

No.DST/CSRI/2017/304(G)  
Government of India  
Ministry of Science & Technology  
Department of Science & Technology

Technology Bhavan  
New Mehrauli Road  
New Delhi-110 016  
Dated: 31.07.2018

**ORDER**

**Sub:** Financial approval of the project under Cognitive Science Research Initiative (CSRI) entitled “*Virtual reality based cognitive rehabilitation for Autism children to improve their social behavior*”

**PI:** Ms. T. Manju, Professor, Department of Information Technology, Thiagarajar College of Engineering, Madurai-625015.

Sanction of the President is hereby accorded to the above mentioned project at a total cost of **₹33,78,800/-** (Rupees Thirty Three Lakh Seventy Eight Thousand and Eight Hundred only) with a break up **₹15,00,000/-** under 'Capital Head' and **₹18,78,800/-** under 'General Head' for a duration of Three years. The items of expenditure for which the total allocation of **₹33,78,800/-** has been approved for Three years are given below:

Sl. No.	Heads	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total
<b>A.</b>	<b><i>Non-Recurring (Capital Items)</i></b>				
	Equipment- Vive-Head Mount Display, rift-Head Mount Display, Computers, Monitor, DSLR Camera, Web Camera, Multimedia	15,00,000/-	-----	-----	15,00,000/-
<b>B.</b>	<b><i>Recurring (General)</i></b>				
	Fellowship: RA-1 @ Rs. 36,000/M for 3 years + HRA @Rs.1,800/- pm	4,53,600/-	4,53,600/-	4,53,600/-	13,60,800/-
	Consumables	10,000/-	10,000/-	-	20,000/-
	Contingencies	40,000/-	30,000/-	30,000/-	1,00,000/-
	Travel	40,000/-	30,000/-	30,000/-	1,00,000/-
<b>C.</b>	<b>Overhead</b>	1,00,000/-	99,000/-	99,000/-	2,98,000/-
<b>D.</b>	<b>Total of Recurring Grant (B+C)</b>	<b>6,43,600/-</b>	<b>6,22,600/-</b>	<b>6,12,600/-</b>	<b>18,78,800/-</b>
<b>E.</b>	<b>GRAND TOTAL (A+D)</b>	<b>21,43,600/-</b>	<b>6,22,600/-</b>	<b>6,12,600/-</b>	<b>33,78,800/-</b>

2. Overhead expenses are meant for the host institute towards the cost for providing infrastructure facilities and benefits to the staff engaged in the project, etc. **Recruitment of RA will be done as per OM No. SR/S9/Z-09/2012 dated 21.10.2014.**

3. Sanction of the grant is subject to the conditions as detailed in website [www.dst.gov.in](http://www.dst.gov.in).

4. Sanction of the President is accorded to the payment of **₹6,43,600/- (Rupees Six Lakh Forty Three Thousand & Six Hundred only)** under 'Grant-in-aid General' to the **Principal, Thiagarajar College of Engineering, Madurai-625015** being first installment of grant for the year 2018-2019 for implementation of the said research project.

5. The grantee organisation will maintain separate audited account for the project and the entire amount of grant will be kept in an interest bearing bank account. For grants released during FY 2017-18 and onwards all interests and other earnings, against released grant shall be remitted to consolidated fund of India, immediately after finalization of accounts, as it shall not to be adjusted towards future release of grant. A certificate to this effect shall have to be submitted along with Statement of Expenditure/ Utilization Certificate for considering subsequent release of grant/closure of project accounts.

6. This sanction is subject to the condition that the grantee organization will furnish to the Department of Science & Technology, financial year wise Utilization Certificate (UC) in the proforma prescribed as per GFR 2017 and audited statement of expenditure (SE) along with up to date progress report at the end of each financial year duly reflecting the interest earned / accrued on the grants received under the project. This is also subject to the condition of submission of the final statement of expenditure, utilization certificate and project completion report within one year from the scheduled date of completion of the project.

7. The grantee organization will have to enter & upload the Utilization Certificate in the PFMS portal besides sending it in physical form to this Division. The subsequent/final instalment will be released only after confirmation of the acceptance of the UC by the Division and entry of previous Utilization Certificate in the PFMS.



8. If the grant has been released under capital head through separate sanction order under the same project for purchase of equipment(s), separate SE/UC has to be furnished for the released Capital head grant.

9. The grant-in-aid being released is subject to the condition that.

(a) A transparent procurement procedure in line with the Provisions of General Financial Rules 2017 will be followed by the Institute/ Organization under the appropriate rules of the grantee organization while procuring capital assets sanctioned for the above mentioned project and a certificate to this effect will be submitted by the Grantee organization immediately on receipt of the grant.

(b) While submitting Utilization Certificate/Statement of Expenditure, the organization has to ensure submission of supporting documentary evidences with regard to purchase of equipment/capital assets as per the provisions of GFR 2017. Subsequent release of grant under the project shall be considered only on receipt of the said document.

10. DST reserves sole rights on the assets created out of grants. Assets acquired wholly or substantially out of government grants (except those declared as obsolete and unserviceable or condemned in accordance with the procedure laid down in GFR 2017), shall not be disposed of without obtaining the prior approval of DST.

11. The account of the grantee organization shall be open to inspection by the sanctioning authority and audit (both by C& AG of India and Internal Audit by the Principal Accounts Office of the DST), whenever the organization is called upon to do so, as laid down under Rule 236(1) of General Financial Rules 2017.

12. PIA will employ EAT submodule while accounting for grant receipts and its expenses.

13. Principal Investigator (PI) is directed to acknowledge "research grant" in all publications emerging out of this particular project. For example, "Authors acknowledge Department of Science and Technology, Government of India for financial support vide Reference No. .... under Cognitive Science Research Initiative (CSRI) to carry out this work."

14. Failure to comply with the terms and conditions of the Bond will entail full refund with interest in terms of Rule 231 (2) of GFR 2017.

15. The expenditure involved is debatable to:

Demand No.84 Department of Science & Technology  
3425 Other Scientific Research (Major Head)  
60 Others (Sub-Major Head)  
60.200 Assistance to other Scientific Bodies (Minor Head)  
68 Science and Technology Institutional and Human Capacity Building (Sub Head)  
68.00 Science and Technology Institutional and Human Capacity Building  
68.00.31 Grants-in-aid General for the year 2018-2019 (Voted)

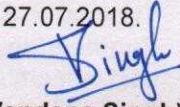
This release is being made Science and Technology Institutional and Human Capacity Building Scheme. (Previous: Research & Development Support 3425.60.200.25.01.31)

16. The amount of **₹6,43,600/- (Rupees Six Lakh Forty Three Thousand & Six Hundred only)** as recurring grant will be drawn by the Drawing and Disbursing Officer of the Department of Science & Technology and will be disbursed to the **Principal, Thiagarajar College of Engineering, Madurai-625015** by means of electronic transfer as per the details given below:

**Institute Name** : Thiagarajar College of Engineering  
**Bank name** : ICICI Bank Ltd.  
**Account No.** : 601301905856  
**Branch** : Thiagarajar College of Engineering Branch, Thiruparankundam  
**IFSC Code** : ICIC0000563

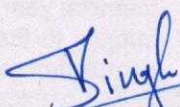
17. As per Rule 234 of GFR 2017, this sanction has been entered at S. No. **18** in the register of grants maintained in the **Research & Development**.

18. This issues with the concurrence of IFD Vide their Concurrence Dy.No/**1466**/2018-19 dated 27.07.2018.

  
(Vandana Singh)  
Scientist-E

Copy forwarded for information and necessary action to:-

1. The Director of Audit (CW & M-II), AGCR Building, IP Estate, New Delhi-110 002.
2. Copy with two spare copies of the sanction to the DDO, DST Cash Section.
3. The Principal, Thiagarajar College of Engineering, Madurai-625015.
4. Ms. T. Manju, Professor, Department of Information Technology, Thiagarajar College of Engineering, Madurai-625015.
5. Pay & Accounts Officer, DST, New Delhi.
6. Sanction Folder.
7. IFD, DST, New Delhi

  
(Vandana Singh)  
Scientist-E



No. SR/WOS-A/PM-63/2017 (C)  
Government of India  
Ministry of Science & Technology  
Department of Science & Technology  
KIRAN DIVISION

Technology Bhawan  
New Mehrauli Road  
New Delhi-110016  
Dated 03.07.2018

**ORDER**

**Sub:** Financial approval of the project under Women Scientist Scheme A (WOS-A) entitled "Acoustic energy absorption in ferromagnetic shape memory alloy polymer composites".

**PI** Ms S.B.P Abirami, Department of Physics, Thiagarajar College of Engineering, Madurai-625015, TN.

In continuation of the Sanction Order No. **SR/WOS-A/PM-63/2017 (G)** dated 03.07.2018 Sanction of the President is hereby accorded to the payment of **Rs 5,00,000/-** (Rupees Five Lac only) as the Grant for "creation of capital assets" in the above mentioned project. The details of the equipments to be procured are given below:

Sl. No.	Heads	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total
A.	<b>Non-Recurring (Capital Items)</b>				
	Equipments: Tubular furnace, SRS power supply, Labview, MacBook	5,00,000/-	-----	-----	5,00,000/-
	<b>TOTAL</b>	5,00,000/-	-----	-----	5,00,000/-

2. The grantee organization will maintain separate audited account for the project and the entire amount of grant will be kept in an interest bearing bank account. The interest earned / accrued should be reported to DST (financial year wise) while submitting the Statement of Expenditure/Utilization Certificate. The interest thus earned will be treated as a credit to the grantee organization, which will be adjusted towards future release of grant.

3. This sanction is subject to the condition that the grantee organization will furnish to the Department of Science & technology, financial year wise Utilization Certificate (UC) in the proforma prescribed as per GFR 2017 and audited statement of expenditure (SE) along with up to date progress report at the end of each financial year duly reflecting the interest earned / accrued on the grants received under the project. This is also subject to the condition of submission of the final statement of expenditure, utilization certificate and project completion report within one year from the scheduled date of completion of the project.

4. The grantee organization will have to enter & upload the Utilization Certificate in the PFMS portal besides sending it in physical form to this Division. The subsequent/final instalment will be released only after confirmation of the acceptance of the UC by the Division and entry of previous Utilization Certificate in the PFMS.

5. If the grant has been released under capital head through separate sanction order under the same project for purchase of equipment(s), separate SE/UC has to be furnished for the released Capital head grant.

6. The account of the grantee organization shall be open to inspection by the sanctioning authority and audit (both by C& AG of India and Internal Audit by the Principal Accounts Office of the DST), whenever the organization is called upon to do so, as laid down under Rule 236(1) of General Financial Rules 2017.

7. The grant-in-aid being released is subject to the condition that.

(a) A transparent procurement procedure in line with the Provisions of General Financial Rules 2017 will be followed by the Institute/ Organization under the appropriate rules of the grantee organization while procuring capital assets sanctioned for the above mentioned project and a certificate to this effect will be submitted by the Grantee organization immediately on receipt of the grant.

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(b) While submitting Utilization Certificate/Statement of Expenditure, the organization has to ensure submission of supporting documentary evidences with regard to purchase of equipment/capital assets as per the provisions of GFR 2017. Subsequent release of grant under the project shall be considered only on receipt of the said document.

8. DST reserves sole rights on the assets created out of grants. Assets acquired wholly or substantially out of government grants (except those declared as obsolete and unserviceable or condemned in accordance with the procedure laid down in GFR 2017), shall not be disposed of without obtaining the prior approval of DST.

9. Failure to comply with the terms and conditions of the Bond will entail full refund with interest in terms of Rule 231 (2) of GFR 2017.

10. The expenditure involved is debit to Demand No.84, Department of Science & Technology for the year 2018-19:

3425 Other Scientific Research (Major Head)

60 Others (Sub-Major Head)

60.200 **Assistance to other Scientific Bodies (Minor Head)**

68 Science and Technology Institutional and Human Capacity Building (Sub Head)

01 Disha Programme for Women in Science

68.01.35 Grant for creation of capital assets for the year 2018-2019 (Voted)

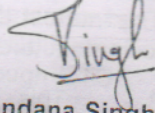
(Previous: Disha Programme for Women in Science 3425.60.200.55.01.35)

11. The amount of **Rs 5,00,000/-** (Rupees Five Lac only) will be drawn by the Drawing and Disbursing Officer, DST and will be disbursed The **Registrar, Thiagarajar College of Engineering, Madurai-625015, TN**. The bank details for electronic transfer of funds through RTGS are given below:-

Institute name : Thiagarajar College of Engineering, Madurai  
Bank Name : ICICI Bank  
Account Number : 601301905856  
Branch : Thiagarajar College of Engineering, Madurai  
IFSC code : ICIC0000563

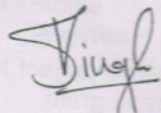
12. As per Rule 234 of GFR 2017, this sanction has been entered at S. No. **145** in the register of grants maintained in the **KIRAN Division** for scheme **(WOS-A)**.

13. This issues with the concurrence of IFD Vide their Concurrence Dy.No)/**1170/2018-19** dated 03.07.2018.

  
(Vandana Singh)  
Scientist-E

Copy for information and necessary action to:-

1. The Director of Audit (CW & M-II), AGCR Building, IP Estate, New Delhi-110 002.
2. Copy with two spare copies of the sanction to the Drawing & Disbursing Officer, DST, Cash Section.
3. The Registrar, Thiagarajar College of Engineering, Madurai-625015, TN.
4. Dr Manickam Mahendran, Associate Professor, Department of Physics, Thiagarajar College of Engineering, Madurai-625015, TN.
5. Ms S.B.P Abirami, Department of Physics, Thiagarajar College of Engineering, Madurai-625015, TN.
6. Pay & Accounts Officer, DST, New Delhi.
7. IFD, DST, New Delhi.
8. Sanction Folder.

  
(Vandana Singh)  
Scientist-E



FILE NO. EEQ/2017/000841  
**SCIENCE & ENGINEERING RESEARCH BOARD(SERB)**  
(a statutory body of the Department of Science & Technology, government of India)

5 & 5A, Lower Ground Floor  
Vasant Square Mall  
Plot No. A, Community Centre  
Sector-B, Pocket-5, Vasant Kunj  
New Delhi-110070

Dated: 23-Feb-2018

**ORDER**

Subject: Financial Sanction of the research project titled "**Study on the reclamation of Wasteland using treated/untreated urban wastewater**" under the guidance of Dr. Chandran Sundararaj, Civil, Thiagarajar College of Engg, Madurai, Madurai, Tamil nadu-625015 - 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. 1906000/-** (Rs. Nineteen Lakh Six Thousand **Only**) with break-up of **Rs. 100000/-** under **Capital (Non-recurring)** head and **Rs. 1806000/-** under **General (Recurring)** head for a duration of 36 months. The items of expenditure for which the total allocation of **Rs. 1906000/-** has been approved are given below:

The following budget may be considered for **Thiagarajar College Of Engg, Madurai**

S. No	Head	Total (in Rs.)
<b>A</b>	<b>Non-recurring</b>	
1	Equipment -> Work station	100000
<b>A'</b>	<b>Total (Non-Recurring)</b>	<b>100000</b>
<b>B</b>	<b>Recurring Items</b>	
1	Recurring - A : (Manpower) Recurring - B : ( Consumables, Travel, Contingencies)	936000 700000
2	Recurring - C : (Overhead Charges)	170000
<b>B'</b>	<b>Total (Recurring)</b>	<b>1806000</b>
<b>C</b>	<b>Total cost of the project (A' + B')</b>	<b>1906000</b>

2. Sanction of the **SERB** is also accorded to the payment of

- **Rs. 100000/-** (Rupees One Lakh only) under 'Grants for creation of capital assets' and **Rs. 600000/-** (Rupees Nine Lakh Twelve Thousand only) under 'Grants-in-aid General' to **Principal, Thiagarajar College Of Engg, Madurai**

being the first installment of the grant for the year 2017-2018 for implementation of the said research project.

3. The expenditure involved is debitable to **Fund for Science & Engineering Research (FSER)**

**This release is being made under Empowerment and Equity Opportunities for Excellence in Science. (Task force Committee) (SC)**

4. The Sanction has been issued to Thiagarajar College Of Engg, Madurai with the approval of the competent authority under delegated powers on **21 February, 2018** and vide Diary No. **SERB/F/9557/2017-2018** dated **21 February, 2018**

5. Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at website ([www.serb.gov.in](http://www.serb.gov.in)).

6. 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.

7. While providing operational flexibility among various subheads under head Recurring-A, it should be ensured that not more than Rs. 1.5 lakh each should be spent for travel and contingency.

8. 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.


9. The sanctioned equipment would be procured as per GFR and its disposal of the same would be done with prior approval of SERB.

10. The release amount of **Rs. 700000/-** (Rupees Seven 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:

Account Name	TCE DRDL PROJECT AC
Account Number	601301905856
Bank Name & Branch	ICICI BANK LTD ICICI BANK LTD,
IFSC/RTGS Code	ICIC0000563
Email id of A/C Holder	principal@tce.edu
Email id of PI	schandran@tce.edu




11. The institute will furnish to the SERB, New Delhi, 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.
12. 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.
13. The project File no. EEQ/2017/000841 may also be mentioned in all research communications arising from the above project with due acknowledgement of SERB.
14. 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
15. As this is the first grant being released for the project, no previous U/C is required.
16. 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.
17. The organization/institute/university should ensure that the technical support/financial assistance provided to them by the Science & Engineering Research Board, a statutory body of the Department of Science & Technology (DST), Government of India should invariably be highlighted/ acknowledged in their media releases as well as in bold letters in the opening paragraphs of their Annual Report.
18. 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 the Science & Engineering Research Board, a statutory body of Department of Science & Technology (DST), Government of India.

  
 (Dr. Pramod Kumar Prasad)  
 Scientist C  
 pk.prasad@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.	<b>Dr. Chandran Sundararaj</b> Civil Thiagarajar College of Engg, Madurai, Madurai, Tamil nadu-625015 Email: schandran@tce.edu Mobile: 919444108500 (Start date of the project may be intimated by name to the undersigned. For guidance, terms & Conditions etc. Please visit <a href="http://www.serb.gov.in">www.serb.gov.in</a> .)
5.	<b>Principal,</b> <b>Thiagarajar College Of Engg, Madurai</b> (Receipt of Grant may be intimated by name to the undersigned)

  
 (Dr. Pramod Kumar Prasad)  
 Scientist C  
 pk.prasad@serb.gov.in



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**ALL INDIA COUNCIL FOR TECHNICAL EDUCATION**

Nelson Mandela Marg, Vasant Kunj,  
New Delhi-110067,

Ref. No.: File No. 8-22/RIFD/RPS/POLICY-1/2016-17

Date: 2 August 2017

**The Drawing and Disbursing Officer**  
All India Council for Technical Education  
Nelson Mandela Marg,  
Vasant Kunj, New Delhi-110067,

**Sub: Release of a sum of Rs.1668706/- being the 1<sup>st</sup> installment of the total grant of Rs.1694118/- for conduct of Project under Research Promotion Scheme (RPS) during the financial year 2017-18.**

Sir,

With reference to the Proposal submitted by the institute, this is to convey the sanction of the Council for payment of **Rs.1668706/- (Rupees Sixteen Lakh Sixty Eight Thousand Seven Hundred Six)** as 1<sup>st</sup> installment out of a total approved grant-in-aid of **Rs.1694118/-** for conduct of a Project under the Research Promotion Scheme (RPS), as per details given below:-

- |      |   |   |   |
|------|---|---|---|
| I.   | Name of the Beneficiary Institution<br>(University / College / Institution) | : | <b>THIAGARAJAR COLLEGE OF ENGINEERING<br/>TIRUPARANKUNDRAM, MADURAI,<br/>TAMIL NADU-625015</b>      |
| II.  | Principal Investigator's Name &<br>Dept./Course                             | : | <b>Dr. KANTHAMANI S<br/>ELECTRONICS AND COMMUNICATIONS<br/>ENGINEERING</b>                          |
| III. | Grant-in-aid Sanctioned   | : | <b>Rs.1694118/-</b> (Rs. 1440000/- for non-recurring and<br>Rs.254118/- for recurring expenditure)  |
| IV.  | Amount to be Released during the<br>year 2017-18                            | : | <b>Rs.1668706/-</b> (Full amount of non recurring & 90 % of<br>recurring sanctioned)                |
| V.   | Duration  | : | <b>3 Years</b>  |
| VI.  | Title of the Project  | : | <b>ANALYSIS AND DEVELOPMENT OF DESIGN DATA<br/>FOR RF MEMS PHASE SHIFTERS FOR PHASED<br/>ARRAYS</b> |

1. The sanctioned grant-in-aid is debitable to the major "601.1(a) (RPS)" Gen. and is valid for Payment during the financial year 2017-18.
2. The grant-in-aid of the grant shall be drawn by the Drawing and Disbursing Officer (DDO), All India Council for Technical Education, New Delhi on the Grants-in-aid bill and shall be disbursed to and credited to the account of **THIAGARAJAR COLLEGE OF ENGINEERING, TIRUPARANKUNDRAM, MADURAI, TAMIL NADU-625015** through RTGS.
3. The date of release of the grant by AICTE shall be taken as the date of commencement of the project. The **Principal/Director/Registrar** shall intimate about the receipt of the grant to AICTE. Any Expenditure, incurred prior to issuance of this Sanction Order, is not allowed to be adjusted in the grant and if the University/Institution do not take the project work within 6 months of the receipt of the grant, approval shall ipso facto lapse.

Contd...2/-



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**ALL INDIA COUNCIL FOR TECHNICAL EDUCATION**

Nelson Mandela Marg, Vasant Kunj,  
New Delhi-110067.

Ref. No.: File No. B-25/RIFD/RPS/POLICY-1/2016-17

Date: 2 August 2017

The Drawing and Disbursing Officer  
All India Council for Technical Education  
Nelson Mandela Marg,  
Vasant Kunj, New Delhi-110067,

Sub: Release of a sum of Rs.1576000/- being the 1<sup>st</sup> instalment of the total grant of Rs.1600000/- for conduct of Project under Research Promotion Scheme (RPS) during the financial year 2017-18.

Sir,

With reference to the Proposal submitted by the institute, this is to convey the sanction of the Council for payment of Rs.1576000/- (Rupees Fifteen Lakh Seventy Six Thousand) as 1<sup>st</sup> instalment out of a total approved grant-in-aid of Rs.1600000/- for conduct of a Project under the Research Promotion Scheme (RPS), as per details given below:-

- |   |   |
|---|---|
| I. Name of the Beneficiary Institution (University / College / Institution) | : THIAGARAJAR COLLEGE OF ENGINEERING<br>TIRUPARANKUNDRAM, MADURAI,<br>TAMIL NADU-625015                           |
| II. Principal Investigator's Name & Dept./Course                            | : Dr. BALAMURUGAN N B<br>ELECTRONICS AND COMMUNICATIONS<br>ENGINEERING  |
| III. Grant-in-aid Sanctioned  | : Rs.1600000/- (Rs. 1360000/- for non-recurring and<br>Rs.240000/- for recurring expenditure)                     |
| IV. Amount to be Released during the year 2017-18                           | : Rs.1576000/- (Full amount of non recurring & 90 % of<br>recurring sanctioned)                                   |
| V. Duration   | : 3 Years   |
| VI. Title of the Project  | : MODELING AND SIMULATION OF HIGH ELECTRON<br>MOBILITY TRANSISTORS(HEMTS) FOR HIGH<br>FREQUENCY CMOS APPLICATIONS |

1. The sanctioned grant-in-aid is debitable to the major "601.1(a) (RPS)" Gen. and is valid for Payment during the financial year 2017-18.
2. The grant-in-aid of the grant shall be drawn by the Drawing and Disbursing Officer (DDO), All India Council for Technical Education, New Delhi on the Grants-in-aid bill and shall be disbursed to and credited to the account of THIAGARAJAR COLLEGE OF ENGINEERING, TIRUPARANKUNDRAM, MADURAI, TAMIL NADU-625015 through RTGS.
3. The date of release of the grant by AICTE shall be taken as the date of commencement of the project. The Principal/Director/Registrar shall intimate about the receipt of the grant to AICTE. Any Expenditure incurred prior to issuance of this Sanction Order is not allowed to be adjusted in the grant and if the University/Institution do not take the project work within 6 months of the receipt of the grant, approval shall ipso facto lapse.

Contd...2/-



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**ALL INDIA COUNCIL FOR TECHNICAL EDUCATION**

Nelson Mandela Marg, Vasant Kunj,  
New Delhi-110067,

Ref. No.: File No. 8-21/RIFD/RPS/POLICY-1/2016-17

Date: 2 August 2017

The Drawing and Disbursing Officer  
All India Council for Technical Education  
Nelson Mandela Marg,  
Vasant Kunj, New Delhi-110067,

**Sub:** Release of a sum of Rs.1321058/- being the 1<sup>st</sup> installment of the total grant of Rs.1341176/- for conduct of Project under Research Promotion Scheme (RPS) during the financial year 2017-18.

Sir,

With reference to the Proposal submitted by the Institute, this is to convey the sanction of the Council for payment of Rs.1321058/- (Rupees Thirteen Lakh Twenty One Thousand Fifty Eight) as 1<sup>st</sup> installment out of a total approved grant-in-aid of Rs.1341176/- for conduct of a Project under the Research Promotion Scheme (RPS), as per details given below:-

- |      |   |   |  |
|------|---|---|--|
| I.   | Name of the Beneficiary Institution<br>(University / College / Institution) | : | THIAGARAJAR COLLEGE OF ENGINEERING<br>TIRUPARANKUNDRAM, MADURAI,<br>TAMIL NADU-625015  |
| II.  | Principal Investigator's Name &<br>Dept./Course                             | : | Dr. HARIHARAN K<br>ELECTRONICS AND COMMUNICATIONS<br>ENGINEERING   |
| III. | Grant-in-aid Sanctioned   | : | Rs.1341176/- (Rs. 1140000/- for non-recurring and<br>Rs.201176/- for recurring expenditure)  |
| IV.  | Amount to be Released during the<br>year 2017-18                            | : | Rs.1321058/- (Full amount of non recurring & 90 % of<br>recurring sanctioned)  |
| V.   | Duration  | : | 3 Years  |
| VI.  | Title of the Project  | : | DESIGN AND DEVELOPMENT OF A MIXED SIGNAL<br>TEST BENCH TO THE RESEARCHER FOR<br>NONLINEARITY TESTING OF ANALOG TO DIGITAL<br>CONVERTERS UNDER DYNAMIC CHARACTERISTIC |

1. The sanctioned grant-in-aid is debitable to the major "601.1(a) (RPS)" Gen. and is valid for Payment during the financial year 2017-18.
2. The grant-in-aid of the grant shall be drawn by the Drawing and Disbursing Officer (DDO), All India Council for Technical Education, New Delhi on the Grants-in-aid bill and shall be disbursed to and credited to the account of THIAGARAJAR COLLEGE OF ENGINEERING, TIRUPARANKUNDRAM, MADURAI, TAMIL NADU-625015 through RTGS.
3. The date of release of the grant by AICTE shall be taken as the date of commencement of the project. The Principal/Director/Registrar shall intimate about the receipt of the grant to AICTE. Any Expenditure, incurred prior to issuance of this Sanction Order, is not allowed to be adjusted in the grant and if the University/Institution do not take the project work within 6 months of the receipt of the grant, approval shall ipso facto lapse.

Contd...2/-



# Honeywell

Honeywell Technology Solutions Lab Pvt. Ltd.,  
CIN: U72200KA1994FTC016379  
Plot No.1, ELCOT - SEZ-IT/ITES Park, Ilankulam Ring Road  
Near Pandikoll, Karuppayurani Post, Madurai - 625 020, INDIA  
Tel: +91-452-248 8070 / 429 9000  
Fax: +91-452-2487884  
E-mail: india.communications@honeywell.com,  
Website: www.honeywell.com/country/in/

## Project Agreement and Statement of Work under Memorandum of Understanding dated

[27<sup>th</sup> Dec 2017]

This Project Agreement and Statement of Work ("SOW") #1 dated December 20, 2017, is entered into pursuant to clause 6 of the Memorandum of Agreement dated [ 27<sup>th</sup> Dec 2017 ] the "MOU" between Honeywell Technology Solutions Labs Pvt. Ltd. ("Honeywell") and Thilagajar College of Engineering ("TCE").

All capitalized terms not otherwise defined herein have the meaning ascribed to them in the Agreement. TCE will provide Honeywell with the Services detailed in this SOW in accordance with the following requirements and schedules. All the legal terms and conditions for this SOW shall be governed by the Agreement. In case of any conflict between the terms and conditions of this SOW and the terms and conditions of the Agreement, the terms and conditions of this SOW shall govern.

WH REAS Parties have signed the 'MOU', identifying areas of potential collaboration and of mutual interest and agreed under Clause 6 that parties would enter specific binding agreements for specific projects to be executed. Accordingly, this Agreement and SOW is being entered.

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth, the PARTIES agree as follows:

### 1. Memorandum of Understanding (MoU)

- 1.1 MOU means the MOU dated 27<sup>th</sup> Dec 2017, and as annexed herewith.
- 1.2 MOU would form part of this SOW.
- 1.3 The terms and conditions mentioned in the annexed MOU dated 27<sup>th</sup> Dec 2017 would form part and parcel of this SOW.

### 2. Scope

- 2.1 The Service Provider shall perform the following research and activities:

#### Video Cognitive Services:

- Recognize video objects, structure it and store the metadata with timestamp and location coordinates
  - o Human dimensions (height, race, color, male/female)
  - o Human wearables (Shoe size, Dress color)
  - o Human carrying objects (bags, weapon (harmful materials))
- Analyze and Correlate video objects with query input
  - o People connectivity

Confidential.



FILE NO. ECR/2017/000827

SCIENCE & ENGINEERING RESEARCH BOARD(SERB)

(a statutory body of the Department of Science & Technology, government of India)

5 & 5A, Lower Ground Floor

Vasant Square Mall

Plot No. A, Community Centre

Sector-B, Pocket-5, Vasant Kunj

New Delhi-110070

Dated: 13-Jul-2017

ORDER

Subject: Financial Sanction of the research project titled “**Design of Neural Network Based New Demand Side Management System for Educational Institutions**” under the guidance of Dr. S Charles Raja, Electrical and Electronics Engg , Thiagarajar College of Engg , Madurai, Madurai, Tamil nadu-625015 - 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. 3022380/- (Rs. Thirty Lakh Twenty Two Thousand Three Hundred and Eighty Only)** with break-up of **Rs. 1451620/- under Capital (Non-recurring) head** and **Rs.1570760/- under General (Recurring) head** for a duration of 36 months. The items of expenditure for which the total allocation of **Rs. 3022380/-** has been approved are given below:

The following budget may be considered for **Thiagarajar College Of Engg, Madurai**

S. No	Head	Total (in Rs.)
A	Non-recurring	
1	Equipment -> Recurring charges- GPRS -> 1 -phase 2 Wire whole current meters 5-30A as per IS 13779 class 1.0(Built in PLCC Modem) -> Meter Boxes -> Head End System Software along with Installation of Metering Infrastructure -> Data Concentrators -LT Whole current Meters -> Data Concentrators -PLCGPRS -> 3-phase whole current meters 10- 60A as per IS 13779 class 1.0 (Built in PLCC Modem) -> Installation and commissioning of Metering Infrastructure -> 3-phase LT CT meters for Distribution Transformer as per IS 14697 class 0.5S -> Solar Package (1KW)	1451620
A'	Total (Non-Recurring)	1451620
B	Recurring Items	
1	Recurring - A : ( Manpower, Consumables, Travel, Contingencies)	1296000
2	Recurring - B : (Overhead Charges)	274760
B'	Total (Recurring)	1570760
C	Total cost of the project (A' + B')	3022380

2. Sanction of the **SERB** is also accorded to the payment of
- Rs. 1451620/- (Rupees Fourteen Lakh Fifty One Thousand Six Hundred and Twenty only) under 'Grants for creation of capital assets' and Rs. 523580/- (Rupees Five Lakh Twenty Three Thousand Five Hundred and Eighty only) under 'Grants-in-aid General' to **Principal, Thiagarajar College Of Engg, Madurai**
- being the first installment of the grant for the year 2017-2018 for implementation of the said research project.
3. The expenditure involved is debitable to **Fund for Science & Engineering Research (FSER)**
- This release is being made under Early Career Research Award. (EC Engineering Sciences)**
4. The Sanction has been issued to Thiagarajar College Of Engg, Madurai with the approval of the competent authority under delegated powers on **10 July, 2017** and vide Diary No. **SERB/F/2839/2017-2018** dated **12 July, 2017**
5. Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at website ( [www.serb.gov.in](http://www.serb.gov.in)).



6. 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.
7. While providing operational flexibility among various subheads under head Recurring-A, it should be ensured that not more than Rs. 1.5 lakh each should be spent for travel and contingency.
8. 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.
9. The sanctioned equipment would be procured as per GFR and its disposal of the same would be done with prior approval of SERB.
10. The release amount of **Rs. 1975200/-** (Rupees Nineteen Lakh Seventy Five Thousand Two Hundred only) will be drawn by the Finance & Budget Officer of the SERB and will be disbursed by means of RTGS transaction as per their Bank details given below:

Account Name	TCE DRDL PROJECT
Account Number	601301905856
Bank Name & Branch	ICICI BANK LTD TCE MADURAI Branch, Thiagarajar College of Engineering Campus,Thiruparankundram,Madurai - 625015.Phone: 0452-2482810
IFSC/RTGS Code	ICIC0000563
Email id of A/C Holder	principal@tce.edu
Email id of PI	charlesrajas@gmail.com

- 11.The institute will furnish to the SERB, New Delhi, 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.
12. 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.
13. The project File no. ECR/2017/000827 may also be mentioned in all research communications arising from the above project with due acknowledgement of SERB.
14. 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
15. As this is the first grant being released for the project, no previous U/C is required.
16. 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.
17. The organization/institute/university should ensure that the technical support/financial assistance provided to them by the Science & Engineering Research Board, a statutory body of the Department of Science & Technology (DST), Government of India should invariably be highlighted/ acknowledged in their media releases as well as in bold letters in the opening paragraphs of their Annual Report.
18. 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 the Science & Engineering Research Board, a statutory body of Department of Science & Technology (DST), Government of India.

(Dr. Ramesh Vijayan)  
SCIENTIST-C  
drvramesh@serb.gov.in

To,



Finance & Budget Officer  
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.	<b>Dr. S Charles Raja</b> <b>Electrical and Electronics Engg</b> <b>Thiagarajar College of Engg , Madurai, Madurai, Tamil nadu-625015</b> <b>Email: charlesrajas@gmail.com</b> <b>Mobile: 919994910088</b> (Start date of the project may be intimated by name to the undersigned. For guidance, terms & Conditions etc. Please visit <a href="http://www.serb.gov.in">www.serb.gov.in</a> .)
5.	<b>Principal,</b> <b>Thiagarajar College Of Engg, Madurai</b>  (Receipt of Grant may be intimated by name to the undersigned)

(Dr. Ramesh Vijayan)  
SCIENTIST-C  
drvramesh@serb.gov.in





# UGC-DAE Consortium for Scientific Research

विश्वविद्यालय अनुदान आयोग – परमाणु ऊर्जा विभाग वैज्ञानिक अनुसंधान संकुल

(An autonomous institution of UGC, New Delhi)

(विश्वविद्यालय अनुदान आयोग, नई दिल्ली द्वारा स्थापित स्वशासी संस्थान)

(Formerly Inter University Consortium for DAE Facilities: IUC-DAEF)

Indore Centre

केन्द्र-निदेशक

Dr. V. Ganesan

Centre-Director

Ref: CSR-IC-240/2017-18/ 1321

31 March 2018

Dr. M. Mahendran

Associate Professor, Dept. of Physics,  
Thiagarajar College of Engineering,  
Madurai-625015, TN

Sub:- Your proposal entitled "Porosity dependent structure and magnetic properties of polycrystalline ferromagnetic shape memory alloys foams."

Dear Dr. Mahendran,

We would like to thank you for visiting Pune for presenting your CRS proposal during March 20-21, 2018. Subsequently the proposals were discussed at length by a Committee. Your above proposal has been approved:

The financial allocation for this year will be:

\*\*Project Fellow (@ Rs.14,000/- pm) + HRA

Rs. 1,68,000/- + HRA

Contingency

Rs.15,000/-

Consumables

Rs.30,000/-

No overheads are available under this scheme.

\*\* If the selected student has M.Sc., with GATE/NET-JRF, then Project Associate-I may be given (@ Rs.25,000/- pm)+ HRA for which additional prior approval has to be taken from the Centre-Director, Indore Centre.

1. This project is sanctioned presently for one year but it may be extended on year basis subject to a total period of three years.
2. Dr. V. Ganesan will coordinate the activities of the project from CSR side.
3. Selection of research student in the project will be done as per the guidelines enclosed. The PI may contact Centre-Director of Indore Centre for approving the CSR Nominee for the selection of the candidate.
4. Ph.D. student appointed under the project is expected to spent at least 3 months in a year at the Consortium, if needed.
5. The major portion of the emerging thesis of respective Ph.D. student should be centered around and contain the results from Consortium.
6. This is a Collaborative Research Scheme. In view of the complex and involved nature of the experiments, any publication emerging under the project must be of collaborative in nature with due consents from the participating institutions / persons, and in consultation with the CRS coordinator. The publication should also acknowledge the UGC-DAE CSR, Indore for the project support.

.....Contd.....2

विश्वविद्यालय परिसर, खण्डवा रोड, इन्दौर-452 001 (म.प्र.)

University Campus, Khandwa Road, INDORE - 452 001 (M.P.) INDIA

Phone +91-731-2472200, 2908150 - Direct, PBX- 2463913, 2762267, 2472201 Exnt : 192, 311

Fax : +91-731- 2465437 . e-mail : vganesan@csr.res.in; cd.indore@csr.res.in

www.csr.res.in



7. The project will be reviewed at the end of each year and a decision will be taken on the financial allocation for the succeeding year.
8. Research Student may be engaged following the guidelines attached herewith. Fellowship may be sanctioned as per the guidelines given in the addendum (enclosed). The Research student must be registered for a Ph.D. from a recognized University in their respective disciplines in a reasonable period of time after joining the project.
9. The CSR will be able to reimburse the travel expenses to investigators as per rules, limited to 2nd AC train fare visiting CSR, Indore Centre on project work. However, the student participant is permitted for a sleeper class train fare by the shortest route and is as per prevailing norms of CSR.
10. At the end of the financial year (i.e., March 31) you will kindly send the (i) utilization certificate for the amount spent and (ii) a statement of account duly signed by the Registrar of your university to the Centre-Director, Indore Centre of UGC-DAE CSR. Funds for the succeeding year in view of the allocation can be released only after receiving the above documents.
11. The PI along with the co-ordinator from CSR side are requested to make every effort to complete the project in time that may enable the research scholar working in the project to complete his/her Ph.D. degree well within the stipulated time limit.
12. Selection of research student in the project will be done as per the guidelines enclosed. A CSR nominee is needed for this.
13. You may please send the following information along with your acceptance for sending the grants:

- a) Name of the Bank
- b) Name of Beneficiary
- c) RTGS Code of the Bank
- d) A/c No. of Beneficiary
- e) Branch of the Bank

Please let me have your acceptance of the CRS under the above conditions by 21 April, 2018 so that money can be transferred to the Registrar of your university. The funds will be transferred after receiving the grants from University Grants Commission, New Delhi.

Yours sincerely,

V. Ganesan  
(V. Ganesan)

Copy to the following for information and necessary action:-

1. The Administrative Officer-I (Accounts), UGC-DAE CSR, Indore Centre.
2. The Registrar, Thiagarajar College of Engineering, Madurai 625 015.
3. The PS to Centre-Director, CSR, Indore Centre for project file.



भारतीय अन्तरिक्ष अनुसंधान संगठन

अन्तरिक्ष विभाग

भारत सरकार

अन्तरिक्ष भवन

न्यू बी ई एल रोड, बेंगलूर - 560 231, भारत

दूरभाष : +91 80 2341 5474

फैक्स :



Indian Space Research Organisation

Department of Space

Government of India

Antariksh Bhavan

New BEL Road, Bangalore - 560 231, India

Telephone : +91 80 2341 5474

Fax :

Dr. M A Paul

Dy. Director, RESPOND

☎: 080-23415269/22172269

FAX-080-23412471

email:ddrespond@isro.gov.in

ISRO/RES/Hackathon/2017-18

February 02, 2018

Dear Sir,

**Subject:** ISRO- Financial support for project proposal titled “Multi-factor authentication add-on for Open VPN” as part of post Hackathon 2017 activities -reg.

-----  
This has reference to the above mentioned project submitted by the team “Defenders” of your College under “Smart India Hackathon-2017”. As you must be aware, “Smart India Hackathon -2017” is an initiative of MHRD along with AICTE which aims at harnessing the creativity and talent of large number of students of all the Engineering Colleges.

As part of the competition held during “Smart India Hackathon- 2017” at Space Application Centre, Ahmedabad; ISRO/DOS jury has selected the Top five projects with six months duration including the project by the team “Defenders” of your college to take up further for full fledged implementation. For each identified project, a focal point has been identified from the respective ISRO Centre for further coordination.

In this regard, I wish to inform you that, Chairman, ISRO/Secretary, DOS has approved the following:

1. Funding of the project for a period of six months at a total outlay of **₹3.00 Lakhs (Rupees Three Lakh only)** towards meeting the expenditure of the project as per the project proposal.
2. Release of grant of **₹3.00 Lakhs (Rupees Three Lakh only)** towards meeting the expenditure of the project.

The approval is subject to fulfillment of the following:

- (a) You will have to submit a comprehensive report (hard copy and soft copy) covering total project activities at the end of the project period. The copies of report should be sent to **Director, Physical Research Laboratory (PRL)**,



**Ahmedabad (Attn: Shri Jigar Raval, Head, Computer Centre, PRL, Ahmedabad)** and two copies to the undersigned.

- (b) You will have to submit the final Fund Utilization Certificate and Audited Accounts Statement for the total expenditure incurred in the project. The FUC and AAS should be sent to the Pay & Accounts Officer, Department of Space, Antariksh Bhavan, New BEL Road, Bengaluru 560 231 and Director, PRL, Ahmedabad with a copy to the undersigned.

The Department of Space has already issued Financial sanction order for the approved grant (copy enclosed).

**You are requested to send the enclosed Grant-in-Aid bill and Electronic Transfer Mandate Form duly filled and signed in original to the Pay and Accounts Officer, Department of Space, Antariksh Bhavan, New BEL Road, Bengaluru : 560 231 with a copy to the undersigned for releasing the grants at the earliest.**

With Regards,

Yours sincerely,

मन म पाँ  
(M A Paul)

**Principal  
Thiagarajar College of Engineering  
Thiruparankundram  
Madurai: 625 015  
Tamil Nadu**

CC: Scientific Secretary, ISRO  
Director, SAC, Ahmedabad  
Dr. Haresh S Bhatt, Nodal Officer, Hackathon 2017, SAC, Ahmedabad  
→ Dr. S Muthuramalingam, HOD, Dept. of IT, Thiagarajar College of Engg.,  
Madurai, TN  
Shri Jigar Raval, Head, Computer Centre, PRL, Ahmedabad (Focal Point)  
Prof. Nandita Srivastava, RESPOND Coordinator, PRL, Ahmedabad  
Shri Rajiv Ratan Chetwani, Director, ISPO, ISRO HQ