# GLOBAL TRAINING PROGRAMME

## FORMULARIO 1 SOLICITUD DE PARTICIPACIÓN: PROGRAMA GLOBAL TRAINING

**REFERENCIA: EHU18**

| INFORMACIÓN CORPORATIVA | | | |
|---|---|---|---|
| Nombre de la empresa/institución | | **Helmholtz-Zentrum Berlin für Materialien und Energie** | |
| Persona de contacto | | **Pablo Echevarria Fernandez** | Email: |
| Localización | País | Alemania | |
| | Ciudad | Berlin | |
| | Dirección | Albert Einstein Straße 15, 12489 | |
| Sector | | **Scientific research on materials for a sustainable energy supply and operation of the electron storage ring BESSY II** | |
| **INFORMACIÓN DE LA PRÁCTICA PROPUESTA** | | | |
| Número de becarios a acoger | | 1 | |
| Tiempo de prórroga de estancia (OPCIONAL)<br><br>VER DOCUMENTO:<br>*"FORM 2_Global Training 2023 preacuerdo extensión"* | Meses extra | 0 | |
| | Mensualidad (€) del becario durante los meses extra (entre 0 y 1600€/mes) | 0 | |
| **INFORMACIÓN DE LA PRÁCTICA** | | | |
| Departamento<br>(en caso de solicitar más de 1 becario, indicar el departamento en el que trabajaría cada uno) | | Institute for Science and Technology of Accelerating Systems | |
| Descripción del proyecto/actividades<br>(en caso de solicitar más de 1 becario, indicar el proyecto/actividades en las que trabajaría cada uno) | | The Institute for Science and Technology of Accelerating Systems is in charge, among other tasks, of the design, construction and commissioning of superconducting cavities used for particles acceleration. Currently it is working in two major projects: SEALab and VSR-Demo.<br>SEALab (SRF Electron Accelerator Laboratory) where the commissioning of the first stages of an energy recovery linear (ERL) particle accelerator are about to take place. The principle behind this idea is the construction of high current, compact particle accelerators requiring much less electrical power and, subsequently, reducing the environmental and financial impacts.<br>VSR-Demo (BESSY Variable Pulse Length Storage Ring Demonstration Project) is the preliminary step to study the possibility of upgrading the storage ring of the synchrotron light source BESSY-II, in operation since 1998, to allow the circulation of particles bunches of different lengths and, thus, expanding the flexibility of the machine toward the beamlines users.<br>Both projects require the installation of several superconducting structures (cavities) with the subsequent associated subsystems, such as, cryogenics to generate liquid Helium at 1.8K, ultra-high vacuum, high power radiofrequency systems, etc.<br>The activities of the trainees will range from the design and simulation of cavities, set up of laboratory experiments, experimental measurements, electromagnetic fields control algorithms design, etc. The specific tasks of the trainees will be adapted, as much as possible, to the previous experience and training of the trainee | |
| **COMPETENCIAS REQUERIDAS PARA EL PUESTO** | | | |
| Información sobre los perfiles deseados<br>(Estudios, experiencia previa, idiomas, otras habilidades…) | | Estudios | Studies: Physics, Electronics Engineer, Industrial Engineer, Computer Science Engineer. |
| | | Nivel Idiomas | Languages: Good English level. The working language will be English. German knowledge is an asset but not necessary. It's very important that the trainee is capable of documenting and reporting their work properly. |

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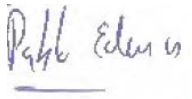
| | **Otros** *(experiencia, programas, habilidades personales, etc.)* | Control algorithms, FPGAs programming, programming languages (LabView, Python, C++), CST Studio, RF systems knowledge (oscilloscopes, network analyzers, spectrum analyzers…), ability of working in a multicultural team. |
| Comentarios | In the previous edition, the tasks performed by the trainee granted them a co-authorship in a publication sent to the International Particle Accelerator Conference. | |

| EMPRESA/ORGANISMO | FIRMA | FECHA |
|---|---|---|
| RESPONSABLE EMPRESA:<br>Pablo Echevarria Fernandez |  | 17/05/2024 |