37 years at 31 December 2016 inclusive.

**Starting date:** April 1, 2018.

It is an obligation for the fellows to be devoted exclusively to this academic and research task according to the work plan of the scholarship. Candidates who are

benefiting from a grant from CONICET are not allowed to change their workplace and/or their director of scholarship.

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