MEMORANDUM OF UNDERSTANDING

Between

THE UNIVERSITY OF BURDWAN

RAJBATI, BURDWAN, WEST BENGAL, 713104

INDIA

and

SHIVAJI UNIVERSITY

KOLHAPUR 416 004

MAHARASHTRA

INDIA

This MOU is entered into on the **eighteenth** day of **January 2021**

BETWEEN

THE UNIVERSITY OF BURDWAN, RAJBATI, BURDWAN, WEST BENGAL 713104, INDIA (hereinafter called "BU" which expression shall where the context so admits include its successors and permitted assignees) of the one part,

AND

SHIVAJI UNIVERSITY, KOLHAPUR 416 004, MAHARASHTRA, INDIA ((hereinafter called "SUK" which expression shall where the context so admits include its successors and permitted assignees) and the other part

1.0 Preamble:

Whereas, "THE UNIVERSITY OF BURDWAN (BU)" is one part and "Shivaji University, Kolhapur (SUK) is the other, both are parties to this MoU.

Whereas, SUK has set up Space Research Center, (SRC) located on the mountain top near Panhala fort (16.8°N, 74.2°E, Altitude: 968 meters) for the space research and application The location of Panhala with magnetic dip latitude of 10.60 is situated in between the crest and trough locations of the plasma fountain effect that exists in the upper atmosphere. This place is ideal for the study of the ionospheric anomalies near equatorial regions. SUK has also installed an Indian Regional Navigation Satellite System (IRNSS): NavIC system Automatic weather monitoring system, Sudden Ionospheric Disturbance (Super-SID) space weather monitor. Relative Ionospheric Opacity Meter (RIO-Meter) at Space Research Center, Panhala, Kolhapur, Whereas, Satellite Synchronized ULF induction magnetometer, Proton Presetion Magnetometer (PPM), Celestron C5XLT OTA, Schmidt-Cassegrain Telescope (SCT), etc are available in the department.

Whereas The University of Burdwan is a leading University in West Bengal engaged in teaching and research in different fields of knowledge and learning. One of the fields of training and research of the University is use of space-based technologies and satellite-based navigation systems (GNSS, hereinafter). The University has a GNSS laboratory used for training and research purposes. Both universities are agreed to extend the collaborative research and academic activities using existing and upcoming GNSS systems, particularly for GNSS Research.

Both the parties are entering into this MoU for Research and Academic Collaboration for GNSS Research in mutually beneficial and befitting manner.

2.0 Effective Date and Duration of MoU:

This MoU is effective from the date of its signing and is valid for a duration 3 (Three) years from the date of signing. It may be extended further in writing based on mutual consent.

3.0 Scope of MoU:

Scope of the MoU involves research and academic collaboration in the field of GNSS which includes but not limited to Navigation Data collection, sharing and analysis for mutually agreed topics of research for both parties, joint academic programs and joint application for possible funding from appropriate funding agencies.

4.0 PROPOSED MODES OF COLLABORATION

SUK and BU propose to collaborate through

a) Establishing collaboration between GNSS research Centre and Department of Physics in the field of GNSS as a Research Partner

b) Mutual sharing of IRNSS/ NavIC/ GNSS data for research, those are not restricted for distribution by any other legal/ ethical obligations

c) Shared data shall be used for Academic research purpose only.

d) Due acknowledgment of data provider institute and ISRO in case of IRNSS/ NavIC data used in joint publications.

e) When the collaboration matures, possibility of similar research and/ or academic collaborations in other fields of studies may be explored with mutual consent

5.0 CONFIDENTIALITY

a. During and for a period of three years from the date of disclosure, each party agrees to consider as confidential all information disclosed by the other party in written or tangible form or, if orally disclosed confirmed in writing within thirty days of disclosure and identified as confidential by the disclosing party.

b. The obligations above shall not extend to any confidential information for which the receiving party can prove that, this information:

- is in the public domain at the time of disclosure or comes within the public domain without fault of the receiving party.
- is already known or become known to the receiving party
- is received from a third party having no obligations of confidentiality to the disclosing party,
- is independently developed by the receiving party or
- is required to be disclosed by law or court order.

6.0 NON-EXCLUSIVITY

The relationship of the parties under this MOU shall be nonexclusive and both parties, including their affiliates, subsidiaries and divisions, are free to pursue other agreements or

collaborations of any kind. However, when entering into a particular business, partnership, or dealership agreement, the participants may agree to limit each party's right to collaborate with others on that subject.

7.0 TERMS AND TERMINATION

This MOU, unless extended by mutual written agreement of the parties, shall expire 3 years after the effective date specified in the opening paragraph and can be renewed through mutual interest. This MOU may be amended or terminated earlier by mutual written agreement of the parties at any time. Either party shall have the right to unilaterally terminate this MOU upon 90 days prior written notice to the other party. However, no such early termination of this MOU, whether mutual or unilateral, shall affect the obligations of the participants under any Business Agreement, Confidentiality clause as referenced in clause 4 above, or any other agreement entered into pursuant to this MOU, which obligations shall survive any such termination.

8.0 RELATIONSHIP

Nothing in this MOU shall be construed to make either party a partner, an agent or legal representative of the other for any purpose. Now onwards, till the validity of this agreement, both the parties may mention the name and LOGO of the other in their documents as "COLLABORATOR" for purposes as may be required. But such an instance should be communicated by the user to the other party in writing beforehand.

9.0 INTELLECTUAL PROPERTY RIGHTS (IP)

Intellectual property rights of both the parties will continue to be maintained as is and no party will have rights to any IP already existing with each party. In case of any IP developed jointly, both parties would sign a separate agreement on a mutually agreed basis for such an instance and terms of the same would NOT be guided through this MOU.

10.0 ASSIGNMENT

It is understood by the Parties herein this MOU is based on the professional competence and expertise of each party and hence neither Party shall transfer or assign this Agreement, or rights or obligations arising hereunder, either wholly or in part, to any third party.

11.0 AMENDMENTS

Amendments or changes to this agreement or MoU shall be made in writing and signed by the duly authorized Representatives

SHIVAJI UNIVERSITY शिवाजी विद्यापीठ KOLHAPUR

THE UNIVERSITY OF BURDWAN RAJBATI BURDWAN 713104

12.0 FUNDING

The initial stage of this agreement would not be funded by any of the parties, however, each party would be responsible for the cost of their travel and living expenses.

After the inception, when the collaboration matures, the funding may be realized on application to various funding agencies of relevance. The Parties can submit joint project proposals to relevant funding agencies and the funding applications should be made by the participating parties with their mutual consent and discussions regarding the scope and extent of such funded program and its goals.

13.0 COSTS OF THE MOU

Each Party shall bear the respective costs of carrying out the obligations under this MOU

14.0 POINT OF CONTACTS

Each Party will nominate its own representatives who would be responsible for all measures to be undertaken under this agreement and they would be called point of contact (PoC). The point of contact for each of the parties are mentioned below:

FOR SHIVAJI UNIVERSITY:

Dr. Rajiv Shrikant Vhatkar,
Asst. Professor and Co-ordinator, Space Research Center, Panhala
Department of Physics, Shivaji University,
Kolhapur-416004, Maharashtra, India
Email: drvhatkar@gmail.com Cell: (0)7588246170

FOR THE UNIVERSITY OF BURDWAN

Dr Anindya Bose,
Senior Scientific Officer,
Department of Physics, The University of Burdwan
Golapbag 713 104, West Bengal
abose@phys.buruniv.ac.in; Cell: (0)9434004478

15.0 Modifications to MoU:

15.1 Any amendment or modifications of this MOU shall be in writing by both parties.

15.2 The modifications/changes shall be effective from the date on which they are made/ executed, unless otherwise agreed to.

16.0 Force Majeure:

Neither party shall be held responsible for non-fulfillment of their respective obligation under this MoU due to circumstances beyond their control but not limited to war, flood, cyclones,

decide about the future course of action. Either party shall intimate each other of any such event.

In witness whereof, the parties hereto have signed this MOU on the **eighteenth** Day of **January 2021.**

17.0 SIGNED IN DUPLICATE

This MOU is executed in duplicate with each copy being an official version of the Agreement and having equal legal validity.

BY SIGNING BELOW, the parties, acting by their duly authorized officers, have caused this Memorandum of Understanding to be executed, effective as of the day and year first above written.

On behalf of

Shivaji University, Kolhapur

By :

REGISTRAR
Shivaji University
Kolhapur

Name :

Title :

Date : 18/01/2021

SEAL

SHIVAJI UNIVERSITY KOLHAPUR

Witness:

1. Dr. Rajiv S. Vhatkar
Coordinator,
Space Research Center, Panhala,
Shivaji University, Kolhapur

2. (Dr. N.L. Tarwal)
Dr. N. L. Tarwal
Assistant Professor,
Department of Physics,
Shivaji University, Kolhapur-416 004

On behalf of

The University of Burdwan, Burdwan

By :

18.01.2021

Name : Prof A Mazumdar

The Registrar (Officiating)
The University of Burdwan
Rajbati, Burdwan-713104
West Bengal

Title : Registrar,
The University of Burdwan

Date : 18/01/2021

SEAL

THE UNIVERSITY OF BURDWAN * RAJBATI BURDWAN 713104

Witness:

1. (PARTHA MITRA)
Professor & Head
Department of Physics
The University of Burdwan
Burdwan-713104

2. 18.01.2021
(ANINDYA BOSE)
DR ANINDYA BOSE
SENIOR SCIENTIFIC OFFICER
DEPARTMENT OF PHYSICS
BURDWAN UNIVERSITY, GOLAPBAG
BURDWAN-713 104, INDIA