

Memorandum of Understanding (MoU)

Between

**INDIAN SPACE RESEARCH ORGANISATION (ISRO)
BENGALURU**

&

**Malaviya National Institute of Technology (MNIT)
Jaipur**

On

ISRO – MNIT Jaipur

Regional Academic Centre for Space (RAC-S)

February, 2019

Memorandum of Understanding (MoU)
between
Indian Space Research Organisation (ISRO)
and
Malaviya National Institute of Technology (MNIT), Jaipur
on
Regional Academic Centre for Space (RAC-S)

PREAMBLE

The Indian Space Research Organization of the Department of Space, Government of India, Bengaluru (*referred to hereinafter as ISRO*)

and

Malaviya National Institute of Technology (MNIT), Jaipur (*referred to hereinafter as MNIT*)

Having recognized the imperative need to pursue advanced research in the areas of relevance to the future technological and programmatic needs of the Indian Space Programme and act as a facilitator for the promotion of Space Technology activities in the region and therefore;

To set up an ISRO- MNIT (Regional Academic Centre for Space) (*referred to hereinafter as RAC-S*) at MNIT Jaipur, to act as a facilitator for the space technology activities in the region, to become an ambassador for the capacity building, awareness creation and R & D activities of ISRO, in the region hereby agree to conclude this Memorandum of Understanding as follows:

ARTICLE 1

ISRO- MNIT Regional Academic Centre for Space (RAC-S)

- 1.1 The ISRO - MNIT Regional Academic Centre for Space (RAC-S) at MNIT, Jaipur shall pursue advanced research in the areas of relevance to the future technological and programmatic needs of the Indian Space Programme and act as a facilitator for the promotion of space technology activities in the western region comprising the states of Maharashtra, Rajasthan, Gujarat and

Goa; and shall devote its resources including human resources to this effect. The activities of RAC-S shall be directed to maximize the use of the research potential, infrastructure, expertise and experience already existent in ISRO and MNIT, Jaipur.

- 1.2 MNIT RAC-S shall also facilitate and engage other institutes of excellence in the region to take part in the capacity building, awareness creation and research and developmental activities related to space technology, space science and space applications.
- 1.3 RAC-S shall consist of Director, MNIT Jaipur, Regional Coordinator, faculty members, visiting scientists and experts, research personnel, technical, administrative and support staff. The number of scientific/technical and administrative/support staff shall be limited, matching with the financial and other resources that are made available for the activities of JPMC.
- 1.4 The Centre will be headed by a Regional Coordinator, who will be identified by MNIT from the existing staff of MNIT. The Regional Coordinator of the RAC-S shall be responsible for overall management of the RAC-S, including its day - to - day functioning and recommending all expenditures under the approved budget of the RAC-S.

ARTICLE 2

MANAGEMENT COMMITTEES

- 2.1 A Joint Policy and Management Committee (*hereinafter referred to as JPMC*) chaired by Director, MNIT and Co-Chaired by Director, CBPO consisting with members from both ISRO and MNIT will be constituted jointly by Director, MNIT and Chairman, ISRO to guide the RAC-S. The Regional Coordinator of the RAC-S shall be the Convener of the JPMC.
- 2.2 JPMC shall plan the promotional activities including the research programmes of common interest and periodically review such research programmes and related activities. JPMC shall be responsible for recommending the annual budget of RAC-S commensurate with the programmatic requirements.
- 2.3 JPMC may consider other matters related to RAC-S towards the pursuance of research activities, excluding the administrative matters concerning the

functioning of RAC-S, though it may provide advice to the Honorary Director/Regional Coordinator of RAC-S on such matters.

- 2.4 The JPMC may also constitute/approve expert committees of domain experts to take up technical review of projects. The JPMC shall meet as frequently as necessary, but at least once a year.
- 2.5 Apart from JPMC, a Regional Coordination Council (RCC) Chaired by Dean, MNIT, or a senior professor from MNIT (To be selected by Director MNIT for a period of Two years) with members from both MNIT and the associating academic institutes in the region shall be constituted by Director, MNIT to identify the projects and other activities to be taken up under the RAC-S. The Regional Coordinator of the RAC-S shall be the Convener of the RCC. The identified R & D projects shall be sent to the concerned ISRO/DOS Centres to get the comments/ recommendations from the centre before putting up the same to JPMC for its approval. Short term B.Tech. projects and M.Tech. Student projects shall be reviewed by RCC and the selected projects shall be put up to JPMC for its approval with an intimation to RESPOND & AI , CBPO Programme Office, ISRO HQ. The RCC shall meet twice a year or as frequently as required. Long term projects should also be reviewed by RCC. However, before putting them to JPMC for approval, projects shall be forwarded for expert's comments/recommendations from ISRO.

ARTICLE 3

RESPONSIBILITIES OF ISRO

- 3.1 ISRO shall provide necessary annual grant, as recommended by the JPMC and not exceeding ₹200.00 Lacs in any single financial year, for the conduct of projects, promotional activities and administrative expenses of the RAC-S. Sanction and utilization of the annual grants shall be in accordance with the applicable financial rules of Government of India and release of funds shall be governed by the terms and conditions specified in the sanction orders.
- 3.2 ISRO shall permit/ authorize, as per the prevailing rules of ISRO, the visits of the regular and the visiting staff of the RAC-S to ISRO establishments, in connection with the research work/projects pursued by the RAC-S.

- 3.3 ISRO Scientists/Engineers deputed/sponsored to the RAC-S for limited periods for works related to research activities of the RAC-S, shall continue to be ISRO employees and their remunerations shall be paid by ISRO.

ARTICLE 4

RESPONSIBILITIES OF MNIT, Jaipur

MNIT will coordinate the research activities and act as the lead institute of RAC-S. MNIT will also engage other institutes of excellence in the area of Science and Technology in the western region, as stated earlier to take part in the research and development activities of the centre. MNIT, Jaipur shall be responsible for:

- 4.1 Overall management of the RAC-S.
- 4.2 To identify 5 to 8 other academic institutes in the region to collaborate in the RAC-S activities. These institutes may take up joint research projects with MNIT. For long term research projects the Principal Investigator can be from the associating institutes and the CoPI can be from MNIT or vice versa.
- 4.3 Getting suitable project proposals from the faculty and other associated research including their research associates, initial evaluation by RCC and forwarding the same for expert's comments/recommendations from ISRO. Making arrangements for the presentation of the recommended proposals for approval of JPMC.
- 4.4 Projects shall be of three types. Short term projects for B.Tech. Students, One year duration projects for M.Tech. Students and R & D projects preferably leading to Ph.D.
- 4.5 Short Term Projects: 3rd Year or 4th year B.Tech. students shall take up short term research projects of less than one year duration in this category as part of their curriculum. 20-30 students from MNIT and associate institutes shall take up this assignment every year. Projects can be taken up individually or as a team of two students. The proposals to be submitted by the faculty of the respective institute and shall be responsible for budget management. The selection of the students for the projects shall be done by the respective institute. The required facility for carrying out the project, travel support (field work, attending conferences etc, 2nd AC fare) shall be provided under the

- scheme but no fellowship shall be provided to the students. Initial evaluation of these projects shall be carried out by RCC and put up for JPMC's approval.
- 4.6 Projects for M. Tech. Students: In such projects the Principal Investigator shall be a faculty of the respective institute. 10-20 students of 1st or 2nd year M.Tech. from MNIT and associated institutes shall join in these projects every year. The proposals shall be submitted by the faculty of the respective institute and shall be responsible for budget management. The required facility for carrying out the project, travel support (field work, attending conferences etc., and 2nd AC fare) shall be provided under the scheme. The selection of the students for the projects shall be done by the respective institute. The students, who have cleared NET/GATE or equivalent qualification shall be eligible for Research Fellowship as per RESPOND JRF/SRF Scheme. If the student is already getting any stipend, then the total emoluments should not exceed the RTESPOND JRF/SRF eligibility. Students who have not cleared NET/GATE and selected for the projects shall not be eligible for fellowship. Initial evaluation of these projects shall be carried out by RCC and put up for JPMC's approval.
- 4.7 R & D Projects, preferably leading to Ph.D Programme: MNIT and other associated Institutes shall also identify R & D projects of relevance to space programme of one to three years duration. In such projects, the principal investigator of the project shall be from the associating institutes and the CoPI can be from MNIT or vice versa. The PI shall be responsible for the budget management of the project. There will be provision for JRF and SRF in these projects as per RESPOND norms. Candidates, who have cleared NET/GATE or equivalent qualification from all over the country are eligible for RESPOND JRF /SRF and carry out their Ph.D programme. If the student is already getting any stipend, then the total emoluments should not exceed the JRF/SRF eligibility. Initial evaluation of these projects shall be carried out by RCC and the selected projects to be forwarded for expert's comments/recommendations from ISRO, before projecting it before JPMC for its approval.
- 4.8 Providing required infrastructure (civil, electrical etc.,) and the technical and administrative support, water, electricity supply and other support to RAC-S.

- 4.9 Making available its technical and administrative machinery for work related to the technical and administrative functioning of the RAC-S including:
- (a) Arranging, if necessary, civil work, electrical wiring, water lines, etc. related to the RAC-S.
 - (b) Selecting and appointing from time to time with the concurrence of the JPMC, scientific /technical and administrative staff for the RAC-S.
 - (c) Providing necessary administrative and logistics support including transport, as per MNIT rules, necessary for the functioning of the RAC-S.
 - (d) Carry out regular maintenance of the RAC-S.
- 4.10 Utilizing, as per MNIT rules for Sponsored Research Projects, the grants, received from ISRO, for approved projects and activities under RAC-S, maintaining a separate audited account of these grants and submission of copies thereof annually along with Fund Utilization Certificates (FUC) to ISRO.
- 4.11 Treating the research personnel of the RAC-S including its scientists as equivalent to MNIT project staff for the purpose of allowing them for the use of libraries, computer centre, and other technical facilities as and when necessary.
- 4.12 Allowing, as per MNIT rules, hostel/residential/guest house accommodation and other welfare amenities of MNIT to the staff and visiting scientists of the RAC-S.

ARTICLE 5

GENERAL TERMS

- 5.1 The financial contributions of ISRO specified in Article 3.1 of this Memorandum of Understanding may be revised from time to time, as reviewed and advised by the JPMC and mutually agreed to by ISRO and MNIT. The actual release of ISRO grants for the RAC-S will be made as per rules and procedures.

- 5.2 The Honorary Director/Regional Coordinator of the RAC-S shall submit to ISRO, the performance and outcome report annually on the activities of the RAC-S with necessary financial and technical information as may be required.
- 5.3 Co-ordination of the activities under this MoU between RAC-S/MNIT, JPMC, respective ISRO Centres and Department of Space shall be done by the Respond & AI (ISRO Sponsored Research and Academic Interface) Capacity Building Programme Office at ISRO HQ.
- 5.4 Any publication, document and / or paper arising out of joint work conducted by the Parties pursuant to this MOU will be jointly owned. The use of the name, logo and /or official emblem of the Parties on any publication, document and /or paper will require prior permission of both the Parties. It may however be ensured that the official emblem and logo is not misused.
- 5.5 All information and documents to be exchanged pursuant to the Memorandum of Understanding will be kept confidential by the Parties and will be used subject to such terms as each Party may specify. The Parties will not use the information for purposes other than that specified without the prior written consent of other Party.
- 5.6 All Confidential Information shall remain the exclusive property of the disclosing Party. The parties agree that this MoU and disclosure of the Confidential Information do not grant or imply any license, interest or right to the Recipient in respect to any intellectual property right of the other Party.
- 5.7 Unpublished information, whether oral, in writing or otherwise, discovered or conceived by the scientists or technicians and exchanged under the provisions of this MoU will not be transmitted to a third party, unless otherwise agreed by the Parties.

ARTICLE 6

INTELLECTUAL PROPERTY RIGHTS

- 6.1 Any intellectual property rights or such information / knowledge being able to sustain or create any such right arising out of the proposed institutional interactions between ISRO and MNIT on their joint intellectual input will be

held jointly by the Parties and shall be used or assigned in terms of joint written agreement duly executed between the Parties.

- 6.2 Each Party shall inform other Party before filing for patent resulting from any of the project sponsored by the RAC-S. The expenses for filling the Patent protection in India and abroad shall be borne equally between both the parties. Any/all financial accruals due to any commercial exploitation, of this patent shall be shared equally by the parties, on a 50:50 basis.
- 6.3 Each Party will ensure appropriate protection of Intellectual Property Rights generated from cooperation pursuant to MoU, consistent with laws, rules and regulations of India (both parties are Indian Parties).
- 6.4 In case research is carried out solely and separately by the Party or the research results are obtained through the sole and separate effort of the Party, the Party concerned alone will apply for grant of IPR and once granted, the IPR will be solely owned by the concerned Party.
- 6.5 The Parties shall not assign any rights and obligations arising out of the IPR generated to inventions/activities carried out under the MoU to any third party without prior written consent of the other Party.

ARTICLE 7

MODIFICATION OR AMENDMENT

The party to this MoU may with mutual written consent of the other party modify or amend the provision (s) of the MoU in order to remove any difficulty regarding execution of the provision of this MoU.

ARTICLE 8

DISPUTE SETTLEMENT

- 8.1 Any or all disagreements/differences of opinion / disputes regarding the interpretation of the provisions of this Memorandum of Understanding shall be resolved by mutual consultation by the signatories and if necessary, in consultation with Department of Legal Affairs.

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8.2 No payments owing to either ISRO or MNIT by the other shall be withheld pending resolution of any differences of opinion, unless such payment is the subject of the dispute.

ARTICLE 9

APPLICABLE LAWS AND INTERPRETATIONS

This Memorandum of Understanding (MoU) shall be governed in terms of the Indian laws including procedure established by law i.e rules, regulations and scheme framed thereunder and intended to interpret and regulate accordingly

ARTICLE 10

TENURE OF THE MoU

The tenure of this Memorandum of Understanding shall be Ten (10) years from the date of signing of this MoU. Unless opted otherwise by either of the signatory to this MoU, the tenure shall be renewed automatically for a further period of Five (5) years.

In WITNESS WHEREOF the undersigned, duly authorized thereto, have signed this Memorandum of Understanding.

Done at.....Jaipur..... on the5th.....day of ...February...2019 in two originals.

Director, CBPO, ISRO HQ
For the Indian Space Research
Organization (ISRO)

Director, MNIT, Jaipur
For the MNIT, Jaipur

Witness:

1. Signature :
Name : M. A. Paul
Designation: Associate Dir, Response AT
Affiliation: ISRO HQ
2. Signature :
Name : SUMAN BOLA
Designation: SCIENTIST
Affiliation: ISRO

1. Signature :
Name : ROHIT GOYAL
Designation: Prof.
Affiliation: Civil Engg. Dept. MNIT Jaipur
2. Signature :
Name : D. BOOLCHANDANI
Designation: Prof
Affiliation: ECE Dept MNIT Jaipur