2023년 한-독일 글로벌 인재양성 플랫폼 참가자 모집

막스플랑크 한국/포스텍 연구소에서는 우리나라의 우수한 과학 인재들이 글로벌 선진 연구 참여를 통해 차세대 과학기술 리더로 성장할 수 있도록 「2023년도 한-독일 글로벌 인재양성 플랫폼」 참가자를 다음과 같이 모집합니다. 과학기술에 대한 열정과 도전정신을 가진 청년 과학자들의 많은 참여 바랍니다.

2023년 5월 12일

막스플랑크 한국/포스텍연구소 소 장 박재훈

1. 사업개요

○ 사업명 : 한-독일 글로벌 인재양성 플랫폼
○ 대 상 : 대한민국 국적의 국내 이·공계열 대학생
○ 기 간 : 2023년 5월~2024년 2월
○ 파견 연구소 : 독일 막스플랑크, 프라운호퍼, 막스루브너, 카를스루에 등
○ 내 용 : 독일 공공 연구기관에 3~6개월간 파견하여 연구 실습 참여 등
○ 참가자 지원 : 왕복 항공료, 월 체재비, 비자·보험·준비금 등
○ 주 최 : 과학기술정보통신부, 한국연구재단
○ 주 관 : (재)막스플랑크 한국/포스텍 연구소

2. 주요일정

연번	내 용	5월	6월	7월	8월	9월	10월	11월	12월	1월	2월
1	참가자 모집	■									
2	서류-면접-최종심사		■								
3	오리엔테이션			■							
4	출국준비(3월~6월)			■	■	■					
5	출국				■	■	■				
6	프로그램 운영				■	■	■	■	■	■	■
7	월별보고서 제출					■	■	■	■	■	■
8	정기 활동 점검						■	■	■	■	■
9	독일 현지 워크숍						■				
10	Alumni 활동(한국)										■

※ 출국 일정은 비자발급 및 현지 연구소 사정에 따라 변동 가능

3. 파견 연구소(18개 연구기관 21개 연구그룹)

연번	연구소명(영문명)	선발인원
1	막스플랑크 고체상태 연구소 (Max Planck Institute for Solid State Research)	1
2	막스플랑크 광학연구소 (Max Planck Institute for the Science of Light)	1
3	막스플랑크 동물행동학 연구소 (Max Planck Institute of Animal Behavior)	2
4	막스플랑크 미세구조 물리학 연구소 (Max Planck Institute of Microstructure Physics)	2
5	막스플랑크 복합기술시스템 역학연구소 (Max Planck Institute for Dynamics of Complex Technical Systems)	1
6	A. 막스플랑크 분자세포 생물학 및 유전학 연구소 (Max Planck Institute for Molecular Cell Biology and Genetics - MH)	1
7	B. 막스플랑크 분자세포 생물학 및 유전학 연구소 (Max Planck Institute for Molecular Cell Biology and Genetics-CM)	1
8	막스플랑크 생물물리학연구소 (Max Planck Institute of Biophysics)	1
9	A. 막스플랑크 생물학 사이버네틱스 (Max Planck Institute for Biological Cybernetics － Circadian)	1
10	B. 막스플랑크 생물학 사이버네틱스 (Max Planck Institute for Biological Cybernetics － Neuroscience)	1
11	막스플랑크 인구학연구소 (Max Planck Institute for Demographic Research)	1
12	A. 막스플랑크 중합체연구소 (Max Planck Institute for Polymer Research-Bonn)	1
13	B. 막스플랑크 중합체연구소 (Max Planck Institute for Polymer Research-Blom)	1
14	막스플랑크 철 연구소 (Max Planck Institute for Eisenforschung GMBH)	1
15	막스플랑크 컴퓨터데이터시설 연구소 (Max Planck Institute for Computing and Data Facility)	1
16	프라운호퍼 건축물리 연구소 (Fraunhofer Institute for Building Physics)	1
17	프라운호퍼 미세구조 물질시스템 연구소 (Fraunhofer Institute for Microstructure of Materials and Systems IMWS)	1
18	프라운호퍼 생산기술연구소 (Fraunhofer Institute for Production Technology)	2
19	프라운호퍼 환경안전 에너지 연구소 (Fraunhofer Institute for Environmental, Safety and Energy UMSCIHT)	1
20	막스루브너 영양, 식품 연구소 Max Rubner-Institut, Department of Microbiology and Biotechnology	2
21	카를스루에 기술연구소 Karlsruhe Institute of Technology	1

※ 선발인원은 독일 현지 연구소 면접 및 최종심사 결과에 따라 결정됨

※ 각 연구소별 파견기간 및 모집내용은 첨부파일 또는 네이버 카페 참조

4. 선발내용

☐ **지원자격**

○ 대 상 : 대한민국 국적의 국내 이·공계열 대학생

   (지원서 접수 마감일 기준 학적 상태 : 재학, 휴학, 졸업예정자 가능)

○ 학점 및 외국어

구분	내용
학점	전체학기 평점 B학점 이상(3.0/4.5 기준)
외국어	**면접일(6.15) 기준 아래 공인영어시험 중 유효한 성적 1개 충족** TOEIC 775점, TOEFL iBT 83점, IELTS 6.0점, TEPS 385점 TOEIC Speaking 130 이상, OPIC IM2, TEPS-Speaking 55, G-Telp(LevelⅡ) 77점 이상 **※ 독일어로 의사소통 가능자 우대**

※ 독일 비자취득 또는 해외여행 결격사유가 없는 자

※ 남자의 경우 군필자 또는 면제자

☐ **모집 및 선발**

○ 모집기간 : ~2023.6.7.(수), 18:00까지 제출 완료 분에 한함

○ 선발인원 : 25명 이내

○ 선발전형

 - 1차 서류심사 : 지원자격, 서류작성 충실도, 증빙서류 검증 등(6월 초)

 - 2차 면접심사 : 독일 연구소 담당자 온라인(ZOOM) 면접(6월 중순 예정)

 - 3차 최종심사 : 서류, 면접 심사 결과 종합 및 최종 검증(6월 말 예정)

○ 지원방법

 - 온라인 신청서 작성 후 서류 업로드(**https://www.mpk-intern.or.kr**)

 - **제출서류 전체를 1개의 PDF 파일로 편집하여 제출**

 - 파일명 : [소속대학_이름_1지망 (한국어)연구소명]

 - 제출 2일 내 접수 완료 안내 이메일 개별 발송 예정

○ 제출서류

 - 지원 신청서(첨부양식) 1부

 - (영문) 이력서(또는 CV), (영문) 자기소개서 각1부

 - (영문) 재학(또는 휴학) 증명서, (영문) 성적증명서 각1부

 - 공인 영어성적증명서(면접 예정일 2023.06.15. 전까지 제출 가능) 1부

5. 기타사항

☐ **지원내용**

○ 왕복 항공료 1회에 한하여 최대 2,000,000원 내 실비 지원

○ 월 체재비 : 월 1,500,000원*파견기간(최대 6개월)

○ 비자 및 출국 준비금 : 400,000원*1회(정액 지원)

○ 독일 현지 보험료 : 1회에 한하여 500,000원 내 실비 지원

 ※ 필요시, 소득세법에 따라 소득공제 후 지급

☐ **선발심사**

○ 제출된 서류는 일체 반환하지 아니함

○ 제출된 서류의 내용이 허위로 판명될 경우 합격을 취소함

○ 신청서류상의 기재착오 또는 누락, 최종합격자의 관련증명서 미첨부, 연락불능 등으로 인한 불이익은 막스플랑크 한국/포스텍연구소에서 책임지지 않음

☐ **문의**

○ 전화 : 막스플랑크 한국/포스텍연구소 행정실 윤세나 연구원
   (054-279-3778, 5458)

○ 네이버 카페 : '글로벌 인재양성 프로그램' Q&A 문의
   (https://cafe.naver.com/mpk410)

Application form
Kor-Germany Global Junior Fellowship Program 2023

1. Personal Inform.

Name		Date of Birth	2000.00.00
E-mail	@	Cell No.	010-0000-0000

2. Education

Name School	Major	Statue	Semester	Grade
High School		Graduated	-	-
UNIV.				0.0/4.5

3. Activities

Name of Institution	Duration	Role / Responsibility
	23.00.00 ~00.00	

4. Language Skill

Name of TEST	Score	Date of TEST	Issue

5. Apply Institution

A	
B	
C	

01. Max Planck Institute for Solid State Research

- Name of Institute : Max Planck Institute for Solid State Research

- Required Personnel : 1

- Duration for the fellowship : 4-6 months (TBD)

- Skills required from the students
  1. Undergraduate-level knowledge of physics (solid-state physics, thermodynamics, etc.).
  2. (Preferable) Students in the fields of Physics and Materials Science and Engineering
  3. (Preferable) Basic programming skills

- Job Description
  Exploration of novel epitaxial growth of thin functional films based on thermal laser epitaxy. Includes epitaxial growth and film characterization.

- Website : https://www.fkf.mpg.de

02. Max Planck Institute for the Science of Light

- Name of Institute : Max Planck Institute for the Science of Light
- Required Personnel : 1
- Duration for the fellowship : 6 months (TBD)
- Skills required from the students
  1. Knowledge of optics or biology/biochemistry
  2. Coding skills: MATLAB or Python
  3. English communication
- Job Description
  - Research activities in the field of biophysics and biophotonics
  - Implementation of novel microscopy techniques for studying unexplored biological phenomena
  - Data analysis for quantitative characterization of physical and mechanical properties of biological system

- Website : https://mpl.mpg.de

03. Max Planck Institute of Animal Behavior

- Name of Institute : Max Planck Institute of Animal Behavior
- Required Personnel : 2
- Duration for the fellowship : 3-6 months (TBD)
- Skills required from the students
  1. Programming in R, Python or C/C++ and testing of software
  2. Machine learning, image segmentation
  3. Analysis of animal interaction behavior

- Job Description
  1a. Development and test of an embedded software running on an open-source wildlife tracking device (ESP32-based)
  1b. Development and MoveApps-integration of open-source movement data analysis modules
  2. Image segmentation of underwater video + posture analysis
  3. Social intergroup interactions in primates

- Website : www.ab.mpg.de

04. Max Planck Institute of Microstructure Physics

- Name of Institute : Max Planck Institute of Microstructure Physics
- Required Personnel : 2
- Duration for the fellowship : 6 months (TBD)
- Skills required from the students
  1. Nanodevice fabrication using optical or ebeam lithography
  2. Thin film deposition using e.g. sputtering, MBE or PLD

- Job Description

  Preferably, internships are offered on the following research topics, where cooperation with Korean colleagues on site would be possible: Race Track Memory, 2D Materials, Spin-Orbit Torque.

  In principle, however, all other research topics of the department are also considered for inclusion in an internship,
  see: https://www.mpi-halle.mpg.de/nise/research

- Website : https://www.mpi-halle.mpg.de

05. Max Plank Institute for Dynamics of Complex Technical Systems

- Name of Institute : Max Plank Institute for Dynamics of Complex Technical Systems
- Required Personnel : 1
- Duration for the fellowship : 6 months (TBD)
- Skills required from the students
  1. basic knowledge of unit operations
  2. numerical analysis and process simulation

- Job Description
  1. Solving mass balances to describe chromatographic columns
     1-1. Equilibrium theory
     1-2. Method of characteristics (for linear equilibria)
  2. Design of a batch chromatographic separation processes
     2-1. Process simulation
     2-2. Process design and optimization

- Website : https://www.mpi-magdeburg.mpg.de/2316/en

06. MPI for MOLECULAR CELL BIOLOGY GENETICS - MH

- Name of Institute : MPI for MOLECULAR CELL BIOLOGY GENETICS-MH
- Required Personnel : 1
- Duration for the fellowship : 6 months (TBD)
- Skills required from the students
  1. Creative & Analytical Thinking
  2. Familiar with tissue culture & genetic engineering techniques
  3. Computational analysis background

- Job Description
  1. Generation of human liver organics for disease modeling
     1-1. Generation of multicelluar human liver organoids
     1-2. Gentically engineer human liver of organoids to model cholestatic liver disease
  2. Computational analysis of multicelluar human liver organoids
     2-1. scRNAseg analysis of organoids to determine cellular composition & interacts
     2-2. Benchmarking of human liver organoids scRNAseg data to human liver tissue cells

- Website : https://www.mpi-halle.mpg.de

07. MPI for MOLECULAR CELL BIOLOGY GENETICS - CM

- Name of Institute : MPI for MOLECULAR CELL BIOLOGY GENETICS-CM
- Required Personnel : 1
- Duration for the fellowship : 6 months (TBD)
- Skills required from the students
 1. Creative & Analytical Thinking
 2. Familiarity with physics of tissue/membrane mechanics-or-complex networks
 3. Facilitywith scientific computing & simulations

- Job Description
 1. Theory of topologicla transitions
   1-1. Energy / Free energy based approach
 2. Simulation of selected test case(i.e Liver structure or ER)
   2-1. Toy examples of simple/sinae transitions
   2-2. Quarter sinstics & characterising for larger systems

- Website : https://www.mpi-halle.mpg.de

08. Max-Planck Institute of Biophysics

- Name of Institute : Max-Planck Institute of Biophysics
- Required Personnel : 1
- Duration for the fellowship : 6 months (TBD)
- Skills required from the students
 1. Prior experience in hands-on wet lab experiments and/or fluorescence imaging
 2. Critical and independent thinking
 3. Motivation for academic research

- Job Description
 Study of protein/DNA interactions using single-molecule fluorescence imaging.
 The applicants are advised to read the following references before application:
  https://doi.org/10.1126/science.aar7831
  https://doi.org/10.1038/s41586-020-2067-5
  https://doi.org/10.1038/s41594-022-00802-x
  https://doi.org/10.1101/2022.05.13.491800

- Website : https://www.biophys.mpg.de/structure-dynamics-of-chromosomes

09. Max Planck Institute for Biological Cybernetics - Circadian

- Name of Institute : Max Planck Institute for Biological Cybernetics - Circadian
- Required Personnel : 1
- Duration for the fellowship : 3 months (TBD)
- Skills required from the students
 1. Understanding on classical image processing algorithms
 2. Familiarity with ImageJ (Fiji), QuPath, Python, Matlab is a plus
 3. Ability to read and review scientific literature

- Job Description
 1. Investigating vascular structure from microtomography
  1-1. Reconstruction microtomography acquried from synchrotron facility
  1-2. Segmentation of physiological structure
 2. Identifying cellular / vascular structure from digital microscopy
  2-1. Optimise pipeline for detecting biological features in microscope using softwares (e.g. QuPath)
  2-2. 3D reconstruction from 2D microscopy

- Website : https://www.kyb.tuebingen.mpg.de

10. Max Planck Institute for Biological Cybernetics - Neuroscience

- Name of Institute : Max Planck Institute for Biological Cybernetics - Neuroscience
- Required Personnel : 1
- Duration for the fellowship : 3 months (TBD)
- Skills required from the students
 1. Python programming and version control
 2. Computer vision and machine learning
 3. Image processing

- Job Description
 1. Development of an analysis pipeline for a multi-modal, hyperspectral natural scenes dataset
   1-1. Programming of analysis algorithms for spectral and image data
   1-2 . Development and implementation of quality metrics for image data
 2. Development of dimensionality reduction and prediction techniques
   2-1.Selection of dimensionality reduction approaches for complex, multi-modal data
   2-2. Implementation and evaluation of these approaches

- Website : https://www.kyb.tuebingen.mpg.de

11. Max Planck Institute for Demographic Research

- Name of Institute : Max Planck Institute for Demographic Research
- Required Personnel : 1
- Duration for the fellowship : 6 months (TBD)
- Skills required from the students
  1. Preferred candidates have background in either demography, statistics, computer science, sociology, economics, or other related fields.
  2. Experience with Excel, and R or Python is essential
  3. Good command of English

- Job Description
  1. The student is responsible for conducting literature searches
     1-1. Conduct research on assigned topics via external sources (i.e., websites, research surveys, research articles) and summarize
  2. The Student is responsible for preparing large-scale data which the tasks include:
     Data handling, cleaning, management and annotation Perform data analysis using programming tools such as R, Python,

- Website : https://www.demogr.mpg.de

12. Max Planck Institute for Polymer Research – Bonn

- Name of Institute : Max Planck Institute for Polymer Research – Bonn
- Required Personnel : 1
- Duration for the fellowship : 6 months (TBD)
- Skills required from the students
  1. Good spoken English for communication/discussion
  2. Good background in physics, materials science, or chemistry
  3. Curiousity driven and critically thinking student
  4. Basic skills with data analysis (Origin, Matlab) or programming languages
  5. experience with working in chemical or spectroscopy labs is an advantage but not required

- Job Description
  1. Sample preparation and characterization for spectroscopic experiments
  2. Opportunity to apply state-of-the art laser spectroscopies
  3. Opportunity to perform data analysis using analytical or computational methods

- Website : https://www.mpip-mainz.mpg.de/de/bonn

13. Max Planck Institute for Polymer Research – Blom

- Name of Institute : Max Planck Institute for Polymer Research – Blom
- Required Personnel : 1
- Duration for the fellowship : 3 months (TBD)
- Skills required from the students
  1. Fabrication of perovskite TFTs
  2. Electrical characterization
  3. Understanding of device operation
  4. Good English knowledge

- Job Description
  1. Preparation of perovskite based thin-film transistors
     1-1. Vary processing conditions
     1-2. Vary chemical constituents
  2. Electrical characterization
     2-1. Investigate effect of chemical structure on charge carrier transport and morphology
     2-2. Investigate effect of processing on transport and morphology

- Website : https://www.mpip-mainz.mpg.de/en/blom

14. Max-Planck-Insitut fuer Eisenforschung GmbH

- Name of Institute : Max-Planck-Insitut fuer Eisenforschung GmbH
- Required Personnel : 1
- Duration for the fellowship : 3-6 months (TBD)
- Skills required from the students
  Materials science and/or solid state physics background
  either experimental skills or interest in atomistic simulations required

- Job Description
  Topic 1
  : simulation of defect structures by molecular statics and molecular dynamics in metallic materials; supervision by an expert in the field
  Topic 2
  : nanoindentation in alloys with an without Hydrogen exposure for evaluating material changes and alloying concepts for hydrogen economy

- Website : www.mpie.de

15. Max Planck Computing and Data Facility

- Name of Institute : Max Planck Computing and Data Facility
- Required Personnel : 1
- Duration for the fellowship : 3 months (TBD)
- Skills required from the students
  1. Familiarity with working in a Linux environment
  2. basic numeric and programming skills (e.g. C++, Python, Fortran, ..)

- Job Description
  1. contribute to development and testing of high-performance computing (HPC) and AI applications developed in the Max-Planck Society
  2. assist with performance benchmarks, their analysis and to the verification of HPC environment

- Website : www.mpcdf.mpg.de

16. Fraunhofer Institute for Building Physics

- Name of Institute : Fraunhofer Institute for Building Physics
- Required Personnel : 1
- Duration for the fellowship : 6 months (TBD)
- Skills required from the students
  1. Programming (e.g. Python)
  2. Experience with RDF and SPAQL desired for the job description 1
  3. Experience with IoT and cloud solution desired for the job description 2

- Job Description
  1. Scientific assisstant for an EU Project
     1-1. From the building information model to the automated building energy efficiency and life cycle analysis assessment
          (Domain knowledge is not required)
  2. Scientific assisstant for the remote control of a heating system based on the cloud solution
     2-1. Screen of available IoT systems for the remote control
     2-2. Application of the solution using AWS

- Website : https://www.ibp.fraunhofer.de

17. Fraunhofer Institute for Microstructure of Materials and Systems IMWS

- Name of Institute : Fraunhofer Institute for Microstructure of Materials and Systems IMWS
- Required Personnel : 1
- Duration for the fellowship : 6 months (TBD)
- Skills required from the students
  1. Student in the field of natural science or engineering, favorably inelectrical engineering, physics, materials science, or similar
     - Strong communication and writing skills in English
  2. Favorably hands-on-experiences with complex measurement equipment as well as data analysis
  3. Strong interest and experience in hydrogen energy and green hydrogen production by electrolysis are advantageous

- Job Description
  - Research in the field of defect diagnostics of PEM electrolyzer technologies
  - Establishment of new measurement technologies for characterization of PEM components
  - Planning, conducting, and evaluating experiments
  - Supporting the development of a defect/materials database and content creation
  - Supporting literature and patent research and its analysis/evaluation

- Website : https://www.imws.fraunhofer.de/en.html

18. Fraunhofer Institute for Production Technology, IPT

- Name of Institute : Fraunhofer Institute for Production Technology, IPT
- Required Personnel : 2
- Duration for the fellowship : 6 months (TBD)
- Skills required from the students

  Language: English (Good-Very Good)

  Solid background in Mechanical engineering, Metallurgical engineering, Simulation science or a comparable subject

  Software: CAD Software e.g. solid works, Matlab, Python, LabView

  Optional: Knowledge in sheet metal processing or metallurgy, laser or induction technology, experience with modelling and simulation

  Motivation, willingness and perseverance to learn new skills, excitement for our research topics

- Job Description
  1. Fiber-reinforced plastics group (1 Person)

     Operation of laser- and infrared-based tape winding & tape placement machines
     Programming in machine code

     Thermoforming of tailored composite blanks

     Mechanical testing of the composite and hybrid specimens

     Optical analysis of the specimens
  2. Laser system technology group (1 Person)

     Research activities in the field of laser and induction heating

     (e.g. design of test setups, programming of process monitoring and control algorithms, optimization of control loops, postprocessing of process data)

     Experiments (e.g. heating experiments, forming experiments, optics testing)

     Analysis of results (e.g. optical measurement, data processing, creation of reports)

     Modelling and simulation (e.g. Abaqus, Matlab)
  3. Integrated production machinery group (1 Person)

     Research activities in the field of fuel cell technologies (e.g. production technologies, design studies of bipolar plates, endplates, gasket, MEA etc.)

     Experiments of various sheet metal forming for Bipolar plate production

     (e.g. progressive die forming, stamping and rubber pad forming)

     Measurement and analysis of the results (e.g. optical measurement, microstructure analysis, and Design of Experiment analysis)

     Numerical modeling and simulation (e.g. various sheet metal forming, laser heating process using ABAQUS)

- Website : https://www.ipt.fraunhofer.de/

19. Fraunhofer Institute for Environmental, Safety and Energy UMSCIHT

- Name of Institute : Max Planck Computing and Data Facility
- Required Personnel : 1
- Duration for the fellowship : 6 months (TBD)
- Skills required from the students

  Storage and transportation of hydrogen is quite difficult and expensive particularly for long durations and long distances respectively. And it becomes even more difficult, if decentralized consumers with an inconsistent, relatively low or fluctuating demand has to be serviced. Especially in regions with relatively low potential of sun or wind power an economoic factor for electrolyzers comes along.

  Our solution offers modular plants for the cracking of ammonia to generate hydrogen or hydrogen/ammonia/nitrogen mixtures. Currently we build a plant with a capacity of about 1 kg H2 per hour. The energy supply is completely based on renewable electricity. The process is based on an ohmic reactor where the catalyst itself is heated, which is very beneficial for the endothermic reaction. No additional heat supply is needed, hydrogen can internally separated by membranes, the system can be operated very dynamic and under moderate pressure.

  During the internship period the student will work on an experimental test-bench for ammonia reforming to gain hydrogen. The plant is operated with a so called ohmic where the catalyst support has a defined electric conductivity and subsequently it can be heated directly without any other additional heating cycle and the process can operated very dynamical and flexible. During operation the influence of process parameters as flow rate, temperature shall be varied and the influence on conversion and selctivity described.

  The results shall be used to optimsed an existing process model.

  Process simulation and modelling shall moreover used for an initial design of H2/N2 separation. And several posibilities therefore, e. g. adsorption, membranes shall be compared and assessed.

- Job Description

  Study and knowledge in process engineering. Practical knowledge in operating test-benches is beneficial but not necessary. Good knowledge in process simulation, chemical technologies, thermodynamics are important expertises. After a first initial training independent, reliable and safe work is expected. The ability to work and communicate in interdisciplinary teams is a further important basis for the internship work.

  Very good knowledge of English language is necessary.

- Website : www.umsicht.fraunhofer.de

20. Max Rubner-Institut Federal Research Institute of Nutrition and Food

- Name of Institute : Max Rubner-Institut Federal Research Institute of Nutrition and Food
  (Department of Microbiology and Biotechnology)
- Required Personnel : 2
- Duration for the fellowship : 6 months (TBD)
- Skills required from the students
  1. experiences in Microbiological research
  2. basic skill in bioinformatic for comparative genomics and microbial genomics
  3. Basic R skill and programing
  4. interests in microbiological analysis

- Job Description
  1. Basic microbial tasks
     1-1. Bacteria culturing, antibiotic resistance test, characterization of microorganism isolated from food and food associated environments
     1-2. bacterial identification using phenotypic and genotypic methods
  2. Whole genome sequencing analysis
     (Illumina Miseq, NextSeq and Nanopore MinION)
     2-1. sequencing data analysis, Gene annotation and genome comparison
     2-2. preparation data for further analysis
     2-3. Sequence data analysis using web-based pipelin

- Website : mri.bund.de

21. Karlsruhe Institute of Technology - Institute for Applied Material

- Name of Institute : Karlsruhe Institute of Technology - Institute for Applied Material
- Required Personnel : 1
- Duration for the fellowship : 6 months (TBD)
- Skills required from the students
  1. Solid background in materials science, especially metallic materials,
     for example strengthening Skills required from the mechanisms of materials
  2. English communication skills
  3. Strong motivation

- Job Description
  Topic: Understanding the strengthening mechanisms of bio-inspired materials,
         nacre from seashells.
  1-1. Specimen preparation by mechanical grinding/polishing
  1-2. SEM imaging
  1-3. (optional) Sample preparation for micro-mechanical testing using FIB
  1-4. Supporting micro-mechanical testing of nacre sample
  1-5. Data analysis
- Website : https://www.iam.kit.edu/mmi/