Job posting

Type of position  
☑️ scientific  
☐ administrative

Target group  
☑️ graduates  
☐ post docs  
☐ other

Title  
PhD POSITION (F/M/X) FOR PLASMA-FLUID INTERACTIONS  
PLASMA SOURCE CONCEPTS

Institution  
RESEARCH AND DEVELOPMENT  
FROM IDEA TO PROTOTYPE

Our institute ranks among the largest and most modern institutions in the field of low-temperature plasmas worldwide. In an international working environment, we conduct socially relevant research within our core areas Materials & Energy and Environment & Health. Currently the INP employs about 200 scientists and staff at three locations (Greifswald, Rostock and Karlsburg).

The Diabetes Competence Centre Karlsburg (KDK) was established with modern infrastructure in 2016 between the Leibniz-Institute for Plasma Science and Technology e.V. (INP) and the Clinic Karlsburg. This centre integrates in a unique fashion clinical treatment and application oriented research under one roof. With this interdisciplinary approach newest scientific results can be transferred from research into practical solutions for latest medical issues until reaching clinical routine.

For further information, please visit our website at www.leibniz-inp.de.

Position  
For our research group Plasma Source Concepts we are looking to recruit as of 1st June 2022 for our location in Karlsburg (near Greifswald) an enthusiastic candidate for the

PhD POSITION (F/M/X) FOR PLASMA-FLUID INTERACTIONS  
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Fixed term contract for 3 years / Part-time appointment (26,6 hours/week) / Target salary: TV-L/E13

Responsibilities  
You will design a gas flow test-rig from scratch and together we will advance towards a deeper understanding of the complex interaction between cold atmospheric plasma discharges (e.g. for medical application) and the surrounding fluid(s). Your experiments and your test-rig are aiming to be one-of-a-kind; using robotics, mechatronics, automation, measurements techniques and AI for an integral approach. This challenge is far
from normal and so are you.

Your main responsibilities will be:
- You design, build and operate a multi-purpose gas flow test facility with integrated control-loops and adaptable interfaces for multiple experiments.
- You use your setup to take the first step into a deeper understanding of plasma discharge/ fluid interaction using proven in-house plasma sources.
- You correlate your observations with modeling results.
- You get familiar with top-notch measurement techniques, such as PIV, Fast-framing, robotics & advanced control-loops.
- You interact with an interdisciplinary team from physicists to medical stuff including the presentation of scientific results.
- You present your scientific results on scientific conferences and publish them in peer-reviewed journals.

Goals you will reach after 3 years:
- Interaction of plasma and gasflow measured, understood and published via papers and on topical conferences
- Expert in optical imaging of plasma and gas flow interaction
- PhD thesis submitted
- Ready for an interesting PostDoc Position, either with us or one of our many international partners

Requirements
- Very good university-level qualification (Master of Science degree) in mechanical engineering or comparable subject areas
- Experienced with atmospheric pressure plasma system operation and diagnostics (oscilloscope, OES, power measurement)
- Experienced with experimental fluid mechanics (PIV, LDA, pressure taps, wind tunnels)
- Experienced with Rapid Prototyping (3D printing, FFF, SLA)
- General knowledge of measurement and control systems, with a focus on optical imaging techniques
- Advanced programming skills in Python for data evaluation and more (ROS would be advantageous)
- Analytical competencies and problem-oriented thinking
- Excellent German and English
- Experienced team worker, willingness and enthusiasm for independent work
- High communication skills, individual initiative and extraordinary engagement are required.

Application procedure (deadline etc.)
WE OFFER YOU:
- Compensation according to the collective salary agreement of Länder (TV-L) including employer contributions to medical and dental insurance, maternity leave and retirement benefits
- Highly motivated team and creative work environment
- Become a part of a new institute being developed to address future medical challenges with presently possible technical
solutions
- Unmatched technical facilities of the highest standard
- Working at the chateau park of Karlsruburg
- Unique environment: work hand-in-hand with medical staff and patients
- Thesis advisory committee: experienced and professional assistance throughout your PhD from INP and special consultancy from Karlsruhe Institute of Technology (KIT)
- Opportunities for professional development (e.g. project management, acquisition of third-party funding)
- Networking opportunities at national and international conferences and further research groups
- Possibility of developing and implementing own project ideas
- Flexible working hours and mobile working offers
- 30 vacation days per year (plus: December 24th and 31st)

HOW TO APPLY
Please apply with the required documents (cover letter, CV, transcript of records, optional references) giving the keyword „0477 PhD Position Plasma-Fluid Interactions” - preferably via our online application form - until 24th April 2022.

Your performance and personality matters regardless of your age, origin, gender, sexual identity, disability or ideology. We look forward to receiving your applications!

The INP wants equal participation of men and women, especially in science. There are many good reasons why it is worthwhile to promote the potential of women specifically. Qualified women candidates are explicitly called to apply. Handicapped applicants will be preferred in case of equal qualification.

Contact
For further information and inquiries, please contact Dr. Philipp Mattern (e-mail: philipp.mattern@inp-greifswald.de) or Dr. Torsten Gerling (e-mail: gerling@inp-greifswald.de).

Please send your applications to*:

Leibniz-Institute for Plasma Science and Technology (INP)
Mrs. Gabriele Lembke
Human Resources Department
Felix-Hausdorff-Str. 2
17489 Greifswald
E-Mail: bewu@inp-greifswald.de

* Unfortunately, we cannot refund any of your expenses for applications and job interviews due to budgetary regulations.