

Helmholtz Call for Chinese Applicants Interested in Running for CSC 2021 Fellowship

Helmholtz Centre: Forschungszentrum Jülich GmbH – www.fz-juelich.de
Department/Institute: Institute of Energy and Climate Research, Plasmaphysics (IEK-4)
https://www.fz-juelich.de/iek/iek-4/EN/Home/home_node.html
Supervising scientist: Prof. Dr. Yunfeng Liang
Research Field: Energy; Plasma physics
Position open for: Visiting Scholar Postdoc
Title of the research: Edge SOL transport with an island divertor on W7-X

More description of research topic:

On the way to a reactor design, power and particle exhaust are of major importance in terms of impurity screening, helium removal and power loads on plasma-facing components in both tokamak and stellarator concepts. Wendelstein 7-X, the world largest stellarator for the next few decades, started operations in 2015. A detailed study of the 3D island divertor physics is important, and requires knowledge of the processes in the plasma edge and scrape-off layer (SOL).

The Institute of Energy and Climate Research (IEK-4) is one of the leading institutes in plasma edge diagnostics and physics of plasma-wall interaction. Its major contributions on W7-X are a multi-purpose probe system with probe heads to measure plasma parameters in the edge region, an endoscope system enabling a tomographic reconstruction of impurity radiation in the divertor region as well as divertor power load measurements and active gas injection diagnostics allowing for helium transport studies.

We are seeking a post doctor researcher. He/She will work on the divertor physics and edge diagnostics for understanding the physics of “Edge SOL transport with an island divertor on W7-X”.

Specific requirements:

University studies with a PhD degree in physics. A good basic knowledge of mathematical and modeling skills, and good experiences of divertor physics, plasma wall interaction and plasma diagnostics on tokamak or stellarator are a prerequisite, as well as a good level in English.

Funding: CSC-scholarships will be increased by hosting institution (500 €month and costs for health, emergency-call and liability insurance (50 €))

Working Place: Forschungszentrum Jülich, Germany (near Cologne)

Earliest Start: September 2021

Language Requirement: Very good knowledge of English language, written and spoken. German language courses are organised in the context of our in-house training program and are free of charge.

Name and Address of the Supervisor: Prof. Dr. Yunfeng Liang, Forschungszentrum Jülich GmbH, Institute of Energy and Climate Research (EK-4), D-52425 Jülich, Germany; y.liang@fz-juelich.de