



Memorandum of Understanding

between

Helmholtz-Zentrum Dresden - Rossendorf e. V. 01328 Dresden

- hereinafter referred to as HZDR -

and

Ministry of Education and Science of Georgia 0102, Tbilisi

- hereinafter referred to as MES -

Preamble

For more than 20 years, the Helmholtz Research Centre in Jülich (Forschungszentrum Jülich (FZJ), Germany) successfully cooperates with a consortium of Georgian universities (Agricultural University of Georgia (AUG), Georgian Technical University (GTU), Ilia State University (ISU), Iv. Javakhishvili Tbilisi State University (TSU) and recently Kutaisi International University (KIU)). In 2004 the **Georgian-German Science Bridge** (GGSB) was founded. The GGSB cooperation comprises three pillars:

- ❖ Education: Georgian students are participating various educational programs, e.g., internship programs at FZJ and block-lectures at Georgian universities.
- * Research: Georgian students together with their supervisors are actively involved in diverse common research projects for their Master and PhD projects.
- * Knowledge transfer: Georgian outstanding young scientists are supported to return to universities of the consortium to operate and lead so called SMART|Labs. Two were established (2016-2017) at TSU in the research fields of Elementary Particle Physics (SMART|EDM_Lab) and Atmospheric Chemistry & Simulations (SMART|AtmoSim_Lab).

Ever since Prof. Sebastian M. Schmidt came to FZJ as member of the Board of Management in 2007, he was decisively involved in the development of the GGSB. Now that he has taken on the position of Scientific Director of the Helmholtz-Zentrum Dresden - Rossendorf e. V. (HZDR), he has initiated the extension of the science bridge (GGSB) (see Annex 1) to include HZDR by a Memorandum of Understanding (MoU).

Note: **Annex 1** (existing MoU between FZJ and MES for the period 2021 – 2026)

Partners

HZDR represented by the Board of Directors, and MES, represented by the Minister, intend to enter into specific negotiations on the contracts to be concluded, currently involving the following partners (which can be broadened on mutual agreement):

- a. Helmholtz-Zentrum Dresden Rossendorf e. V.
- b. Consortium of the Georgian Universities
- c. <u>LEPL Shota Rustaveli National Science Foundation of Georgia (SRNSFG)</u>

SRNSFG serves as the Georgian managing body of GGSB (see Annex 2).

Note: **Annex 2** (existing MoU between FZJ and SRNSFG for the period 2021 – 2026)

I. Subject matter of the negotiations

(1) Research

The main (but not exclusive) objective of the future research part of the GGSB is to focus towards one of the Grand Challenges facing society ("Health as a Global Challenge – Contributions by the GGSB") under the acronym GGSB_PLUS (called the PROJECT below). Within this intent, possible areas of common research are: proton therapy, clean energy, circular economy, fluid dynamics, air pollution, radiation physics, radio-oncology and radionuclide production. This comprises:

- Atmospheric research (including implications of air (and soil pollution for thehealth of the Georgian population): Support of the SMART|AtmoSim_Lab;
- b. Fundamental research: Support of the SMART|EDM_Lab with refocus on "Equipment Development for Medicine" in conjunction with the planned Hadron Therapy Center at KIU;
- Biomedical research: Support to a SMART|BioMedImage_Lab to be founded at one
 of the mentioned universities with focus on diagnostics (medical imaging) and
 treatment of tumors;
- d. Applied research: Support of the foundation of a SMART|Tech_Lab and SMART|
 Digital_Lab;
- e. Supercomputing, data analysis, and machine learning: Initialization of a group at KIU (SMART|Data_Lab).
- f. Foster collaborative efforts for joint participation in relevant calls within EU Framework programme for Research and Innovation "Horizon Europe", targeting at the areas of this memorandum.

In the long-term, the intention is to merge these interdisciplinary SMART|Labs into a Georgian Science and Technology Center (GSTC) in order to foster cooperation and synergetic exchange between the labs.

(2) Education

- Student exchange: Continuation of the highly successful exchange program in the frames of the MoU between FZJ and SRNSFG for Bachelor, Master and PhD students, co-financed (50:50 share) by HZDR host institutes and MES (via SRNSFG);
- b. Topical Workshops and Summer Schools for Students in Georgia and/or HZDR;
- c. Education weeks (Block Lectures/Practices) in Georgia and/or HZDR, internships.
- d. Foster collaborative efforts for joint participation in the calls within Marie Skłodowska-Curie Actions, targeted at development and implementation of the programmes for doctoral education and postdoctoral fellowship in the areas of this memorandum.

(3) Knowledge (and technology) transfer

- a. Transfer of expertise to operate a proton cyclotron for radiation therapy;
- Support of existing and future SMART|Labs (e.g. technology);
- c. Scientific and technological consulting, i.p. for the Hadron Therapy Center of LEPL Kutaisi International University.

II. Legally binding provisions

- 1. With the exception of the following provisions, no legal obligation for either of the parties can be derived from this MoU. In particular, there is no obligation to conclude the contracts specified under I.
- Either party shall bear its own internal and external costs incurred in connection with the negotiations and other relevant measures. Either party shall be entitled to terminate the negotiations at any time without giving reasons, provided that a declaration in writing to this effect is presented to the other party.
- 3. In case of failure to materialize the PROJECT or to comply with the time schedules agreed upon, the parties shall not bring forward any claim against one another, irrespective of the legal basis. This shall apply, in particular, to claims for damages or the reimbursement of costs due to failure to conclude the contract. The parties, moreover, shall not be liable for information not being provided at all, or not in good time, or being provided in a faulty manner.
- 4. Either party shall use all and any information obtained from the other party within the framework of the discussions and negotiations exclusively for the purposes (see Preamble) for which it has obtained such information, shall not disclose it to third parties and shall protect it like its own trade secrets. This obligation shall not apply to information that is generally known, information that has been provably derived independently by the party receiving such information, or information lawfully obtained from third parties without infringing any obligation of confidentiality. This obligation shallnot be applicable either in case a party is compelled to disclose the information obtained on the grounds of legal provisions. This obligation shall be valid for a period of six (6) years after this MoU has ceased to be in force.
- 5. Any modifications to this MoU shall be made in writing in order to become valid. The form requirement can only be waived by agreement in writing.
- 6. This MoU shall enter into force on the date of signature by both parties. It shall cease to be valid upon conclusion of all contracts required for the implementation of the project and in case the negotiations are terminated, at the latest, however, on 31st of December 2026 (31/12/2026). However, the provisions on confidentiality shall remain valid.
- 7. Should a provision of this MoU be or become ineffective, this shall not affect the validity of the other provisions. The parties undertake to replace such ineffective provision by an effective provision as close as possible to the regulation purpose of the ineffective provision.

- 8. This MoU is subject to the competent German authority granting any approval which may be necessary for the transfer of objects, know-how, and software to Georgia or technical assistance or Georgian nationals under the relevant export control provisions.
- 9. The exclusive place of jurisdiction for all disputes arising from this MoU shall be Dresden.

Dresden, 04.05.2022

Ministry of Education and Science Georgia

Prof. Dr. Mikhail Chkhenkeli

Minister of Education and Science

Helmholtz-Zentrum

Dresden - Rossendorf e. V.

Prof. Dr. Sebastian M. Schmidt

Scientific Director HZDR

Dr. Diana Stiller

Administrative Director HZDR





Memorandum of Understanding

between

Forschungszentrum Jülich GmbH 52425 Jülich

- hereinafter referred to as JÜLICH -

and

Ministry of Education, Science, Culture and Sport of Georgia

- hereinafter referred to as MESCS -

Preamble

A Letter of Intent (LoI) (see <u>Annex 1</u>) was signed in June 2018 by Forschungszentrum Jülich (FZJ) (Chairman Board of Management, Prof. Dr. Ing. W. Marquardt) and the Ministry of Education, Science, Culture and Sport of Georgia (MESCS) (Minister Prof. Dr. M. Chkhenkeli) to support and further develop the long-term scientific and educational cooperation in the framework of the Georgian-German Science Bridge (GGSB). The major request of the LoI was/is to prepare an update of the existing Memorandum of Understanding (MoU) for a continuation and the further development of the very successful collaboration between Georgian universities and institutes of Forschungszentrum Jülich.

Partners

JÜLICH, represented by the Board of Management, and MESCS, represented by the Minister, intend to enter into specific negotiations on the contracts to be concluded, currently involving the following partners (which can be broadened on mutual agreement):

a. Forschungszentrum Jülich

- Institute of Bio- and Geosciences (IBG), in particular IBG-2 (U. Schurr, H. Scharr)
- Institute of Energy and Climate Research (IEK), in particular IEK-8 (A. Kiendler-Scharr,
 A. Wahner)
- Institute of Neuroscience and Medicine (INM), in particular INM-4 (J. Shah) and INM-5
 (B. Neumaier)
- Institute for Nuclear Physics (IKP), in particular IKP-2 (H. Ströher)
- Central Institute for Engineering, Electronics and Analytics (ZEA), in particular ZEA-1
 (G. Natour) and ZEA-2 (S. van Waasen)
- Pupils laboratory (JuLab)

b. Georgian Universities

- Agricultural University of Georgia (AUG), represented by its rector (V. Lejava)
- Georgian Technical University (GTU), represented by its rector (D. Gurgenidze)
- Ilia State University (ISU), represented by its rector (G. Zedania)
- Kutaisi International University (KIU), represented by its rector (A. Tevzadze)
- I. Javakhishvili Tbilisi State University (TSU), represented by its rector (G. Sharvashidze)

c. <u>LEPL Shota Rustaveli National Science Foundation of Georgia (SRNSFG)</u>

SRNSF serves as the Georgian managing body of GGSB.

I. Subject matter of the negotiations

(1) Research

The main (but not exclusive) objective of the future research part of the GGSB is to focus towards one of the Grand Challenges facing society ("Health as a Global Challenge – Contributions by the GGSB") under the acronym GGSB_PLUS (called the PROJECT below).

- a. Atmospheric research: Continuation of the SMART|AtmoSim_Lab at TSU, including implications for health of the Georgian population (detailed in ANNEX
 2)
- b. Fundamental research: Continuation of the SMART|EDM_Lab at TSU; refocus
 on "Equipment Development for Medicine" in conjunction with the planned
 Hadron Therapy Center at KIU (outlined in ANNEX 3)
- c. Biomedical research: Foundation of a SMART|BioMedImage_Lab at one of the mentioned universities with focus on diagnostics (medical imaging) and treatment of tumors (motivation and in-depth description see ANNEX 4)
- d. Applied research: Foundation of a SMART|Tech_Lab at AUG to support the KIU therapy Center at its two sites in Kutaisi and Tbilisi (ANNEX 5).
- e. Supercomputing, data analysis, and machine learning: Initialization of a group at KIU.

In the long-term it is planned to merge the interdisciplinary SMART|Labs into a SMART|Hub in order to foster cooperation and synergetic exchange between the labs.

(2) Education

 a. Student exchange: Continuation of the highly successful exchange program for Bachelor, Master and PhD students, co-financed (50:50 share) by JÜLICH (host institutes) and MESCS (via SRNSFG).

- b. Topical Workshops and Summer Schools
- c. Education weeks (Quali-Startup Lectures/Practices)
- d. JuLab Workshops

(3) Knowledge (and equipment) transfer

- a. GE Cyclotron transfer from FZJ to KIU (Tbilisi site)
- b. Equipment for SMART|Labs
- c. Scientific and technological consulting, i.p. for the therapy center

II. Legally binding provisions

- With the exception of the following provisions, no legal obligation for either of the parties can be derived from this MoU. In particular, there is no obligation to conclude the contracts specified under I.
- Either party shall bear its own internal and external costs incurred in connection with the
 negotiations and other relevant measures. Either party shall be entitled to terminate the
 negotiations at any time without giving reasons, provided that a declaration in writing to
 this effect is presented to the other party.
- 3. In case of failure to materialize the PROJECT or to comply with the time schedules agreed upon, the parties shall not bring forward any claim against one another, irrespective of the legal basis. This shall apply, in particular, to claims for damages or the reimbursement of costs due to failure to conclude the contract. The parties, moreover, shall not be liable for information not being provided at all, or not in good time, or being provided in a faulty manner.
- 4. Either party shall treat the negotiations and the contents of this MoU confidentially, unless the other party has given its prior written consent to a publication.
- 5. Either party shall use all and any information obtained from the other party within the framework of the discussions and negotiations exclusively for the purposes (see Preamble) for which it has obtained such information, shall not disclose it to third parties and shall protect it like its own trade secrets. This obligation shall not apply to information that is generally known, information that has been provably derived independently by the

party receiving such information, or information lawfully obtained from third parties without infringing any obligation of confidentiality. This obligation shall not be applicable either in case a party is compelled to disclose the information obtained on the grounds of legal provisions. This obligation shall be valid for a period of six (6) years after this MoU has ceased to be in force.

- 6. Any modifications to this MoU shall be made in writing in order to become valid. The form requirement can only be waived by agreement in writing.
- 7. This MoU shall enter into force on the date of signature by both parties. It shall cease to be valid upon conclusion of all contracts required for the implementation of the project and in case the negotiations are terminated, at the latest, however, on 31st of December 2026 (31/12/2026). However, the provisions on confidentiality shall remain valid.
- 8. Should a provision of this MoU be or become ineffective, this shall not affect the validity of the other provisions. The parties undertake to replace such ineffective provision by an effective provision as close as possible to the regulation purpose of the ineffective provision.
- 9. This MoU is subject to the competent German authority granting any approval which may be necessary for the transfer of objects, know-how, and software to Georgia or technical assistance or Georgian nationals under the relevant export control provisions.
- 10. The exclusive place of jurisdiction for all disputes arising from this MoU shall be Jülich.

Tbilisi, 30.04 2020

Ministry of Education, Science, Culture and Sport of Georgia

Mikhail Chkhenkeli

Minister of Education, Science, Culture and Sport of Georgia

Forschungszentrum Jülich GmbH

Wolfgang Marquardt

Chairman, Board of Directors, FZ Jülich

Hans Ströher

Director, IKP-2, FZ Jülich





Memorandum of Understanding

between

Forschungszentrum Jülich GmbH 52425 Jülich, Germany

- hereinafter referred to as JÜLICH -

and

LEPL Shota Rustaveli National Science Foundation of Georgia (SRNSFG)
0193 Tbilisi, Georgia

- hereinafter referred to as FOUNDATION -

on Cooperation in Research, Education and Knowledge Transfer

The Forschungszentrum Jülich GmbH (JÜLICH, Germany) and the LEPL Shota Rustaveli National Science Foundation of Georgia (FOUNDATION, Georgia), hereinafter referred to as the PARTIES,

- Taking into consideration the Memorandum of Understanding (MoU) between the Ministry of Education, Science, Culture and Sport of Georgia (MESCS) and JÜLICH on "the long-term scientific and educational cooperation in the framework of the Georgian-German Science Bridge (GGSB)", signed on 30 of April, 2020;
- Updating the existing MoU between JÜLICH and FOUNDATION on "Scientific Cooperation" signed on 16 of June, 2015,

have agreed as follows:

Article I - General Provisions

- Being guided by common interests, the Parties express the readiness to further promote cooperation within the limits of their competence between the universities, research institutions and researchers of the Germany and Georgia.
- For implementation of the provisions of the present Memorandum, a Joint Research and Education Programme will be elaborated in order to establish a set of exact measures, procedures and the frame for rights and obligations of the Parties.
- The present Memorandum shall impose no financial obligation on either Party. The financial contribution of each party to support scientific activities shall be determined on the basis of mutual agreement.
- 4. The Parties express the readiness to facilitate the elaboration and implementation of the provisions on the protection of intellectual property rights of the scientific research institutions and researchers of Germany and Georgia within the framework of joint scientific cooperation programmes.
- The Parties shall designate their own information centres or contact persons
 responsible for notifying researchers of Germany and Georgia of the entry into force
 of the provisions of the present Memorandum.

Article II - Amendments, Terms, Extension

 The Parties shall have the right to introduce amendments and additions to the present Memorandum by mutual agreement. These amendments and additions shall be drawn up as a separate agreement and the integral part of the present Memorandum. The present Memorandum shall enter into force upon its signature by authorized representatives of both Parties and shall cease to be valid upon the implementation of the joint undertakings in the framework of joint Research and Education Programmes and in case the negotiations are terminated, at the latest, however, on 31st of December, 2026.

Article III - Final Provisions

- The present Memorandum shall not affect the rights and obligations of the Parties based on other agreements and shall not preclude the right of the Parties to use other forms of cooperation.
- In case of intention of either Party to terminate the present Memorandum, the Parties shall without delay hold bilateral consultations in order to agree on the terms of withdrawal acceptable to both Parties.
- Any dispute arising between the Parties concerning the interpretation or application of the present Memorandum shall be resolved through negotiations.
- 4. Signed in Jülich, July 2020 in two copies in English, and two in Georgian language. Both documents are equally authentic.

Jülich, July 2020

For Shota Rustaveli National Science

Foundation of Georgia (SRNSFG)

Zwiad Gabisonia

Director General

Joba Somushig

For Forschungszentrum Jülich GmbH

Wolfgang Marquardt

Chairman of the Board of Directors

ppa. Norbert Drewes

Corporate Development

i.V. Hans Ströher

Director of Nuclear Physics Institute IKP-2