FILE NO. CRG/2022/006660

### SCIENCE & ENGINEERING RESEARCH BOARD(SERB)

(A statutory body of the Department of Science & Technology, Government of India)

Science and Engineering Research Board 3rd & 4th Floor, Block II Technology Bhavan, New Mehrauli Road New Delhi - 110016

Dated: 24 February, 2023

### **ORDER**

Subject: Financial Sanction of the research project titled Multi-Source Optimization using Deep Learning framework for Downscaling Satellite-Derived Thermal Data under the guidance of Dr. Indrajit Mukherjee, Computer Science & Engineering, Birla Institute of Technology, Mesra, ranchi, Ranchi, Jharkhand-835215 and by Dr. Jeganathan Chockalingam, Professor, Remote Sensing, Birla Institute Of Technology, Mesra and by Dr. Shashank Pushkar, Assistant Professor, Department Of Computer Science And Engineering, Birla Institute Of Technology, Mesra - Release of 1st grant.

Sanction of Science and Engineering Research Board (SERB) is hereby accorded to the above mentioned project at a total cost of Rs. 1908240/- (Rs. Nineteen Lakh Eight Thousand Two Hundred and Forty Only) with break-up of Rs. 100000/- under Capital (Non-recurring) head and Rs.1808240/- under General (Recurring) head for a duration of 36 months. The items of expenditure for which the total allocation of Rs. 1908240/- has been approved are given below:

The following budget may be considered for Birla Institute Of Technology, Mesra, Mesra, Ranchi

S. No	Head	Total (in Rs.)
Α	Non-recurring	
1	Equipment -> Desktop	100000
A'	Total (Non-Recurring)	100000
В	Recurring Items	
1	Recurring - I : (Research Personnel) Recurring - II : (Consumables, Travel, Contingencies) Recurring - III : Scientific Social Responsibility	1350240 225000 60000
2	Recurring - IV : (Overhead Charges)	173000
B'	Total (Recurring)	1808240
С	Total cost of the project (A' + B')	1908240

- 2. Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at website ( www.serb.gov.in).
- 3. Overhead expenses are meant for the host Institute towards the cost for providing infrastructural facilities and general administrative support etc. including benefits to the staff employed in the project.
- 4. While providing operational flexibility among various subheads under head Recurring-II, it should be ensured that not more than Rs. 1.5 lakh each should be spent for travel and contingency.
- 5. Budget sanctioned under Scientific Social Responsibility (SSR) is meant only for activites enlisted under SSR norms and under no circumstances it can be reappropriated.
- 6. As per rule 211 of GFR, the accounts of project shall be open to inspection by sanctioning authority/audit whenever the institute is called upon to do so.
- 7. The sanctioned equipment would be procured as per GFR and its disposal of the same would be done with prior approval of SERB.
- 8.The institute will furnish to the SERB, separate Utilization certificate(UCs) financial year wise to the SERB for Recurring (Grants-in-aid General) & Non-Recurring (Grants for creation of capital assets) and an audited statement of accounts pertaining to the grant immediately after the end of each financial year.

Supp

- 9. The institute will maintain separate audited accounts for the project. A part or whole of the grant must be kept in an interest earning bank account which is to be reported to SERB. The interest thus earned will be treated as credit to the institute to be adjusted towards further installment of the grant.
- 10. The research personnel sanctioned in the project, if any is co-terminus with the duration of the project and SERB will have no liability to meet the fellowship and salary of supporting staff if any. beyond the duration of the project
- 11. The institute may refund any unspent balance to SERB by means of a Demand Draft favoring "FUND FOR SCIENCE AND ENGINEERING RESEARCH" payable at New Delhi.
- 12. The project File no. CRG/2022/006660 should be mentioned in all communications arising from the above project. The organization/institute/university should ensure that the technical support/financial assistance provided to them by SERB should invariably be highlighted/ acknowledged in their media releases as well as in bold letters in the opening paragraphs of their Annual Report.
- 13. In addition, the investigator/host institute must also acknowledge the support provided to them in all publications, patents and any other output emanating out of the project/program funded by SERB.

14. Sanction order for release of funds under a) Non-recurring and b) Recurring will be issued separately depending on the availability of funds. The project become operational from the day the first release of grant received by the implementing Institute.

(Dr. Prahlad Ram) Scientist D prahlad@serb.gov.in

To, Under Secretary SERB, New Delhi

Copy forwarded for information and necessary action to: -

1.	The Principal Director of Audit, A.G.C.R.Building, IIIrd Floor I.P. Estate, Delhi-110002		
2.	Sanction Folder, SERB , New Delhi.		
3.	File Copy		
4.	Dr. Indrajit Mukherjee Computer Science & Engineering Birla Institute of Technology , Mesra, ranchi, Ranchi, Jharkhand-835215 Email: imukherjee@bitmesra.ac.in Mobile: 919431182820		
	Dr. Jeganathan Chockalingam Remote Sensing Birla Institute Of Technology, Mesra		
	Dr. Shashank Pushkar  Department Of Computer Science And Engineering  Birla Institute Of Technology, Mesra  (Start date of the project may be intimated by name to the undersigned. For guidance, terms & Conditions etc. Please visit <a href="https://www.serb.gov.in">www.serb.gov.in</a> .)		
5.	Registrar, Birla Institute Of Technology, Mesra, Mesra, Ranchi		
	(Receipt of Grant may be intimated by name to the undersigned)		

(Dr. Prahlad Ram) Scientist D prahlad@serb.gov.in

# FILE NO. CRG/2022/006660-G SCIENCE & ENGINEERING RESEARCH BOARD(SERB)

(A statutory body of the Department of Science & Technology, Government of India)
Science and Engineering Research Board
3rd & 4th Floor, Block II
Technology Bhavan, New Mehrauli Road
New Delhi - 110016

Dated: 24 February, 2023

### **ORDER**

Subject: Research project entitled Multi-Source Optimization using Deep Learning framework for Downscaling Satellite-Derived Thermal Data under the guidance of Dr. Indrajit Mukherjee, Computer Science & Engineering, Birla Institute of Technology, Mesra, ranchi, Ranchi, Jharkhand-835215 and by Dr. Jeganathan Chockalingam, Professor, Remote Sensing, Birla Institute Of Technology, Mesra and by Dr. Shashank Pushkar, Assistant Professor, Department Of Computer Science And Engineering, Birla Institute Of Technology, Mesra.

- 1. In continuation of SERB's sanction order No. CRG/2022/006660 dated 24 February, 2023, sanction of the competent authority is hereby accorded to the payment of a sum of **Rs.100000/**-under 'Grants-in-aid General' to Birla Institute Of Technology, Mesra, Ranchi, Ranchi, Jharkhand-835215 being the grant for the financial year 2022-2023 for implementation of the above said project.
- 2. Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at the website (www.serb.gov.in) and as mentioned in the sanction order of even number dated 24 February, 2023.
- 3. As this is the first grant being released under 'Grants-in-aid General' for the project, no previous U/C is required.
- 4. The expenditure involved is debitable to Fund for Science & Engineering Research (FSER) This release is being made under Core Research Grant (PAC Earth & Atmospheric Sciences) (General).
- 5. The Sanction has been issued with the approval of the competent authority on 17 February, 2023 and vide Diary No. SERB/F/10950/2022-2023 dated 24 February, 2023..
- 6. The release amount of **Rs. 100000/-** (Rupees One Lakh only) will be drawn by the Under Secretary of the SERB and will be disbursed by means of RTGS transaction as per their Bank details given below:

PFMS Unique Code	BITMESRA
<b>Account Name</b>	BIRLA INSTITUTE OF TECHNOLOGY
Account Number	01670110045787
Bank Name & Branch	UNITED COMMERCIAL BANK MESRA BRANCH, DIST. RANCHIMESRA- 835215, RANCHI, JHARKHAND
IFSC/RTGS Code	UCBA0000167
Email id of A/C Holder	registrar@bitmesra.ac.in
Email id of PI	imukherjee@bitmesra.ac.in

(Dr. Prahlad Ram) Scientist D prahlad@serb.gov.in

To, Under Secretary SERB, New Delhi

# Copy forwarded for information and necessary action to: -

1.	The Principal Director of Audit, A.G.C.R.Building, IIIrd Floor I.P. Estate, Delhi- 110002	
2.	Sanction Folder, SERB , New Delhi.	
3.	File Copy	
4.	Dr. Indrajit Mukherjee Computer Science & Engineering Birla Institute of Technology , Mesra, ranchi, Ranchi, Jharkhand-835215 Email: imukherjee@bitmesra.ac.in Mobile: 919431182820	
	Dr. Jeganathan Chockalingam Remote Sensing Birla Institute Of Technology, Mesra	
	Dr. Shashank Pushkar  Department Of Computer Science And Engineering  Birla Institute Of Technology, Mesra  (Start date of the project may be intimated by name to the undersigned. For guidance, terms & Conditions etc. Please visit <a href="www.serb.gov.in">www.serb.gov.in</a> .)	
5.	Registrar, Birla Institute Of Technology, Mesra, Mesra, Ranchi	
	(Receipt of Grant may be intimated by name to the undersigned)	

(Dr. Prahlad Ram)
Scientist D
prahlad@serb.gov.in

# FILE NO. CRG/2022/006660-C

## SCIENCE & ENGINEERING RESEARCH BOARD(SERB)

(A statutory body of the Department of Science & Technology, Government of India)

Science and Engineering Research Board

3rd & 4th Floor, Block II

Technology Bhavan, New Mehrauli Road

New Delhi - 110016

Dated: 24 February, 2023

### ORDER

Subject: Research project entitled Multi-Source Optimization using Deep Learning framework for Downscaling Satellite-Derived Thermal Data under the guidance of Dr. Indrajit Mukherjee, Computer Science & Engineering, Birla Institute of Technology, Mesra, ranchi, Ranchi, Jharkhand-835215 and by Dr. Jeganathan Chockalingam, Professor, Remote Sensing, Birla Institute Of Technology, Mesra and by Dr. Shashank Pushkar, Assistant Professor, Department Of Computer Science And Engineering, Birla Institute Of Technology, Mesra.

- 1. In continuation of SERB's sanction order No. CRG/2022/006660 dated 24 February, 2023, sanction of the competent authority is hereby accorded to the payment of a sum of **Rs.100000/**-under 'Grants-in-aid Capital' to Birla Institute Of Technology , Mesra, Ranchi, Ranchi, Jharkhand-835215 being the grant for the financial year 2022-2023 for implementation of the above said project.
- 2. Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at the website (www.serb.gov.in) and as mentioned in the sanction order of even number dated 24 February, 2023.
- 3. As this is the first grant being released under 'Grants-in-aid Capital' for the project, no previous U/C is required.
- 4. The expenditure involved is debitable to Fund for Science & Engineering Research (FSER) This release is being made under Core Research Grant (PAC Earth & Atmospheric Sciences) (Capital).
- 5. The Sanction has been issued with the approval of the competent authority on 17 February, 2023 and vide Diary No. SERB/F/10949/2022-2023 dated 24 February, 2023.
- 6. The release amount of **Rs. 100000**/- (Rupees One Lakh only) will be drawn by the Under Secretary of the SERB and will be disbursed by means of RTGS transaction as per their Bank details given below:

PFMS Unique Code	BITMESRA		
Account Name	BIRLA INSTITUTE OF TECHNOLOGY		
Account Number	01670110045787		
Bank Name & Branch	UNITED COMMERCIAL BANK MESRA BRANCH, DIST. RANCHIMESRA- 835215, RANCHI,JHARKHAND		
IFSC/RTGS Code	UCBA0000167		
Email id of A/C Holder	registrar@bitmesra.ac.in		
Email id of PI	imukherjee@bitmesra.ac.in		

(Dr. Prahlad Ram)
Scientist D
prahlad@serb.gov.in

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4.	Dr. Indrajit Mukherjee Computer Science & Engineering Birla Institute of Technology , Mesra, ranchi, Ranchi, Jharkhand-835215 Email: imukherjee@bitmesra.ac.in Mobile: 919431182820	
	Dr. Jeganathan Chockalingam Remote Sensing Birla Institute Of Technology, Mesra	
	Dr. Shashank Pushkar Department Of Computer Science And Engineering Birla Institute Of Technology, Mesra (Start date of the project may be intimated by name to the undersigned. For guidance, terms & Conditions etc. Please visit www.serb.gov.in.)	
5.	Registrar, Birla Institute Of Technology, Mesra, Mesra, Ranchi  (Receipt of Grant may be intimated by name to the undersigned)	· 3
	(Dr. Prahlad Ram) Scientist D prahlad@serb.gov.in	()X'