November 11, 2009

PERSONNEL CONTRACTS WITH CPAN PARTIAL FINANCIAL SUPPORT

The CPAN project of the CONSOLIDER–INGENIO 2010 program announces 11 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, 9 university graduate degree and 2 university intermediate degree, can be found in Annex I. The maximum duration of the CPAN financial support assigned to each appointment will be two years and in any case it will be limited by the ending date of the project (29th November 2012).

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 the positions that require an university graduate degree, the amount of the CPAN financial support will be 30.000 euro per year, and the minimum annual retribution they will receive, which must be indicated in the contract, is 27.000 euro (brut salary).

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

An additional financial support of 14.000 euros per year will be assigned for the university graduate degree contract CPAN09-TS13 destined at CERN. The financing for the contract CPAN09-TS18 will be only for one year.

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.

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 Office 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 November 12, 2009 to December 5, 2009 (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 December 12, 2009.

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 could 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 Office. 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.

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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 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.

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ANNEX I: Relation of Contracts

Reference: CPAN09-TS10

"Perform experiments in Particle, Astroparticle and Nuclear Physics and develop nuclear instrumentation in the Centro Nacional de Aceleradores."

CPAN beneficiary group:

Centro Nacional de Aceleradores, Sevilla.

Candidate requirements:

Degree in Physics or Engineering. Previous expertise in application of accelerator techniques, radiation detector development and experiments of low energy accelerators will be specially valued.

Job profile:

The High Technician requested will incorporate to the personnel working in the Centro Nacional de Aceleradores, and will develop his activity associated to the large facilities in the centre: 3MV Tandem accelerator, Tandetron AMS accelerator and Cyclotron accelerator.

The main role is to provide the contact and the technical support to all the researchers in the Consolider-CPAN project who wish to perform research making use of the facilities in the CNA. This research covers fields as detector development, study of the characteristics and performance of existing detectors, low energy nuclear physics experiments, etc. Additionally, depending on the proposals presented by the researchers of the Consolider-CPAN project, the Technician will study, and eventually carry out, adaptations of existing beam lines to achieve the best response to the users' requests.

Information and contact: Rafael García Tenorio, e-mail: gtenorio@us.es.

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Reference: CPAN09-TS13

"Beam diagnostics for HIE-ISOLDE"

CPAN beneficiary group:

Instituto de Estructura de la Materia (IEM), Madrid
Universidad de Huelva
Centro Nacional de Aceleradores (CNA), Sevilla.
Universidad Complutense de Madrid, Madrid.
Instituto de Física Corpuscular (IFIC), Valencia.
Supervisor group of this call: IEM (Choose this Institute in the application)

Candidate requirements:

Postdoc or graduated student with a minimum of 24 months of relevant experience in the field of electronics or applied physics. Good knowledge of electromagnetism and relative simulation tools. Good knowledge of electronics and some knowledge of mechanics. An excellent level of English is a must.

Job profile:

The REX-ISOLDE accelerator at CERN is used to produce radioactive ion beams for nuclear physics studies. As part of a consolidation project the beam profile monitors based on the detection of secondary electrons generated by impinging accelerated ions on aluminium foils require a thorough redesign. This redesign consists in a detailed study of the distribution of the electromagnetic fields in the monitor and the simulation of the beam dynamics of the secondary electrons with the aim of identifying performance limitations and overcome them trough modifications of the monitor layout. The detection of the secondary electrons need also to be improved. The candidate will be in charge of the modification and construction of the new monitor and the data obtained from the measurements need to be analyzed in order to find the calibration factors for the monitors. The position will be placed at CERN.

Information and contact: Maria José García Borge, Borge@iem.cfmac.csic.es ; Luis Fraile, e-mail: luis.fraile@cern.ch; Matteo Pasini, e-mail: matteo.pasini@cern.ch.

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Reference: CPAN09-TS15

"Computer Engineer for Tier3s Administration and support of distributed analysis."

CPAN beneficiary group:

Instituto de Física de Altas Energías (IFAE), Barcelona.

Candidate requirements:

Degree in Computer Engineering, Telecommunications, Physics or similar. Advanced knowledge in Linux, Redes and computing farms and knowlwdge in GRID elements of distributed computing used in Particle Physics experiments. Good level of English and availability to travel to several Institutes in Spain and CERN (Geneve) is a must.

Job Profile:

According to the actual computing model used by ATLAS at LHC, the analysis of the experiment data will take place in Tier3 centres located in the different institutions. One of the goals is to define a model based in Grid tools for a best coordination between the centres in order to optimize the global capacity of the Spanish Physicists in the data analysis of ATLAS.

Nowadays, the research groups at IFAE (Barcelona), IFIC (Valencia) and UAM (Madrid) are in the process of preparing their Tier3 farms before the commissioning of the accelerator and with this contract it is pretended to consolidate that effort. The selected candidate will dedicate the 60% of his/her time to support the different Tier-3s, and to test and validate new updates and tools. The other 40% of the time will be destined to cover partially the need of a more centralized contact among the ATLAS users and the Tier3 centres in Spain to support distributed analysis.

Information and contact: Mario Martínez; e-mail: mmp@ifae.es

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Reference: CPAN09-TS16

"Beam instrumentation design for future High Energy Colliders".

CPAN beneficiary group:

Instituto de Física Corpuscular (IFIC), Valencia.

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Candidate requirements:

Candidates must hold a degree in Industrial Engineering or similar, with proven experience in design and construction of the instrumentation for colliders.

Job profile:

The future in high energy accelerators is pointing forwards the design of a linear collider and the upgrade of the LHC (sLHC). The IFIC group participates in the design of beam instrumentation for these Future Large Colliders, more specifically Beam Position Monitors (BPM) and Optical Transition Radiation Monitors (OTR) for ILC/CLIC. The candidate will participate in the design and construction of such systems. Furthermore he/she will collaborate in the mechanic of the Radio Frecuency cavities for CLIC. Concerning the sLHC he/she will contribute in the design of a new colimation system.

Information and contact: Angeles Faus, e-mail: Angels.Faus@ific.uv.es; Carmen García; e-mail: Carmen.Garcia@ific.uv.es

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Reference: CPAN09-TS17

"Development of data acquisition systems and nuclear instrumentation"

CPAN beneficiary group:

Instituto de Física Corpuscular (IFIC), Valencia.

Candidate requirements:

Engineer in Electronics or similar. The candidate should have previous experience on analogue and digital nuclear electronics and data acquisition systems. Knowledge on DSP and FPGA programming, as well as on C/C++ programming languages is required and also a good level of English.

Job profile:

The successful candidate will take part in the instrumentation development in the activities that the Spectrosopy Gamma group at IFIC develops in relation with the DESPEC/HISPEC experiment in the future international facility FAIR-Darmstadt, and in other experimental facilities.

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In particular it is expected that the successful candidate will take responsibility on the development of a new digital data acquisition system based on FADC and dedicated software on FPGA as well as on the development of a prototype system for the distribution of synchronization signals to the different digital systems of the experiment.

Information and contact: Jose L. Tain, e-mail: tain@ific.uv.es.

Reference: CPAN09-TS18

"Engineer or Physicist specialized in Grid computing in the frame of Astroparticle Physics".

CPAN beneficiary group:

Universidad de Alcalá de Henares.

Candidate requirements:

The candidates must hold a degree in Engineering, Physics or similar with proven experience in Grid computing environments and knowledge in glite middleware.

Job profile:

Establishment, commissioning and maintenance of a GRID VO for the Astroparticle Physics and Special Plasma Group of the Universidad de Alcala in order to perform Monte Carlos simulations for the Pierre Auger Observatory project where the group participate.

The main tasks will be:

- Study of the computing needs.
- Needed infrastructure.
- Speed of connexion.
- Quantity of CPUs.
- Storage capacity.
- Evaluation of costs and location of the equipment.
- Training in GRID technology (CERN, UNAM, PRAGA).
- Acquisition of equipments and commissioning of the system.
- Commisioning of the VO for the Alcala University.
- Implementation of the software to be used in the Pierre Auger project:
- Offline DPA

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This contract will have a duration of one year.

Information and contact: Luis del Peral, e-mail: luis.delperal@uah.es.

Reference: CPAN09-TS19

"Design, commisioning and operation of the acquisition system (software and hardware) of the ANAIS experiment"

CPAN beneficiary group:

Universidad de Zaragoza

Candidate requirements:

Candidates must hold a degree in Electronics Engineering or in Physics, proven experience in applied electronics and expertise on Linux C and C++ programming.

Job profile:

The selected candidate will participate with other members of the Group in the design and mounting of the ANAIS acquisition system -an experiment searching for dark matter in the Canfranc Underground Laboratory-. The development of this work will require expertise in modular electronics –mainly based on VME and NIM modules- and knowledge of Linux C++ to develop the acquisition and control systems as well as the data processing of the experiment.

He/She will work in the laboratories of the research Group at the University of Zaragoza and in the Canfranc Underground Laboratory.

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Reference: CPAN09-TS20

"High-performance computing technician"

CPAN beneficiary group:

Instituto de Física Teórica (IFT), Madrid.

Candidate requirements:

Candidates must hold a degree in any scientific discipline or Engineering. Knowledge and experience in the administration of Linux systems are required, especially in managing high-performance computing clusters. In particular, knowledge of the use, installation and management of programming tools (Fortran or C++, compilers, libraries, MPI, etc.), as well as management and installation of networks and web tools (APACHE, PHP, Drupal or similar, etc.) will be valued. Also valuable will be the knowledge and experience in using the applications and methodology characteristic of scientific computing. Due to the international profile of the IFT, a good level of English will be considered relevant.

Job profile:

The successful candidate will join the team that manages the high-performance computing resources of the IFT, with particular responsibility for the management and installation of the institute computing clusters. The primary tasks of the technician will be:

- Administration of the system and tools of the IFT clusters.
- Participation in the selection, purchase and set-up of new high-performance computing equipment of the IFT.
- Participation in the set-up of the computing infraestructure and communications of the new IFT building.
- Support to other administrative and management tasks of other IFT computing services (web servers, intranet, development of Web/SQL applications, etc).
- The contribution to the reorganization of the IFT computing services in the new building.

Information and contact: Carlos Pena Ruano, e-mail: carlos.pena@uam.es

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Reference: CPAN09-TS21

"Computer engineer/Physicist specialized in computing systems"

CPAN beneficiary group:

Universidad Complutense de Madrid.

Candidate requirements:

The candidate must hold a degree in Engineering, Physics or similar. She/he will be in charge of developing applications in a Grid environment for the CTA project, create and adapt tools to control data pipelines and general system management."

Job profile:

The candidate main tasks will be to:

- Develop applications in Grid environments.
- Create and maintain pipelines for data analysis.
- Manage computer clusters running linux.
- Data communications.

Information and contact: José Luis Contreras: contrera@gae.ucm.es.

Reference CPAN09-TM06

"Support and maintenance engineer for the electronics of the SPD of LHCb at La Salle (Universitat Ramon Llull)".

CPAN beneficiary group:

Universitat Ramon Llull (Barcelona).

Candidate requirements:

Degree in electronics engineering, telecommunications or degree in engineering with competences in electronics. Knowledge in VHDL and PVSS are desirable.

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Job profile:

The group at La Salle, Universitat Ramon Llull, is involved in the LHCb collaboration. Among its responsibilities, we find a contribution to maintenance of the electronics of the SPD, its integration in the experiment control system and the development of the electronics for the LHCb upgrade. Besides, the group is also involved in studies of pixel detectors for future accelerators.

The candidate main tasks shall be to support the maintenance of the SPD electronics by finishing the development of the integrated test system, performing the quality control tests for the production of Very Front End board spares as well as the required changes and improvements of the experiment control system part related to the SPD. Besides, the candidate may also contribute to support the developments for the upgrade of LHCb or the electronics for pixel detectors.

The candidate shall be based in Barcelona, but shall be available to travel to CERN or other collaborating laboratories.

Information and contact: Xavier Vilasís Cardona, xvilasis@salle.url.edu.

Reference CPAN09-TM07

"Diffusion and dissemination of DIRAC. Support groups and communities interested in using DIRAC as a tool to access the Grid."

CPAN beneficiary Group

Universidad de Barcelona and Universidad de Santiago de Compostela.

Candidate requirements.

Middle or senior in computer engineer. Advanced knowledge of high level programming languages. Especially Python and Javascript. Advanced knowledge of Linux system administration.

Job profile

The person selected will work to support the DIRAC project for dissemination to user groups and communities, preferably Spanish, interested in using it as a tool to simplify access to distributed computing facilities.

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DIRAC is the software system developed by LHCb to jointly manage all activities of distributed computing, integrating Grid and traditional resources. The Spanish groups members of LHCb, USC and UB have actively participated in its development and are committed to its long-term support.

It is expected that the person chosen could be integrated into the development and support team DIRAC, paying particular attention to the preparation of demonstration sessions, tutorials, documentation review and other outreach. Likewise, it is hoped his/her contribution to the development of new components which are not particularly relevant for LHCb, but are of interest to other communities and complement the functionality of DIRAC.

This contract will have an initial duration of one year. The Executive Committee will take in consideration its renovation after studying the obtained results.

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