

Georgian-German Science Bridge

(Status (2016) and Future)

The *Georgian-German Science Bridge* (GGSB) was proposed recently to act as an umbrella organization that covers the multitude of ongoing activities between Georgian Universities and the Forschungszentrum Jülich (FZJ). The objective of the GGSB is to connect scientists and students from both countries via common research projects and through education at universities, thus fostering mutual Georgian-German cultural relationships.



The following activities are already ongoing under the auspices of the GGSB:

- Exchange of scientists and engineers within established and newly founded collaborations to plan and to perform forefront scientific research.
- Facilitate visits by bachelor, master and PhD students to FZJ in order to participate in measurements, analyses, and interpretation of results.

In this way, Georgian researchers and students have access to world-leading scientific infrastructure at FZJ and German scientists find highly-qualified personnel with whom to collaborate. A first bilateral PhD of Georgian and German universities (“Cotutelle” between Tbilisi (TSU) and Cologne university) has been successfully completed – further are planned.

- Transfer of new scientific equipment, corporately planned and built, for use in common experiments.
- Transfer of used equipment (redundant but operational), which is beneficial for educational and training purposes.

In so doing, technology and know-how is transferred to further develop both countries.

- Organization of common workshops and topical conferences (including other international experts) to present and discuss recent results and achievements and to plan future projects or cooperation.
- Organization of summer schools and autumn lectures to educate students and young researchers.

These measures boost the get-to-know each other. Over the years, more than 100 scientists and students from both countries have “crossed this bridge”.

A new concept within the GGSB framework is to establish so-called SMART|Labs. These will involve small groups of experts (scientists/engineers) and students based at one of the Georgian Universities and will be headed by outstanding young Georgian researchers. These will cooperate with (and be supported by) FZJ partners on common frontier scientific projects. The first example (SMART|EDM_Lab) will be founded in August this year (2016) at Tbilisi State University (TSU) with the support of the Georgian Ministry of Education (MoE) and help from SRNSF. When this proves successful, others will follow, with an overarching SMART|Hub structure to interconnect the different SMART|Labs.

The GGSB is not limited to either the currently participating consortium of Georgian Universities (Agricultural, Ilia, GTU and TSU) or to the FZJ (with the involved institutes IEK, IKP, INM, PGI and ZEA); it can be extended to include other German research institutions and universities.

In the long run, GGSB could also be enlarged to other Caucasian countries to turn GGSB into CGSB.

History of the “Georgian-German Science Bridge” (GGSB)

- 1992 First contacts between IKP of KFA Jülich (O.W. Schult) and HEPI TSU (M. Nioradze)
- 1995 Start of cooperation between IKP and HEPI TSU at ANKE (simulations, detectors and proposals for experiments at COSY); HEPI TSU joins ANKE collaboration
- 1998 First cooperation agreement between FZJ and HEPI TSU (extended ever since)
- 2004 First “Caucasian-German School and Workshop in Hadron Physics” (CGSWHP´04) in August/September in Tbilisi; organized by IKP of FZJ and Tbilisi State University (TSU) (H. Ströher, A. Kacharava, M. Nioradze)**
- 2005 Visit of the President of the Georgian Academy of Sciences (A. Tavkhelidze) to FZJ
- 2006 Second meeting CGSWHP´06 in September in Tbilisi; organized by IKP/FZJ and TSU
- 2007 Visit of the Rector of TSU (G. Khubua) to FZJ

 Invitation of the Georgian Science Minister (A. Lomaia) by the German Science Minister (A. Schavan) to Germany
- 2008 Third meeting CGSWHP´08 scheduled for August in Tbilisi; **cancelled!**

 Visit of the Georgian Science Minister (G. Nodia) to Germany, scheduled for August; **cancelled!**
- 2009 Visit of the Rector of the Georgian Technical University (GTU) (A. Prangishvili) to FZJ

 Visit of a Georgian TV team (R. Bluashvili) to FZJ; movie about Jülich (COSY)
- 2010 Fourth meeting (GGSWBS´10) in May in Tbilisi; organized by IEK/IKP/ZAT and GTU/TSU; signature of a Memorandum of Understanding between FZJ and GTU/TSU; Awarding of Dr. h.c. to H. Ströher (IKP-2)
- 2011 Visit of the Rector of TSU (A. Kvitashvili) to FZJ

 Student exchange program between Shota Rustaveli National Science Foundation (SRNSF) and Jülich; signed by S. Sisauri (SRNSF) and S. M. Schmidt (FZJ) in December in Tbilisi

 Internship program between IKP and GTU, TSU
- 2012 Visit of the Rector of Batumi State University (BSU) (A. Bakuridze) and a GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit) representative (I. Tsereteli) to FZJ; preparation of a Letter-of-Intent

Fifth meeting (GGSWBS'12), a workshop in Tbilisi (GTU, TSU) and a school in Batumi (Batumi State University, BSU) in August; organized by IEK/INM/IKP/PGI/ZEA and BSU/GTU/TSU; signature of the IKP-BSU Lol

2012 90th anniversary of GTU; S. Schmidt and H. Ströher attending; first awards of exchange fellowships (SRNSF-FZJ) to 3 PhD and 3 Master students for a stay in FZJ

2013 Autumn lectures in October at GTU (5 lecturers from Jülich (M. Büscher, D. Gotta, A. Kacharava, J. Shah and H. Ströher))

Signature of equipment exchanges (INM/IKP and GTU) and internship (INM and GTU)

Foundation of a "Regional Training Center in Theoretical Physics"; participating institutions: FZJ and TSU (Baku, Bonn, Erevan and Siegen universities); sponsored by Volkswagen Stiftung – spokesperson U.-G. Meißner (IKP, Univ. Bonn)

2014 Visit of a Georgian delegation (Vice Rectors TSU (M. Chitashvili, M. Eliashvili) and others) to FZJ; second round of the SRNSF-FZJ fellowship program (2 PhD and 1 Master students)

Delivery of laboratory equipment from FZJ (IKP) to GTU

Sixth meeting ("10 years of Georgian-German Science Bridge") in July in Tbilisi; organized by IEK/INM/IKP/PGI/ZEA and GTU/Ilia University/TSU

Letter of Intent between Ministry of Education and Science of Georgia and FZJ signed in Tbilisi

Awarding of Dr. h.c. to Prof. O. Schult from TSU and to Profs. S. M. Schmidt and H. Ströher from GTU

Common („Cotutelle“) contracts between GTU, TSU and the University of Cologne for 2 PhD-students (Malkhaz Jabua (GTU), Zara Bagdasarian (TSU))

2015 Delivery of laboratory equipment from FZJ (INM) to GTU; start of GTU laboratory based on the "Georgian German Science Bridge", which is planned to be further developed into a so called "SMART|Lab"

Visit of Director General of SRNSF, Prof. M. Chitashvili, in FZJ (June) to extend agreement on the JUELICH-GEORGIA Joint Programme for Master and PhD students until 2020. Within this program 10 students (8 PhD and 2 Master) are currently co-financed and they are working in 4 different institutes of FZJ

The second "Autumn Lectures" in Tbilisi, October 6 – 14, with lecturers from Germany (S. Schmidt, H. Ströher, J. Shah, D. Gotta, G. Natour, D. Eversheim (University of Bonn) A. Kacharava and I. Keshelashvili); Topic: "Nuclear Physics for Medicine"

Awarding of Dr. h.c. to Profs. S. M. Schmidt and A. Wahner from TSU and to Prof. J. Shah from GTU

On October 7, Extension of the MoU between the Consortium of Georgian Universities (GTU, Ilia, TSU, and AgU) and Jülich institutes (IEK, IKP, INM, PGI/JCNS and ZEA) has been signed until 2020

On October 7, the MoU between the Ministry of Education and Science of Georgia (MoE) and Jülich was signed to support and further develop the long-term scientific and educational cooperation. In this regard the foundation of so called SMART|Labs between the consortium of Georgian Universities and Jülich institutes is envisaged. A first contract for the dedicated SMART|EDM_lab has been signed

2016 January: Visit of Georgian ambassador, Prof. Lado Chanturia in Berlin, by Prof. H. Ströher and Dr. A. Kacharava

April: A first common PhD program (“Cotutelle”) has been finalized at the University of Cologne by TSU student Zara Bagdasarian

May: Planned visit of Ministry delegation (MoE) of Georgia has started. The date for visit is agreed to be 10th of May 2016.

August/September: Seventh meeting (GGSWBS’16), a workshop and summer school in Tbilisi is scheduled. To launch the first SMART|EDM_Lab at TSU on August 29.

Students and Scientist Exchanges (since 2001):

- Bachelor/Master students (internship) in Jülich: 25 (GTU, Ilia, TSU, AgU)
- Master students (for thesis) in Jülich: 15 (GTU, TSU, Ilia)
- PhD students (for thesis) in Jülich: 13 (GTU, Ilia, TSU)
- Post Docs in Jülich 5 (GTU, TSU)
- Scientists visiting Jülich 35 (BSU, GTU, Ilia, TSU, AgU)

- FZJ-scientists visiting Georgia > 100
- Visits of Georgian relatives to Jülich > 40

- Visits of German relatives to Georgia ~ 60

Funding of the scientific cooperation via:

- BMBF (5 WTZ projects), COSY-FFE (5 projects), DAAD (>15 scientists) and DFG (1 project)
- EC (I3HP, Hadron Physics)
- SRNSF and FZJ
- Volkswagen Stiftung

Status: April 2016

Joint collaborations at a glance

