

# APPLICATION FORM



Please email this form and supporting documents to:

Mr. Peter Kurz  
HEPP Coordinator  
Max-Planck-Institut für Plasmaphysik  
[hepp@ipp.mpg.de](mailto:hepp@ipp.mpg.de)

Submit by email

## APPLICATION FORM

Hacker	Philipp	
Last Name	First Name	Middle Name(s)
15.06.1994	Demmin	German
Date of birth	Place of birth	Nationality
Karl-Liebnecht-Ring 13		17489
Address		Postal Code
Greifswald		Germany
City		Country
+49 152 05 277 686		
Phone (home)	Phone (work)	Fax
rayleighsjeans@gmail.com		
Email		

☒ Male ☐ Female ☒ Single ☐ Married No. of Children 0

## Qualifying Degree

Ernst-Moritz-Arndt University Greifswald

Awarding body / place of higher education

Physics

Course of study

Master of Science

Degree title

10/2017

Date of award (expected)

Grade (if known)

Prof. Dr. Ralf Schneider

Supervisor

Title of thesis and main subject(s)

Thesis title: "Kinetic Effects in RF Discharges"

subjects: 2d3v PIC simulation of low-temperature ccrf discharges

main courses: low-temperature and high-temperature plasmaphysics

## Other Degree (if applicable)

Ernst-Moritz-Arndt University Greifswald

Awarding body / place of higher education

Physics

Course of study

Bachelor of Science

Degree title

09/2015

Date of award (expected)

2.9

Grade (if known)

Prof. Dr. André Melzer

Supervisor

Title of thesis and main subject(s)

Thesis title: 'Modenanregung in Yukawa-Bällen'

subject: external excitation of complex plasma systems,  
stereoscopic diagnostics

## Education

In this table, please list briefly your education and training after leaving school.

Term/ Dates	Place of higher education	Details
10/2012 - 09/2015	EMA University Greifswald Institute of Physics	Bachelors Degree in Physics
10/2012 - now	EMA University Greifswald Institute of Physics	Masters Degree in Physics

## Course Work

Please provide a list of your course work and your grades. You can also attach a transcript.  
Please specify the grading system of your institution, e.g. 'A' (top 10 %), 'B' (top 20 %).

*Course work*

*Grading system*

## Research Experience

Please provide a description of your previous research activities (implication, aim and your contribution) and list publications if applicable.

10/2012-04/2014 Basic Practical Laboratory Course  
Basic experiments in all research fields at the Institute of Physics  
University of Greifswald

05/2015-09/2015 Bachelor Thesis: 'Modenanregung in Yukawa-Bällen'  
Research Group of Prof. Dr. Andre Melzer  
University of Greifswald  
Stereoscopic particle diagnostics with MATLAB

10/2015-07/2016 Internship in the Group of Prof. Dr. Melzer  
Complex Plasma Systems, Experiment Setup

10/2015-04/2016 Advanced Practical Laboratory Course  
Advanced experimental methodology

04/2016-10/2016 Research Group Traineeship  
'Electric field strength spectroscopy in dielectric barrier discharges'  
Research Group of Prof. Dr. Jürgen Meichsner  
Institute of Physics, University of Greifswald

10/2016-now Master Thesis: 'Kinetic Effects in RF Discharges'  
Research Group of Prof. Dr. Ralf Schneider  
C++ 2d3v PIC simulation of ccrf discharges



## Research Interests

Please provide a detailed description of your research interests.

Due to the choice of subjects and courses my main interest in scientific research is focused around high-, low-temperature plasmaphysics and the interaction of gas discharges with walls.

During my Master of Science study program I developed a considerable curiosity for numerical methodology and the corresponding mathematical background, as well as plasma-related computation science. One of my strong points would be the intelligent and fast evaluation of large data sets.

## Other Information

Please describe briefly your other interests which are not directly related to your research work.

I am heavily into canoe-watersports, especially dragon boat racing. Also, I have been particularly successful in the latter. In 2011 I participated with the 'U18 Junior National Team of Germany' at the 11th IDBF Nations Championship in Tampa Bay, FL USA and won 9 gold and 2 silver medals. Furthermore I am engaged into the Hochschulsportgemeinschaft of the University of Greifswald. Sports is not only a hobby, but also a passion to me.

## Motivation

Please describe your motivation for applying at the International Helmholtz Graduate School for Plasma Physics (HEPP).

Dear Mrs. or Mr.,  
with this form I would like to submit my initial application for a Ph.D. position at the International Helmholtz Graduate School for Plasma Physics. Over the course of my Bachelor and Master study, I had the opportunity to work in many different fields of plasma physics. Hence it has been a goal of mine for a long time to further intensify my experiences with scientific research and diagnostic methodology. A Ph.D. position at the Max-Planck Institute would be a great accomplishment and honor for me. The hard work, devotion and determination which is necessary to succeed with the scientific research at such a renowned institute are within the foundation of my personality. The attached curriculum vitae and references should give a good overview of my development as a scholar and physicist.

## Awards

Please list below any award that you feel is relevant to this application.

## References

Please name two referees who have agreed to write a letter of recommendation upon request by HEPP.

Prof. Dr. Ralf Schneider  
(Computational Science)  
Tel. +49 3834 / 420 1400

Prof. Dr. Jürgen Meichsner  
(Low-Temperature Plasmaphysics)  
Tel. +49 3834 / 420 4740