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Position:

Research Area:

Specific Require

Duration of stay:

Work Place:

Earliest Start:

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Research Field:

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Department/Institute:

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Research Field:

Position:

Research Area:

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Duration of stay:

Work Place:

Earliest Start:

Language Requirem

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Helmholtz Call f

Helmholtz Centre: Forschu

Department/Institute: Institute (INM-3),

Supervising scientists: Prof. Dr.

University for Registration: Univ

Research Project: Uncover

Research Field: Neuroin

Position: PhD St

Research Area:

Over the last dec the neural mecha neural systems, research field, m social cognitive c uncovering the n information, inclu involved. For this temporal resoluti functionally conn FZ Jülich provide unique environm applicant will par neuroscience an data analysis.

Specific Requirements:

Desirable: Exper Obligatory: Exce data processing Desirable applic neuroscience an

Duration of stay: 4 years

Work Place: Forschungszent

Earliest Start: October 2018

Language Requirement: Very g languag

Name and Address of Supervis

Forschu (INM-3) kai.vog

Helmholtz

Helmholtz Centre:

Department/Institute:

Supervising scientist:

University for Registrat

Research Field:

Position:

Research Area:

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Specific Requirements

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Duration of stay: 4 yea

Work Place: Forsc

Earliest Start: Septe

Language Requiremer
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Research Field:

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Duration of stay:

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Language Require

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Helmholtz Call for 2018 CSC Fellc

Helmholtz Centre: Forschungszentrum Jülich GmbH v

Department/Institute: Central Institute of Engineering, Ele and Technology (ZEA-1), http://ww 1/EN/Home/home_node.html

Supervising scientist: Prof. Dr. G. Natour, Dr. S. M. Groß

University for Registration: RWTH Aachen University

Research Field: Materials Science, Energy Researc

Position: PhD Student ☑

Research Area:

Growing demand for electrical energy together wit reduce CO_2 emissions lead to an increased interest oxide fuel cells (SOFC) are energy conversion dev production of electricity. Forschungszentrum Jülicl 20 years. The ceramic and metallic aggregates in a sealed gas-tight and electrically insulating by a gla the sealant is crystallizing too slowly in terms of ar assembling.
Latest investigations of ZEA-1 have shown the ten state-of-the-art sealing material. The current projec acceleration of the crystallization process by addin The preparation of glass and glass-ceramic sample after thermal treatment by optical and electron mic characterization of the novel composite materials a further experiments, the applicability of improved tests under relevant conditions.
Beside of the experimental studies, the documenta (e.g. contribution to international conferences) is e

Specific Requirements:

A university degree (MSc) in one of the following science, chemistry, physics, mineral science. Soft s working ability are required.

Duration of stay: 48 months

Work Place: Forschungszentrum Jülich, Germa

Earliest Start: September 2018

Language Requirement: Very good knowledge of English, language course will be offered pa

Name and Address of the Supervisor: Prof. Dr. G. Natour Institute of Engineering (ZEA-1), 5 juelich.de

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Helmholtz Centre:

Department/Institute:

Supervising scientist:

University for Registra

Research Field:

Position:

Research Area:

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Specific Requirements

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Duration of stay:

Work Place:

Earliest Start:

Language Requiremer

Name and Address of

Helmholtz Call for 2018 CSC Fellowship Applicant

Helmholtz Centre: Forschungszentrum Jülich GmbH – www.fz-juelich.de
Department/Institute: Institute of Bio- and Geosciences, Agrosphere (IBG-3)
http://www.fz-juelich.de/ibg/ibg-3/EN/Home/home_noc

Supervising scientist: Prof. Dr. Harrie-Jan Hendricks-Franssen
University for Registration: RWTH Aachen University
Research Field: Hydrology (Land surface and subsurface modelling)
Position: PhD Student **X** Sandwich PhD Stu

Research Area:

Climate change and other human-induced actions modify the terrestrial water an cycles. It is therefore important that simulation models can adequately predict th of climate change and other human actions on the water and energy cycles. Th TerrSysMP is able to simulate the coupled water and energy cycles from the grou to the upper atmosphere, coupling a subsurface model, land surface mo atmospheric circulation model. One of the main advantages of this model is that it groundwater and the lateral movement of water in the subsurface. A TerrSysMP-n Europe (the EURO-CORDEX domain) has been developed. Terrestrial model pr of the coupled water and energy cycles are affected by errors related to uncerta forcings, model parameters, model structural errors, initial conditions and b conditions. Sequential data assimilation, for example the assimilation of soil information from remote sensing, allows improving terrestrial model predic reanalyses. Also a data assimilation framework has been coupled to Te (TerrSysMP-PDAF) and is able now to assimilate groundwater level data, soil data and discharge data, which has been tested at the catchment scale.

In this PhD-research, it is planned to assimilate remotely sensed soil moist measured by the SMAP-satellite in a multi-scale data assimilation approach. Us made of an already existing TerrSysMP model for the European CORDEX-dom first step, an ensemble needs to be developed that covers the uncertainty of vegetation parameters, as well as model forcings, across Europe. In a next s assimilation will be performed and it will be evaluated how the assimilatio moisture data from SMAP affects the simulation of other hydrological flu evapotranspiration and discharge, and the simulation of hydrological st groundwater levels. Finally, the assimilation will be extended to include other d like groundwater levels. It is expected that the assimilation of further data t further improve the modelling of the coupled water and energy cycles over th CORDEX domain. A successful PhD-thesis will be defended at RWTH Aachen.

Specific Requirements:

- MSc degree in for example hydrology, meteorology or soil science
- Experience with data assimilation is of advantage
- Good background in statistics
- Good programming skills
- Experience with remote sensing data is of advantage

Duration of stay: 48 months
Work Place: Forschungszentrum Jülich, Germany (near Cologne)
Earliest Start: September 2018
Language Requirement: Very good knowledge of English language, written and spo
German language course will be offered parallel to the proje
Name and Address of the Supervisor: Prof. Dr. Harrie-Jan Hendricks-Franssen,
Forschungszentrum Jülich, Institute of Bio- and Geoscience
52425 Jülich, Germany; h.hendricks-franssen@fz-juelich.de

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Helmholtz Centre:

Department/Institute:

Supervising scientist:

University for Registration:

Research Field:

Position:

Research Area:

Land surface
they calculate
the atmosphe
simulate this
differences in
drought stress
parameterizati
in these differ

In this PhD-w
soil moisture
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Specific Requirements:

- MSc
- Good
- Expe
- Good
- Expe

Duration of stay: 48 n

Work Place: Fors

Earliest Start: Sep

Language Requirement: Ver
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Helmholtz Centre:

Department/Institute:

Supervising scientist:

University for Registrati

Research Field:

Position: PhD

Research Area:

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another
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the valu
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Specific Requirements:

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Duration of stay:

Work Place:

Earliest Start:

Language Requirement

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Helmholtz Call for 2018 CSC I

Helmholtz Centre: Forschungszentrum Jülich Gı

Department/Institute: Institute of Bio and Geoscien
http://www.fz-juelich.de/ibg/ib

Supervising scientists: Prof. Dr. Erwin Klumpp & Pro

University for Registration: RWTH Aachen University
Netherlands)

Research Field: Terrestrial Biogeochemistry

Position: PhD Student **X**

Research Area:

Compare dust inputs of the Ataca
desert) with other more erosiona
the world. Significant key inputs
atmospheric (dust) deposition in
overall understanding and evolut
systems we examine and better
the desert soil and where the du
translocations, what nutrient an
over space and time. The study v
techniques (isotopes, nutrient st

Specific Requirements:

A Ph.D. student who is currently wo
on agriculture, environmental scien
additional background in chemistry,
agriculture is beneficial. Experience
spectrometry, field flow fractionatic
together with data analysis skills is
experiments is a plus. Good knowle
Experience with field work in arid/d
helpful.

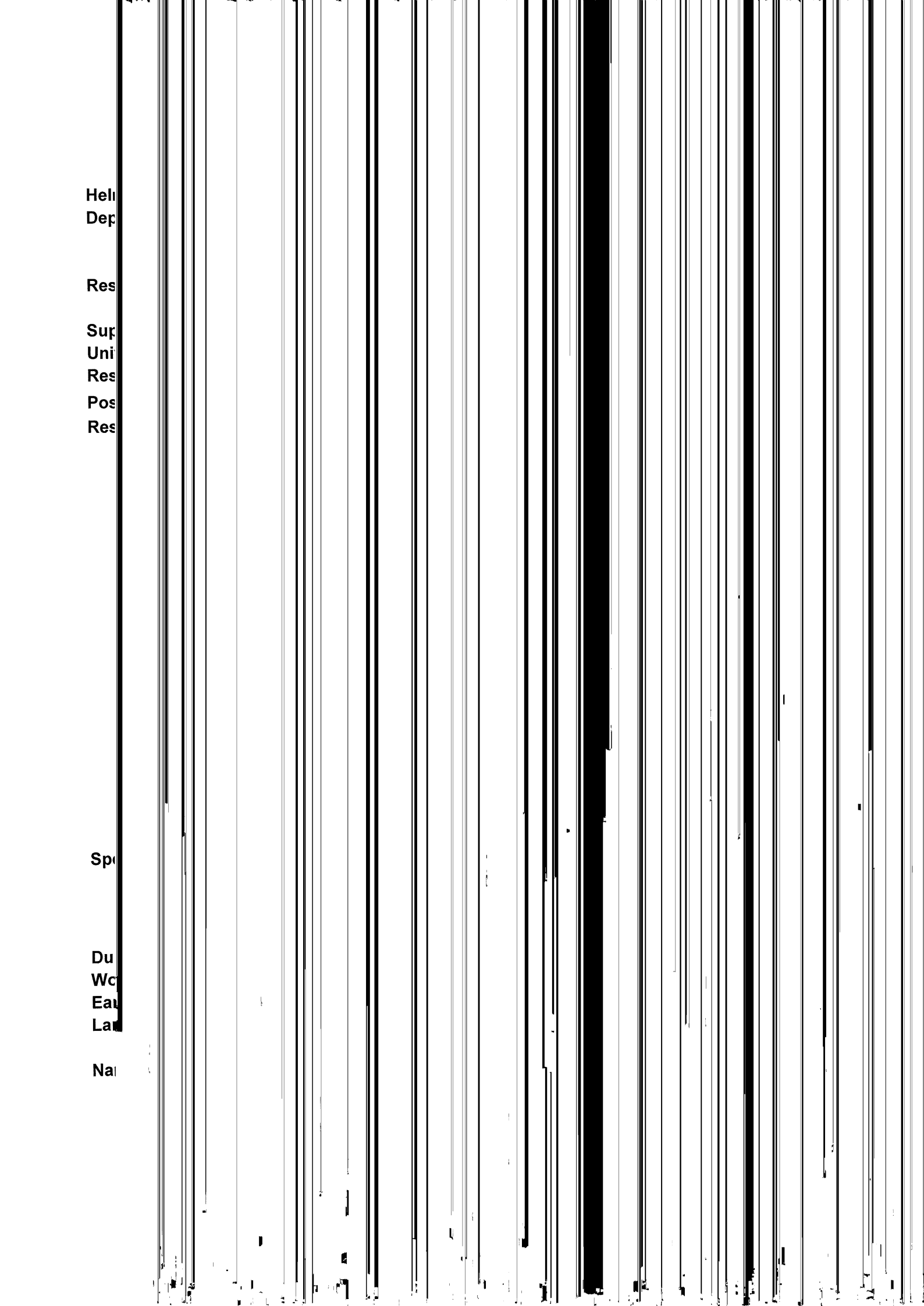
Duration of stay: 4 years

Work Place: Forschungszentrum Juelich,

Earliest Start: September 2018

Language Requirement: Very good knowledge of En
language course will be offe

Name & Address of Supervisor: Prof. Dr. Erwin Klum
(IBG-3), Forschungs
e.klumpp@fz-juelich



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Position:

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Research Field:

Position:

Research Area:

Specific Require

Duration of stay

Work Place:

Earliest Start:

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Name and Addr

Helmholtz Call for 20

Helmholtz Centre: Forschungszen

Department/Institute: Insitute of Com
https://www.css

Supervising scientist: Prof. Dr. Jörg L

University for Registration: Heinrich-He

Research Field: Structural Biolc

Position: PhD Student **X**

Research Area:

Molecular pathology of c
Biochemical, spectrosco
function and dysfunction

This project is aimed at
protein interaction with p
Expression, purification,
proteins are essential st
fluorescence spectrosco

Development of a resea
applicant is possible an

Specific Requirements:

Masters in biology, bioch
e.g. cloning, PAGE, wes
structural methods woul
The laboratory language
proper knowledge (IELT
campus is encouraged.
Enrolment at Heinrich-H
http://www.math-nat-fak

Duration of stay: 4 years

Work Place: Center for Structural
hamburg.de/

Earliest Start: September 2018

Language Requirement: Very good co
language course will

Name and Address of Supervisor: Prc
Germany, j.labahn@

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Helmholtz Centre

Department/Insti

Supervising scie

University for Re

Research Field:

Position:

Research Area:

Specific Require

Duration of stay

Work Place:

Earliest Start:

Language Requ

Name and Addr

Helmholtz Call for 2018 CSC Fellows

Helmholtz Centre: Forscchungszentrum Jülich GmbH – w

Department/Institute: Institute of Energy and Climate Researc
Engineering (IEK-3)
http://www.fz-juelich.de/iek/iek-3/EN/Ho

Supervising scientist: Prof. Dr. D. Stolten, Jochen Linssen

University for Registration: RWTH-Aachen University

Research Field: Electrical engineering

Position: PhD Student √

Research Area:

Electric drivetrains are the key elements for a lov
transport which is based on renewable energy. F
zero emissions is an important step to improve th
particular, this is the case for metropolitan areas.
these important possibilities. However, the const
infrastructure becomes necessary and the additi
the electric grid.
Objective of the planned research activity is a de
charging infrastructure needs for battery electric
distribution grid enhancement due to slow and fa
study, the analysis should conduct detailed grid
distribution grid architectures for China and for G
different penetration levels of charging options. B
techno economic analysis for the required grid e
distribution grids will be performed.

Specific Requirements:

Electrical engineering / industrial engineering
Knowledge in electric grid, energy systems, ar
English

Duration of stay: 4 years

Work Place: Forschungszentrum Jülich, Germany (

Earliest Start: September, 2018

Language Requirement: Very good knowledge of English langu
German language course will be offere

Name and Address of the Supervisor: Prof. Dr. Detlef Stolten,
Institute of Energy and Climate Resea
Germany; d.stolten@fz-juelich.de; j.lin-

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Helmholtz Centre: Fc

Department/Institute: In
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Supervising scientist: Pr

University for Registration

Research Field: M

Position: PhD S

Research Area:

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which can
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The lack o
necessity o
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Specific Requirements:

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Duration of stay: 4
Work Place: F
Earliest Start: S
Language Requirement: V
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Helmholtz Centre:

Department/Institute:

Supervising scientist: P

University for Registrati

Research Field:

Position:

Research Area:

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Specific Requirements:

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Duration of stay:

Work Place:

Earliest Start:

Language Requirement

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Helmholtz

Helmholtz Centre:

Department/Institute:

Supervising scientist:

University for Registrat

Research Field:

Position: Phl

Research Area:

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Duration of stay:

Work Place:

Earliest Start:

Language Requiremen

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Helmholtz Centre: Fc

Department/Institute: Ins
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Supervising scientist: Pr

University for Registration

Research Field: M

Position: Pl

Research Area:

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Specific Requirements:

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Duration of stay: 4

Work Place: F

Earliest Start: S

Language Requirement: \
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University for Reg

Research Field:

Position:

Research Area:

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Duration of stay:

Work Place:

Earliest Start:

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Name and Addres

Helmholtz Call fo

Helmholtz Centre: Forschung

Department/Institute: Institute o
http://www

Supervising scientist: Prof. Dr. A

University for Registration: Univer

Research Field: Biomedica

Position: PhD Stud

Research Area: **Influence**

Nanomaterials have be
development. For bior
drug delivery, phototh
nanoparticle possess
inertness and the fac
scope of this project w
solid surfaces in ord
improve the biocompa
will modulate the a
electrophysiological p
synthesized, bound
Lithographical method
of neuron adhesion
development as functi
We offer an up-to-dat
microfabrication of sa
a strong expertise in c

Specific Requirements:

The candidate sh
material science
requested for the
Instruction and g
the supervising t

Duration of stay: 4 years

Work Place: Research Centr

Earliest Start: September 201

Language Requirement: Very go
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Name and Address of the Superv
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Position:
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Helmholtz Call for

Helmholtz Centre: Forschungs

Department/Institute: Institute of (
www.fz-jue

Supervising scientist: Prof. Dr. Bir

University for Registration: Heinrich

Research Field: Computatio

Position: PhD Studer

Research Area:

In the Computatio
we employ biomol
(MD) aiming to un
highly complex pr
fatal diseases, as i
from it in the form
protein aggregatio
all-atom force fi
insufficient, prev
interpretation of
quantum chemica
understand the ori
force fields. For m

Specific Requirements:

1. Excellent knov
2. Experience wi
3. Experience wi
4. Programming
5. Very good Eng

Duration of stay: 4 years

Work Place: Forschungszentru

Earliest Start: September 2018

Language Requirement: Very good
language c

Name and Address of the Supervis
Institute of Comp
b.strodel@fz-jue

Helmholtz Call for 2018

Helmholtz Centre: Forschungszentrum

Department/Institute: Institute of Bio- and
http://www.fz-juelich

Supervising scientist: Dr. Bei Wu

University for Registration: University of

Research Field: Iron cycle and stabl

Position: PhD Student **X**

Research Area:

Paddy ecosystems experi
biogeochemical process,
dynamics in iron (Fe). This
signatures and Fe speciati
land-use duration. The PhI
soil chronosequence up t
well as rice, upland and d
soil samples, but the ne
planned to be sampled a
signatures, as well as Fe
rate in such ecosystems.

Specific Requirements:

Master's degree in Chen
Environmental Sciences.
soil-plant analyses. Exper
such as (multi-collector-)
((MC-)ICP-MS), or specia
familiar with paddy ecosys

Duration of stay: 4 years

Work Place: Forschungszentrur

Earliest Start: September 2018

Language Requirement: Very good comma
language course w

Name and Address of the Supervisor: Dr.
Agrosphere (IBG-3
Email: b.wu@fz-ju