**Data-based optical butting correction and enhancement of**

**High Resolution Satellite Imagery**

DISSERTATION

Submitted in partial fulfillment of the requirements of the

MTech, Data Science and Engineering

By

(MANI KUMAR VEDANTAM)

(2018AH04070)

Under the supervision of

MANJU SARMA S

GROUP DIRECTOR, DPSG/DPA,

NATIONAL REMOTE SENSING CENTRE

INDIAN SPACE RESEARCH ORGANISATION

Dissertation work carried out at

NRSC/ISRO, Hyderabad

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE

Pilani (Rajasthan) INDIA

(November, 2020)

DSE CL ZG628T - DISSERTATION

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**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI**

**CERTIFICATE**

This is to certify that the Dissertation entitled “**Data-based optical butting correction and enhancement of High Resolution Satellite Imagery”** and submitted by Mr. **MANI KUMAR VEDANTAM** ID No: **2018AH04070** in partial fulfillment of the requirements of DSE CL ZG628T Dissertation embodies the work done by him under my supervision.

(Signature of the Supervisor)

**Place:** Hyderabad MANJU SARMA S

**Date:** November, 2020 GROUP DIRECTOR

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI**

**SECOND SEMESTER 2019-20**

DSE CL ZG628T **DISSERTATION**

**Dissertation Outline**

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**Name of Supervisor:** MANJU SARMA S

**Designation of Supervisor**: GROUP DIRECTOR,

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Indian Space Research Organization

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**Topic of Dissertation**: Data based optical butting correction and enhancement of high resolution satellite data imagery

**Name of First Examiner:** \_\_\_\_\_\_\_\_Prof. MANINDER SINGH BAWA\_\_\_\_\_\_\_\_\_

**Designation of First Examiner**:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Qualification and Experience: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**E- mail ID of First Examiner:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Name of Second Examiner: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Designation of Second Examiner:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Qualification and Experience:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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(Signature of Student) (Signature of Supervisor)

Date: ------------ Date: --------------

**BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI**

**Work Integrated Learning Programmes Division**

**SECOND SEMESTER 2019-20**

**DSE CL ZG628T DISSERTATION**

**(EC-2 Mid-Semester Progress Evaluation Sheet)**

**NAME OF THE STUDENT:** MANI KUMAR VEDANTAM

**ID NO. :** 2018AH04070

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**NAME OF SUPERVISOR :** MANJU SARMA S

**PROJECT TITLE :** Data-based optical butting correction and enhancement of High Resolution Satellite Imagery

# **EVALUATION DETAILS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **EC No.** | **Component** | **Weightage** | **Comments**  (Technical Quality, Originality, Approach, Progress, Business value) | **Marks Awarded** |
| 1 | Dissertation Outline | 10% |  |  |
| 2. | Mid-Sem Progress  Seminar  Viva  Work Progress | 10%  5%  15% |  |  |

|  |  |  |
| --- | --- | --- |
|  | **Supervisor** | **Additional Examiner** |
| Name | Manju Sarma S | Prof. ManinderSingh Bawa |
| **Qualification** |  |  |
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| **Date** |  |  |

**BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI**

**Work Integrated Learning Programmes Division**

**SECOND SEMESTER 2019-20**

**Supervisor’s Rating of the Technical Quality of this Dissertation Outline**

EXCELLENT / GOOD / FAIR/ POOR (Please specify): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Supervisor’s suggestions and remarks about the outline (if applicable).**

Date\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Signature of Supervisor)

**Name of the supervisor:** MANJU SARMA S

**Email Id of Supervisor:** manjusarma\_s@nrsc.gov.in

**Mob # of supervisor:** 9866516331

**BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI**

**SECOND SEMESTER 2019-20**

DSE CL ZG628T **DISSERTATION**

Dissertation Title : DATA-BASED OPTICAL BUTTING CORRECTION AND ENHANCEMENT OF HIGH RESOLUTION SATELLITE IMAGERY

Name of Supervisor : MANJU SARMA S

Name of Student : MANI KUMAR VEDANTAM

ID No. of Student : 2018AH04070

## Abstract

(Contents of the abstract is to be given here)

##### Abstract (in about 500 words)

**Key Words:**

(***Note:*** *The Abstract should briefly describe the work done with respect to the goals, in about 500 words. The Abstract in the above format should be included in the bound Report, after the Acknowledgements and immediately before the Table of Contents. Of course, 02 copies of the abstract are to be submitted as loose sheets also along with the Final Report to the BITS Coordinator).*