

The Max Planck Institute for Physics invites applications for an

Engineering position (m/f/d)

MADMAX is a new experimental approach to search for Dark Matter axions making use of a strong magnetic dipole. The required magnetic physics Figure of Merit (FoM) is about $100 \text{ T}^2\text{m}^2$ which will be achieved by a unique dipole producing a field of 9 T in a bore of 1.35 m. The MADMAX magnet project is presently being realized with two partners with the following scope of work:

- Design of the magnet (conceptual design, manufacturing design, drawings, specifications, etc.)
- Purchase of all hardware (conductor, casings, cryostat, etc.)
- Manufacturing of the magnet (winding, impregnation, insertion, assembly, etc.)
- Cold Testing of individual coils (AC/DC insulation, cooling down, leaks, energizing, quench, etc.)
- Installation of the magnet at DESY in its facility (power supply, valve box, control and safety systems, etc.)

The successful candidate is expected to become a representative of the MADMAX collaboration in the Magnet project and to take a leading role in the technical coordination of the project. She/He will become the main interface between the MADMAX collaboration and the partner's project leaders or technical coordinators. Her/His role will be transverse in each phase of the project. The main duties would be:

- Design phases: review of the designs proposed by the partners, official review and validation on behalf of MADMAX of drawings and specifications before purchase
- Purchase phases: review of the different technical offers and quotes coming from subcontractors, validation on behalf of MADMAX of the company's choice
- Manufacturing phases: follow up of the production process in industry, quality control, validation on behalf of MADMAX of acceptance tests, non-conformities, and change requests
- Cold tests phases: participation to the coils cold tests, validation on behalf of MADMAX of the tests reports, non-conformities and change requests
- DESY facility integration phases: definition of all interfaces between DESY infrastructure and magnet components, follow up and coordination of the magnet installation and commissioning

The work will be performed in close cooperation with the magnet partners and the MADMAX collaboration partners. Extended stays at DESY Hamburg and at other locations of partners may be required.



Formal requirements for this position are a master in engineering or physics or equivalent. A PhD is of advantage. The successful candidate is expected to have gained experience within challenging engineering projects. Good knowledge of CAD, manufacturing processes, definition and control of interfaces are prerequisite. The candidate should have experience with respect to quality control and technical follow up of subcontracted items with suppliers. A very good team spirit and communications skills as well as experience in working with a group of diverse partners are essential. A good knowledge of superconducting magnet design is an advantage but not strictly required. The candidate is required to have good proficiency of English. Proficiency of German is an advantage. Salary and benefits are commensurate with public service organizations (TVöD-Bund). The contract is initially limited to 3 years with the possibility of an extension.

The Max Planck Society strives for gender equality and diversity. The Max Planck Society is committed to increasing the number of individuals with disabilities in its workforce and therefore encourages applications from such qualified individuals. Furthermore, the Max Planck Society seeks to increase the number of women in those areas where they are underrepresented and therefore explicitly encourages women to apply.

For questions concerning the position offered, please contact:
Dr. Béla Majorovits (E-mail: bela@mpp.mpg.de).

Interested applicants should send an application letter detailing areas of expertise, a professional statement, an up to date curriculum vitae, transcripts of graduate degrees and contact information for three professional references to the following E-mail address jobs-madmax@mpp.mpg.de until **October 4, 2020**. The call is open until the position is filled.

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