June 5, 2009

Personnel Contracts with CPAN partial financial support

The CPAN project of the CONSOLIDER–INGENIO 2010 program announces 9 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, 7 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 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 personnel with 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 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.

Email: cpan@ific.uv.es
Tel.: +34 96 354 48 46
Fax: +34 96 354 34 88

CPAN
IFIC, CSIC – Universidad de Valencia
Edificio Institutos de Investigación
Apartado de correos 22085
E-46071 Valencia, España

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 June 5, 2009 to July 4, 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 July 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 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 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-TS08

"R&D on Electronics for the Muon Detector of the CMS Experiment at the LHC."

CPAN beneficiary group:

Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT), Madrid.

Candidate requirements:

Candidates must hold a degree in Electronics, Telecommunications or Industrial (Electronics or Automatics) Engineering or Physics (Electronics).

Experience and know-how in electronic boards design, mainly the digital part, and firmware development in VHDL, will be considered very relevant, as well as the experience in using laboratory instrumentation and LabView or C++, and in developing equipment for measurements and tests. A good level of English, and availability to travel, are a must.

Job profile:

The CIEMAT group is actively involved in the CMS experiment (Compact Muon Solenoid) at the LHC. In particular, the group is responsible of the read-out electronics for the muon chambers of the CMS detector. We have been leading this activity from the initial design phase, through the testing phase with prototypes, the mass production in Spain, the quality control, and finally the installation and setting up of the electronics in the CMS detector at CERN.

The candidate will work, under the supervision of CIEMAT experts in the maintenance and operation of the muon detector Electronics, as well as in activities related to the development of new electronics required in the detector upgrade for the future high-luminosity phase of the LHC.

Information and contact: Cristina Fernández Bedoya, e-mail: cristina.fernandez@ciemat.es

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Reference: CPAN09-TS09

"Electronic Engineer/Physicist specialized in FPGA designs in the framework of sLHC"

CPAN beneficiary group:

Instituto de Física Corpuscular (IFIC), Valencia.

Candidate requirements:

Candidates must be Physicists or Electronic Engineers, with experience in the design, fabrication and tests of digital circuits based on last generation FPGAs. Traveling and long stays at CERN are expected.

Job Profile:

IFIC, where the main activities are expected to be carried out, is a High Energy Physics Institute where ongoing research activities include experimental and theoretical work with application in near-term and far-future projects, offering the possibility to work on a rich scientific environment at the forefront of a broad range of High Energy Physics studies.

IFIC ATLAS group participates in the operation and commissioning of the Hadronic Tile Calorimeter (TileCal), where we have the main responsability in the back-end electronics, trigger and data taking operation of the detector. Our group is also leading the R&D activities towards the sLHC TileCa trigger and calorimeter upgrade, including the new back-end electronics.

The main expected responsabilities of the candidate, who is expected to work under close supervision of IFIC TileCal researches and engineers, are:

- Digital Electronics. Microelectronics.
- PCB designs related to data acquisition.
- Knowledge of HEP data acquisition systems, related electronic design software, and electronic instrumentation.
- Knowledge of CAD tools for PCB designs, signal integrity analysis, etc.
- Hardware description languages to program logical circuits (FPGAs).
- Programming of Digital Signal Proccessing units (DSPs) with assembler and C languages.
- Knowledge of data transfering busses and protocols (VME, PCI, PCI Express, etc.).
- Programming languages C/C++/JAVA.
- Knowledge and experience with optical fiber data transfering at high rates.
- Participation in the back-end electronics upgrade of TileCal.

Information and contact:

Juan A. Valls Ferrer, e-mail: valls@ific.uv.es

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.

Email: cpan@ific.uv.es
Tel.: +34 96 354 48 46
Fax: +34 96 354 34 88

CPAN
IFIC, CSIC – Universidad de Valencia
Edificio Institutos de Investigación
Apartado de correos 22085
E-46071 Valencia, España

Reference: CPAN09-TS11

"Developments for the iTOF y CALIFA spectrometers for R3B experiment of FAIR and the electronics of readout"

CPAN beneficiary group:

Instituto Galego de Física de Altas Enerxias (IGFAE), Santiago de Compostela

Candidate requirements:

Physics degree on opto-electronics or equivalent.

Job profile:

Within the frame of instrumentation developments for R3B experiment of FAIR done by GENP-USC the aim is to reach the maximum resolution possible in time in (iTOF) and in amplitude (CALIFA), going beyond present values. For that the hired technologist should develop new optoelectronic tecnics to carture signals as well as innovation methods of digitalization and treatment of data.

The successful candidate should be incorporate in the already existing working teams and should be ready to make stay in collaborating groups in Sapin and abroad.

Information and contact: Ignacio Durán, e-mail: iduran@usc.es ; José Benlliure, e-mail: jbenlliure@usc.es

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Reference: CPAN09-TS12

“Development of a simulation and analysis tool for the R3B experiment (Reactions with Relativistic Radioactive Beams)“.

CPAN beneficiary group:

Instituto de Estructura de la Materia, Madrid.

Candidate requirements:

Doctor in Physics or Engineering or Physicist or Engineer with experience.
Experience on analysis of experiments with many detectors and reaction channels will be specially considered. Experience in C and C++-programming important.

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Job profile:

The successful candidate will be incorporated in the experimental nuclear physics group of the Instituto de Estructura de la Materia, and It will spend an important part of his/her time at GSI, Darmstadt, Germany. Its main role will be to be responsible of adapting the simulation and analysis tool FAIRoot to the R3B experiment, the so called R3Broot under development just right now.

Information and contact:

María Jose García Borge, e-mail: borge@iem.cfmac.csic.es ; e-mail: Olof Tengblad, olof@iem.cfmac.csic.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 aluminum 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.

Reference: CPAN09-TS14

"Electronics engineer for pixel detector instrumentation at USC"

CPAN beneficiary group:

Instituto Galego de Física de Altas Enerxias (IGFAE), Santiago de Compostela

Candidate requirements:

The candidate must have a degree on Engineering or Physics, or a Ph. D., with some experience in silicon sensor instrumentation, power supply systems of photodetectors, or read-out data acquisition software.

Job profile:

The candidate is expected to take responsability on two related activities, namely: detector development for an upgraded LHCb vertex detector, intended for perform data adquisition at 40 Mhz, and R&D in pixel detectors for e+e- high luminosity colliders. Both activities will be developed at IGFAE using clean room and common laboratory instrumentation.

Information and contact:

Bernardo Adeva; e-mail: Bernardo.Adeva@usc.es

Reference: CPAN09-TM03

“Support for the computing infrastructure at the High Energy Experimental Physics Group in the University of Oviedo”

CPAN beneficiary group:

Universidad de Oviedo

Candidate requirements:

Applicants should have a Degree in scientific area (Ph.D., graduate, engineer). Advance knowledge on LINUX system administration.

Job profile:

The candidate will be responsible to support the group computing services, including local services maintenance and development, as well as the integration of new hardware into the current infrastructure. In particular the candidate is expected to maintain, upgrade and install services needed by the local users: Web, distributed data, data backup and batch systems. On top of data he/she will need to be able to support the computing systems already in place for CMS (PhEDEx, Squid) and to integrate the new services that the evolution of the CMS computing model may require. The knowledge and experience on GRID computing technologies will be an advantage.

Information and contact:

Javier Cuevas (fjcuevas@uniovi.es), Isidro González (gonzalezisidro@uniovi.es)

Reference: CPAN09-TM04

"Electronic Engineer for development of pixels."

CPAN beneficiary group:

Institut de Física d'Altes Energies (IFAE), Barcelona.

Candidate requirements:

Applicants must hold a degree in Electronics (FPII or GFPS) with proven experience in soldering PCB (Printed Circuit Boards) and SMD components, working with laboratory instrumentation and knowledge of PCB development tools. Knowledge of LabVIEW, LabWindows and C/C++ will be valuable. A fair level in English is a must.

Job profile:

The main responsibilities of the candidate will be:

- Start-up and maintenance of a testing bank for silicon sensors.
- Support to the R&D department in the design of new electronic circuits.
- Testing the prototypes of electronic circuits necessary for the group R&D.
- Reparation and maintenance of the existing electronic circuits.
- Manual soldering of prototypes with SMD components.
- Experimental measures with laboratory instruments (oscilloscopes, testers, etc..)
- PCB design.

Information and contact:
Cristóbal Padila, e-mail: Cristobal.Padilla@cern.ch ; Ily Korolkov, e-mail: korolkov@ifae.es