C0122/1498403

### FILE NO. CRG/2021/000747

# 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: 03 January, 2022

### ORDER

Subject: Financial Sanction of the research project titled **Investigation of Fractal Growth on the Curved Surfaces in Hele Shaw Flow** under the guidance of Dr. Kiran Suresh Bhole, Mechanical Engineering, Sardar Patel College of Engineering, Munshi nagar, Andheri (west) mumbai, Mumbai city, Maharashtra-400058 and by Dr. Nilesh Ramkrishna Raykar, Professor, Mechanical Engineering, Sardar Patel College Of Engineering - 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. 3180921/- (Rs. Thirty One Lakh Eighty Thousand Nine Hundred and Twenty One Only) with break-up of Rs. 2431747/- under Capital (Non-recurring) head and Rs.749174/- under General (Recurring) head for a duration of 36 months. The items of expenditure for which the total allocation of Rs. 3180921/- has been approved are given below:

The following budget may be considered for Sardar Patel College Of Engineering, Munshi Nagar, Andheri (West) Mumbai

| S. No     | Head   | Total (in Rs.)      |
|-----------|--|---------------------|
| A         | Non-recurring  |                     |
| 1         | Equipment -> Data Acquisition System -> Servo Motorized Translation Stage Bundled with Controller and Power Supply -> Base Plate -> Motorized Linear Translation Stage, Stepper Motor -> Power Supply -> Benchtop Stepper Motor Controllers (three Channel) -> Adapter Plate -> Right Angle Brackets -> Glass Plates | 2431747             |
| A'        | Total (Non-Recurring)  | 2431747             |
| В         | Recurring Items  |                     |
| 1         | Recurring - I : (Manpower) Recurring - II : (Consumables, Travel, Contingencies) Recurring - III : Scientific Social Responsibility  | 0<br>40000<br>60000 |
| 2         | Recurring - IV : (Overhead Charges)  | 289174              |
| <i>B'</i> | Total (Recurring)  | 749174              |
| С         | Total cost of the project (A' + B')  | 3180921             |

- 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.

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- 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.
- 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 manpower 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/2021/000747 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. Pankaj K. Rawat)

Scientist D ms\_cmer@serbonline.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. Kiran Suresh Bhole Mechanical Engineering Sardar Patel College of Engineering , Munshi nagar, Andheri (west) mumbai, Mumbai city, Maharashtra-400058 Email: kiran_bhole@spce.ac.in Mobile: 919869378873   |
|    | Dr. Nilesh Ramkrishna Raykar Mechanical Engineering Sardar Patel College Of Engineering (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. | Principal,<br>Sardar Patel College Of Engineering, Munshi Nagar,Andheri (West) Mumbai   |
|    | (Receipt of Grant may be intimated by name to the undersigned)  |

(Dr. Pankaj K. Rawat)

Scientist D ms\_cmer@serbonline.in

## FILE NO. CRG/2021/000747-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: 03 January, 2022

#### ORDER

Subject: Research project entitled **Investigation of Fractal Growth on the Curved Surfaces in Hele Shaw Flow** under the guidance of Dr. Kiran Suresh Bhole, Mechanical Engineering, Sardar Patel College of Engineering, Munshi nagar, Andheri (west) mumbai, Mumbai city, Maharashtra-400058 and by Dr. Nilesh Ramkrishna Raykar, Professor, Mechanical Engineering, Sardar Patel College Of Engineering.

- 1. In continuation of SERB's sanction order No. CRG/2021/000747 dated 03 January, 2022, sanction of the competent authority is hereby accorded to the payment of a sum of Rs.289724/- under 'Grants-in-aid General' to Sardar Patel College Of Engineering, Munshi Nagar, Andheri (west) Mumbai, Mumbai City, Maharashtra-400058 being the grant for the financial year 2021-2022 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 03 January, 2022.
- 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 on Mechanical, Manufacturing, Aerospace Engineering & Robotics) (General).
- 5. The Sanction has been issued with the approval of the competent authority on 28 December, 2021 and vide Diary No. SERB/F/6266/2021-2022 dated 29 December, 2021...
- 6. The release amount of Rs. 289724/- (Rupees Two Lakh Eighty Nine Thousand Seven Hundred and Twenty Four 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          | MHMC00003768   | 2 |
|---------------------------|--|---|
| Account Name              | SPCE GRANTS ACCOUNT  | 7 |
| Account Number            | 430385092  | K |
| Bank Name &<br>Branch     | Indian Bank INDIAN BANK, Bhavan's Campus, Munshi Nagar, Andheri West, Mumbai-400058, Maharashtra | 1 |
| IFSC/RTGS Code            | IDIB000B092  | 1 |
| Email id of A/C<br>Holder | principal@spce.ac.in   | 1 |
| Email id of PI            | kiran_bhole@spce.ac.in   | 1 |

(Dr. Pankaj K. Rawat)

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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.   |
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| 4. | Dr. Kiran Suresh Bhole<br>Mechanical Engineering  |  |
|----|---|--|
|    | Sardar Patel College of Engineering , Munshi nagar,Andheri (west) mumbai, Mumbai city,<br>Maharashtra-400058  |  |
|    | Email: kiran_bhole@spce.ac.in<br>Mobile: 919869378873   |  |
|    |   |  |
|    | Dr. Nilesh Ramkrishna Raykar  |  |
|    | Mechanical Engineering  |  |
|    | Sardar Patel College Of Engineering   |  |
|    | (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. | Principal,<br>Sardar Patel College Of Engineering, Munshi Nagar,Andheri (West) Mumbai   |  |
|    | (Receipt of Grant may be intimated by name to the undersigned)  |  |

(Dr. Pankaj K. Rawat)
Scientist D
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612211041592

## FILE NO. CRG/2021/000747-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: 03 January, 2022

# **ORDER**

Subject: Research project entitled **Investigation of Fractal Growth on the Curved Surfaces in Hele Shaw Flow** under the guidance of Dr. Kiran Suresh Bhole, Mechanical Engineering, Sardar Patel College of Engineering, Munshi nagar, Andheri (west) mumbai, Mumbai city, Maharashtra-400058 and by Dr. Nilesh Ramkrishna Raykar, Professor, Mechanical Engineering, Sardar Patel College Of Engineering.

- 1. In continuation of SERB's sanction order No. CRG/2021/000747 dated 03 January, 2022, sanction of the competent authority is hereby accorded to the payment of a sum of Rs.2431747/- under 'Grants-in-aid Capital' to Sardar Patel College Of Engineering, Munshi Nagar, Andheri (west) Mumbai, Mumbai City, Maharashtra-400058 being the grant for the financial year 2021-2022 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 03 January, 2022.
- 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 on Mechanical, Manufacturing, Aerospace Engineering & Robotics) (Capital).
- 5. The Sanction has been issued with the approval of the competent authority on **28 December, 2021** and vide Diary No. **SERB/F/6265/2021-2022** dated **29 December, 2021**.
- 6. The release amount of Rs. 2431747/- (Rupees Twenty Four Lakh Thirty One Thousand Seven Hundred and Forty Seven 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          | MHMC00003768  | 7 |
|---------------------------|---|---|
| Account Name              | SPCE GRANTS ACCOUNT   | 1 |
| Account Number            | 430385092   | 7 |
| Bank Name &<br>Branch     | Indian Bank INDIAN BANK, Bhavan's Campus, Munshi Nagar, Andheri West, Mumbai-400058,<br>Maharashtra | 1 |
| IFSC/RTGS Code            | IDIB000B092   | 1 |
| Email id of A/C<br>Holder | principal@spce.ac.in  | 1 |
| Email id of PI            | kiran_bhole@spce.ac.in  | 1 |

(Dr. Pankaj K. Rawat)

Scientist D

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To, Under Secretary SERB, New Delhi

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| 4. | Dr. Kiran Suresh Bhole Mechanical Engineering Sardar Patel College of Free  |
|----|---|
|    | Sardar Patel College of Engineering , Munshi nagar, Andheri (west) mumbai, Mumbai city, Maharashtra-400058  |
|    | Email: kiran_bhole@spce.ac.in<br>Mobile: 919869378873   |
|    |   |
|    | Dr. Nilesh Ramkrishna Raykar  |
|    | Mechanical Engineering Sardar Patel College Of Engineering  |
|    | (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. | Principal,  |
|    | Sardar Patel College Of Engineering, Munshi Nagar, Andheri (West) Mumbai  |
|    | (Receipt of Grant may be intimated by name to the undersigned)  |

(Dr. Pankaj K. Rawat) Scientist D ms\_cmer@serbonline.in