

WIKOOP – Workshop; 26th and 27th September 2022



Research Mobility

**WIKOOP – Workshop
26th and 27th September 2022**

Dr. Pradeep Ghosh

Researcher Mobility

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**Opportunities for Cooperation and
Exchange between Helmholtz and CAS**

Mega Science Projects in China

At present, a total of **seven** such projects are under construction at CAS:

1. The Large Sky Area Multi-Object Fiber Spectroscopic Telescope (LAMOST).
2. The upgraded Beijing Electron-Positron Collider (BEPCII).
3. The Shanghai Synchrotron Radiation Facility (SSRF).
4. The Germplasm Bank for Wildlife in Southwest China Coordinated by the CAS Kunming Institute of Botany,
5. The National Biosafety Laboratory in Wuhan (a P4 lab). Its construction was started in May 2005 by the CAS Institute of Virology.
6. The Meridian Chain of Comprehensive Ground-based Space Environment Monitors in the Eastern Hemisphere (dubbed as the Meridian Project).
7. The Hefei High Magnetic Field Center. Coordinated by the CAS Hefei Institutes for Physical Sciences,



Mega Science Projects in China (Future)

Five projects are to be started by CAS researchers in the near future:

1. An airborne remote sensing system. It is to be built under the charge of the CAS Institute of Electronics.
2. A five hundred meter aperture spherical radio telescope (FAST). It is to be constructed by the National Astronomical Observatories at CAS.
3. A maritime investigation vessel. It is to be built under the charge of the CAS Institute of Oceanology.
4. A research facility for protein research. It is to be launched under the charge of the Shanghai Institutes for Biological Sciences
5. The China Spallation Neutron Source (CSNS). The facility is to be built under the charge of the CAS Institute of High Energy Physics.





Policy from Germany towards China and vice-versa

The Policies towards cooperation has been very carefully orchestrated. The China Strategy of the Germany (from BMBF) has not been released. Extra measures have been asked to cut down on espionage and other dual use issues.

China on the other hand has increased their spending and commitment to invite more and more researchers from Germany. The Government struggles to make China as an attractive destination for researchers from Germany.

Experiences (from Past)

GSI and CAS (IMP Lanzhou) Cooperations

40 years of extensive Collaboration.

GSI researchers have worked hand in hand to work on design and development of the IMP Lanzhou Facility.

Joint appointments and visiting scientist programs has facilitated a continues knowledge transfer and capacity building for CAS Institute for Modern Physics in Lanzhou.

Several exchange programs have been used such as CAS funded or CSC funding for the development of researchers and their training in successful development of the facility and its operation.



Specific Plans (for Future)

GSI/FAIR and CAS Cooperations

Extending the long standing 40 years of extensive Collaboration.

Working on a early-career postdoctoral Programme to nurture the junior scientist.

Facilitating more Joint appointments and visiting scientist programs in light for Mega science projects (CAS coordinated) under construction in China and (soon ready for operation) FAIR at Darmstadt.



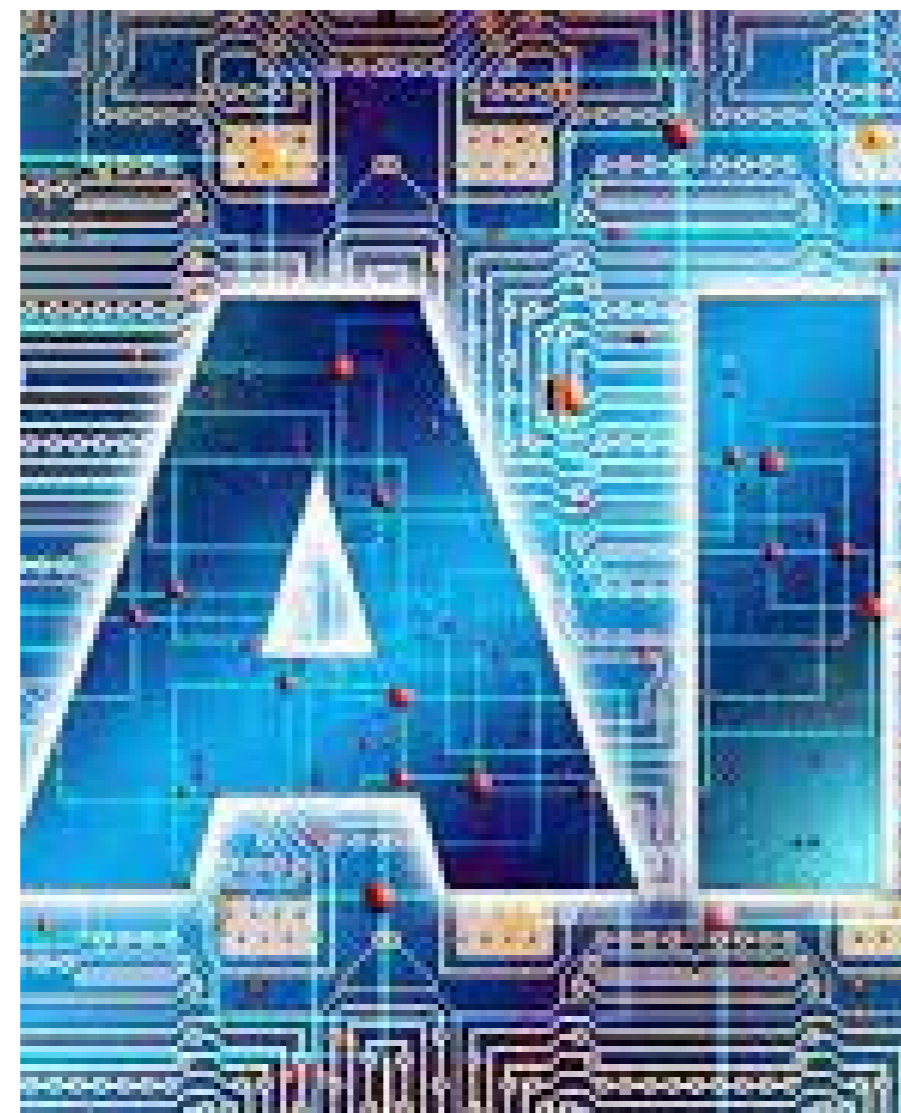
Focused Research (matching partners in China and Germany)

Following key topics (not an exhaustive list) are a good match where both Helmholtz and CAS could find great partnership and create a lot of innovation and knowledge transfer between researchers

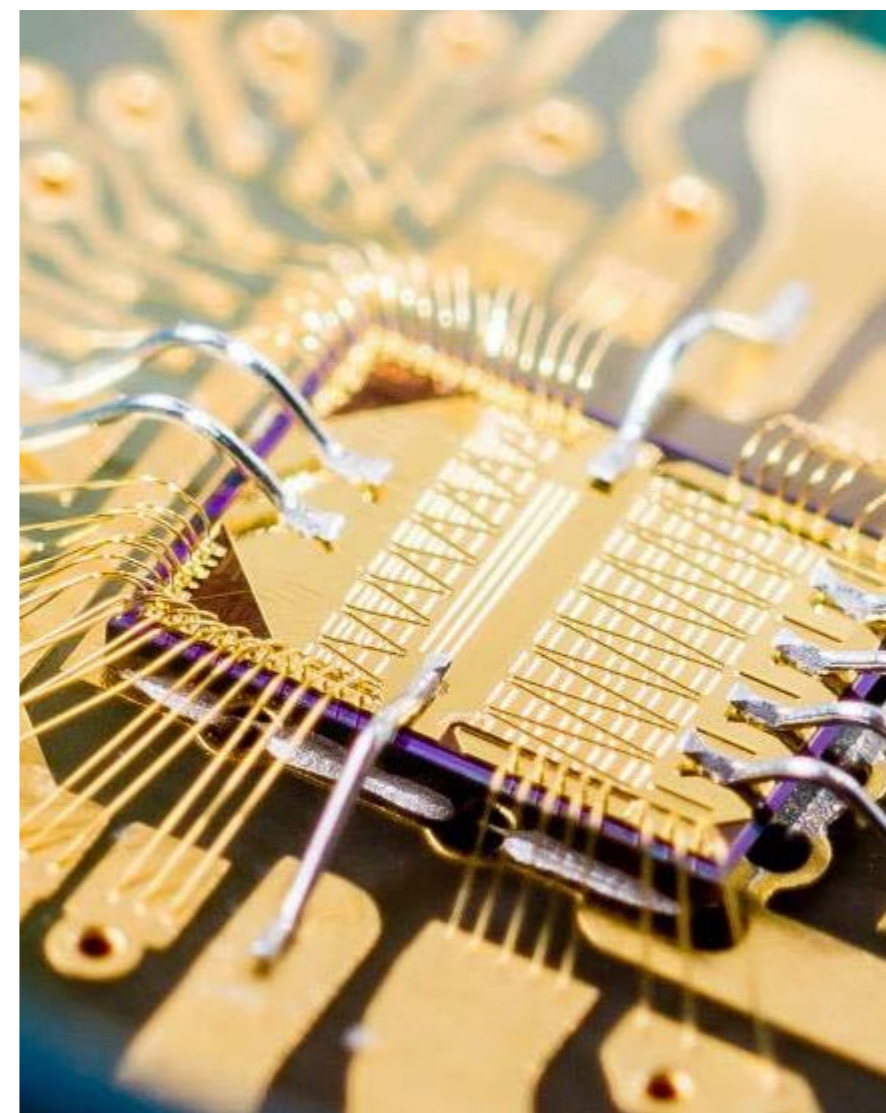
Fundamental science



AI & Machine Learning



Sensors/Detector development



Health & Infection



Accelerator development



Germany: Status quo on funding opportunities

Several Programme in general are available and specific Programme to access Helmholtz centers.

The flagship Programme of Helmholtz OCPC Programme has resulted in more than 100 postdocs who have been awarded to perform cutting edge research at more than 10 locations of the Helmholtz centers in Germany.

The CSC Programme has supported more than 200+ junior researchers to perform their doctoral research training jointly with German researchers



Sino-German Innovation Platform (SGIP)



DFG & BMBF (specific Calls)



Alexander Von Humboldt



DAAD



tscher Akademischer Austausch
erman Academic Exchange Serv

others ...



China: Status quo on funding opportunities

The following list includes mobility programmes targeting international scientists and researchers to conduct academic/scientific research in Chinese universities, research institutes, and laboratories.

Programme

- National High-end Foreign Experts Recruitment Plan
- National Thousand Talents Plan (Foreign Experts programme)
- Changjiang Scholars Programme – Chair Professors
- Chinese Academy of Sciences (CAS) President’s International Fellowship Initiative (PIFI)
- China Postdoctoral International Exchange Programme
- National Natural Science Fund – Research Fund for International Young Scientists
- Confucius China Studies Programme
- Chinese government scholarships
- Beijing Overseas High-level Talent Recruitment Plan
- Beijing International S&T Cooperation Programme – International Talent Exchange
- Shanghai Municipal Thousand Talents Plan (Foreign Experts programme)
- Jiangsu ‘Mass Innovation and Entrepreneurship’ Talent Programme
- Nanjing ‘345’ Overseas Talent Recruitment Programme
- Suzhou S&T Development Plan – Innovation and Entrepreneurship Talent Programme
- Zhejiang Provincial Thousand Talents Plan (Foreign Experts programme)
- Hangzhou ‘115’ Foreign Talent Recruitment Plan
- Shenzhen Distinguished Talents – Subsidies for foreign academicians
- Shenzhen Overseas Senior Talents Programme – Peacock Teams
- Anhui Foreign Expert Hundred Talents Plan
- Shaanxi Provincial Thousand Talents Plan (Foreign Experts programme)
- Shandong ‘Double Hundred’ Foreign Expert Plan
- Hubei Provincial Hundred Talents Plan (Foreign Experts programme)
- Hunan Provincial Hundred Talents Plan (Foreign Experts programme)
- Fujian Provincial Foreign Expert Hundred Talents Plan
- Yunnan Provincial Foreign Expert Introduction Programme
- Hong Kong Ph.D. Fellowship Scheme (HKPFS)



China: Status quo on funding opportunities

Chinese Academy of Sciences (CAS) President's International Fellowship Initiative (PIFI)

The Chinese Academy of Sciences (CAS) offers a package of international fellowships, collectively called the **CAS President's International Fellowship Initiative (PIFI)**, to support highly-qualified international scientists and postgraduate students to work and study at CAS institutions and strengthen their scientific collaboration with CAS researchers. The PIFI programme is available to different categories of international experts, researchers and students:

<p>Category A: Distinguished Experts</p> <p>Supports leading international scientists to conduct a lecture tour at CAS for 1-2 weeks, in at least two CAS institutes. Distinguished experts are also expected to host CAS postdoctoral researchers at CAS expenses at their lab for a research stay of 1-3 months.</p> <ul style="list-style-type: none"> ▪ Benefits: 50,000 RMB per week, plus all expenses covered ▪ Requirements: Well-renowned experts globally, winners of international awards or honours 	<p>Category B: Visiting Scientists</p> <p>Supports leading international scientists to implement cooperative projects at CAS institutions for 2-9 months.</p> <ul style="list-style-type: none"> ▪ Benefits: 20,000 / 30,000 / 40,000 RMB per month for assistant, associate or full professorship, plus other subsidies to cover living and travel expenses ▪ Requirements: Title of assistant professor (or above); outstanding scientific records; 5+ years' experience in renowned universities; and has a collaborative research plan with a CAS 	<p>Category C: Postdoctoral Researchers</p> <p>Supports promising young international scientists to conduct research at CAS-affiliated institutions for 1-2 years.</p> <ul style="list-style-type: none"> ▪ Benefits: 250,000 RMB per year, plus subsidy for travel expenses ▪ Requirements: Ph.D. degree in natural or technological sciences; under 40 years' old; recommended by a CAS host researcher; and does not have other commitments
<p>How to apply: Applicants must first find a CAS host researcher. An efficient online database is available to assist with the search. A research proposal must then be formulated. Official PIFI applications are then submitted by the host researcher/institute, from early August to mid-September.</p>		
<p>Category D: Special Experts</p> <p>Supports experts with particular skills and capacities to work full-time in CAS-affiliated institutions for 2-3 years.</p> <ul style="list-style-type: none"> ▪ Benefits: 60% of the contract amount covered by PIFI, and the remaining by the CAS host institute ▪ Requirements: Foreign personnel who can undertake long-term and full-time employment for CAS, and who meet the specific needs of the special post 	<p>Category F: Ph.D. Students</p> <p>Supports around 200 international graduates each year to pursue their Ph.D. degrees at the UCAS or USTC. They will take regular training courses at UCAS/USTC for about a year and carry out research and dissertation at CAS institutes.</p> <ul style="list-style-type: none"> ▪ Benefits: monthly stipend of 7,000 to 8,000 RMB, tuition fee waivers, travel and visa support ▪ Requirements: Master's degree; under 35 years' old; meets the admission requirements of UCAS or USTC; and does not have other commitments 	<p>Category G: Master's Students</p> <p>Supports around international undergraduates each year to take specialised 1-year courses at UCAS or USTC. They will carry out research and dissertation at CAS institutes, for a maximum of 3 years.</p> <ul style="list-style-type: none"> ▪ Benefits: monthly stipend of 4,000 RMB, plus tuition fee waivers ▪ Requirements: Bachelor's degree; under 30 years' old; recommended by a supervisor and his/her related CAS institute; and meets the admission requirements of UCAS or USTC
<p>Applicants for the Category D - Special Experts must respond directly to specific job advertisements published on a dedicated section of CAS website.</p>	<p>How to apply: Applicants must follow the application procedures indicated on the websites of UCAS or USTC.</p>	

Challenges

(for Europeans/German Researchers in China)

References: Report - European researchers' mobility in China: Challenges and opportunities

1. Perception of holding a position in China
2. Non-effective integration within the Chinese scientific research community;
3. Still burdensome and time-consuming immigration procedures and residence regulations;
4. Awareness of funding opportunities and talent mobility incentives remains not optimal;
5. Constraints in accessing data and information, both from outside and from within China
6. Frustration for not being always allowed to write research proposals in English;



Challenges

(for Chinese Researchers in Germany)

References: Experiences from last years

1. Lack of Awareness of the funding opportunities on new programs -
2. Non-effective integration within the German scientific research community ;
3. Still burdensome and time-consuming immigration procedures and residence regulations (certainly after the entity list was released and Corona pandemic);
4. Challenges scientific research procedures in Germany and unclear expectation from German researcher;
5. Language as a crucial problem at the junior research level;
6. Mental preparedness is not there leaving family and country for a medium term.



Thank YOU!



A crisis is an opportunity riding a dangerous wind.

- Chinese proverb

Hopefully we take the best advantage and make a win-win situation for all stakeholders

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