

July 23, 2008

## **Personnel Contracts with CPAN partial financial support**

The CPAN project of the CONSOLIDER-INGENIO 2010 program announces 5 contracts of personnel with partial financial support from CPAN. The proposed contracts are meant to provide technical support to the groups' research activities in a series of priority lines within the strategic actions of the CPAN Project. A detailed description of these contracts, 3 university graduate degrees and 2 university intermediate degrees, can be found in Annex I. The maximum duration of the CPAN financial support assigned to each appointment will be two years.

The groups participating in the CPAN Project will make an effort to give publicity to the present announcement in order to optimize the number and quality of the applications received.

### **1) Amount and nature of the financial support**

The CPAN financial support for each of the contracts specified in Annex I will have the aim of co-financing the total contract cost, understood to be the sum of the net retribution plus the Social Security company fee. The beneficiary entities will hire the selected candidates in accordance with the current labour legislation.

For personnel with a university graduate degree, the amount of the CPAN financial support will be 30.000 euros per year, and the minimum annual retribution they will receive, which must be indicated in the contract, is 27.000 euros (brut salary).

For personnel with an intermediate university degree, the amount of the CPAN financial support will be 25.000 euros per year, and the minimum annual retribution they will receive, which must be indicated in the contract, is 22.000 euros (brut salary).

The remaining co-financing of the contract will be the responsibility of the beneficiary groups and organisms, who will assume the cost of retribution increments of the hired personnel in the following years, as well as the repercussions of any increases in the Social Security fee. The given financial support will be compatible with other aids or subsidies, as long as they do not jointly exceed the total cost of the contract.

An additional financial support of 14.000 euros per year will be assigned for the university graduate degree contract CPAN08-TS06 destined at CERN.

The beneficiary entities are obliged to put at the appointee's disposition all the installations and material means needed for the normal development of their work, as well as to guarantee the same rights and benefits enjoyed by the entities' personnel of similar category.

In case of interruption of the contract, the beneficiary entity and the appointed personnel are obliged to communicate such interruption to the CPAN Coordinator within 15 natural days from the date of the interruption.

## 2) Candidate requisites

People whose contract is co-financed through this aid must have a graduate or intermediate university degree as required by the contract to which they apply. Candidates must be in possession of the required degrees by the date in which the application is presented.

## 3) Formalization and Application Process

Applications will be presented by the candidates through an internet application which can be accessed from the WEB page of the CPAN project: <http://www.i-cpan.es>. Applications must include:

- 1) The candidate's personal information.
- 2) The type of contract to which the candidate opts.
- 3) The candidate's Curriculum Vitae, including a scanned copy of the academic certification and university degree.

Applications must be presented from September 1, 2008 to September 30, 2008 (both inclusive).

The beneficiary group shall complete the application with a report about the optimal fitness of each candidate for the foreseen activities, assigning a tentative priority order to each candidate. These reports will also be processed through the internet application installed in the CPAN WEB page. The deadline for these reports is October 10, 2008.

## 4) Evaluation of applications

The evaluation of applications will be done by an Evaluation Commission named by CPAN's Executive Committee. The referred Commission will study and order the applications according to the following rules:

- 1) Compliance of the candidate to the development of the tasks to be performed, as function of the technical skills required.
- 2) CV of the candidate.

The resolution with the list of selected candidates will be published in CPAN's web page. The Evaluation Commission will propose, if needed, a list of supplants.

The proposed candidates must confirm in a period of 15 natural days their acceptance by means of e-mail which must be sent both to the receiving group as well as to the CPAN coordinator. If no notification is received within that period, the CPAN's Executive Committee will be entitled to select the following candidate in the list of supplants.

## 5) Payment of the CPAN financial support and follow-up

In general, the assigned funding will start on the date in which the contract between the candidate and the corresponding organization starts, either after the publication of the resolution



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or before that, in this last case always having as limitation the date in which the period for presenting applications is open.

Payments will be done on an annual basis to the corresponding organizations. The payment procedures for the first year will start after the publication of the resolution as soon as the contract being financed is presented. The payment for the following year requires the previous presentation (and positive evaluation by CPAN's Executive Committee) of a scientific-technologic report resuming the activities performed, signed by the contracted person and the IP responsible for the corresponding CPAN's group.

Any publication or result related with the activities performed under this program must contain a reference to the CPAN financial support.

## **ANNEX I: Relation of Contracts**

### **Reference: CPAN08-TS06**

“Maintenance and Operation of the CMS Barrel Muon System”

**CPAN Group:** CIEMAT, Madrid

#### **Candidate requirements:**

We will consider all applicants who will be able to prove having experience in the field of experimental particle physics, especially those with a Ph.D. degree in Physics or with an engineer degree, who have already worked in the commissioning, maintenance and operation of high energy physics detectors, and/or corresponding data acquisition systems.

#### **Job profile:**

The candidate is expected to participate in the final phase of the commissioning of the CMS Muon system at CERN and later on, once the LHC will start operating, play a leading role in the on-site activities associated to the data taking, operation and maintenance of the detector, as well as data analysis. Spanish groups inside the CMS-Muon community have responsibilities in the maintenance and operation of the Barrel Muon Drift Tube (DT) Chambers, readout electronics, link alignment system, Level 1 trigger (DTTF), detector calibration, data quality monitoring, detector performance (DPG), and data analysis. The successful candidate will be based at CERN for the next two years and will work in close collaboration with the CMS team in charge of the daily operation of the experiment, assuming the responsibility of some of the previously mentioned tasks.

**Information and contact:** Prof. Marcos Cerrada; e-mail: [Marcos.Cerrada@cern.ch](mailto:Marcos.Cerrada@cern.ch)

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### **Reference: CPAN08-TS08**

“Development of high performance digitizer boards for the DAQ of the DESPEC experiment at FAIR”

**CPAN Group:** CIEMAT, Madrid

#### **Candidate requirements:**

Applicants must hold a degree in engineering or technical engineering with demonstrated experience in electronics, telecommunications, industrial electronics, degree in Physics with specialization in electronics or any other equivalent degree.

#### **Job profile:**

The candidate will lead the development of a high performance digitizer board for the data acquisition system of the DESPEC experiment at FAIR. The digitizers will be used for the data-taking of a neutron Time Of Flight (TOF) spectrometer also developed by the GIN group at

CIEMAT. The candidate will carry out its work at the CIEMAT laboratories and facilities. In addition, he/she will have to travel to GSI-Darmstadt (FAIR in the future) and other research centers for the integration of the work into the general DESPEC data acquisition framework.

**Main tasks and responsibilities:**

- Conceptual design of a 12 bit and 1 Gigasample/s digitizer board.
- Coordination of the performance tests.
- Coordination of the tests in the laboratory with real neutron detectors.
- Development and programming of the pulse shape analysis software
- Final design and coordination of the industrial production phase.

**Information and contact:** Dr. Daniel Cano Ott; e-mail: [daniel.cano@ciemat.es](mailto:daniel.cano@ciemat.es)

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**Reference: CPAN08-TS11**

“Development of electronics for tracking detectors for the FAIR facility”.

**CPAN Group:** Universidad de Sevilla

**Candidate requirements:**

Applicants must have a higher engineering degree, in electronics, communications or industrial engineering, with specialization in electronics or communications, or have an equivalent degree.

**Job profile:**

Development of the electronics associated to secondary electron detectors (SeD), for its use in tracking detectors for radioactive beams in the FAIR facility. Adaptation of the Basic Nuclear Physics line and the Tracking chamber in the CNA to minimize electronic noise conditions. Analysis and treatment of the signals of beam tracking detectors (BTD) to determine the direction and energy of beam particles. Application of fast electronic modules to the amplification and treatment of signals produced by ion beams.

**Information and contact:** Marcos Aurelio González Álvarez, Joaquín Gómez Camacho;  
e-mail: [malvarez@us.es](mailto:malvarez@us.es), [gomez@us.es](mailto:gomez@us.es).

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**Reference: CPAN08-TM02**

“R+D for the dipole separator of ELISe@FAIR. Fast-timing measurements”

**CPAN Group:** Universidad Complutense de Madrid

**Candidate requirements:**

Minimum academic level: bachelor in electronics engineering, bachelor in informatics, bachelor in physics knowledgeable in electronics and informatics. The willingness to travel and spend training periods abroad will be highly rated.

**Job profile:**

The ELISE experiment at FAIR will allow studying electron scattering off exotic nuclei in collider mode. The main experimental device for ELISE will be a high resolution electron spectrometer with a pre-deflector magnet and two vertical dipoles. The technician will be required to perform R+D tasks for the pre-deflector magnet of ELISE in collaboration with companies working on the field. He or she will also contribute to R+D and setup of ultra fast scintillators suitable for fast-timing measurements with detector arrays at new facilities. The applicant should be available to travel outside Spain for several months (to CERN, GSI, KVI or other facilities) in order to acquire adequate training on magnetic elements design for electron spectrometers.

**Information and contact:** J.M. Udías, L.M. Fraile; e-mail: [grupo@nuclear.fis.ucm.es](mailto:grupo@nuclear.fis.ucm.es)

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**Reference: CPAN08-TM03**

“Characterization of forefront scintillator for the CALIFA spectrometer of R3B (FAIR) and the readout electronics”

**CPAN Group:** IEM-CSIC

**Candidate requirements:**

Minimum academic level: bachelor in electronics engineering, or bachelor in telecommunication engineering, in the branch of electronics, or any other equivalent degree. Good knowledge in English is appreciated.

**Job profile:**

The successful candidate will be in charge of the mechanical mounting of the test bench and the test of the scintillators coupled to different systems of light collection. He/she will design the test bench, participate in the test done at the laboratory of IEM with standard radioactive sources and in the tandetron of 5 MV at CMAM to deduce the response of the scintillator to charged particles. He/she will be in charge of adapting the existing multiplexed data readout system for Si detectors to the readout of the photomultiplier tubes and large area photo diodes, specifically to develop a voltage and temperature control system.

**Information and contact:** MJG Borge and Olof Tengblad; e-mail: [borge@iem.cfmac.csic.es](mailto:borge@iem.cfmac.csic.es) or [olof.tengblad@cern.ch](mailto:olof.tengblad@cern.ch).