

**10** YEARS  
OF UNIVERSITY  
RECOGNITION  
**20** YEARS OF  
ACADEMIC  
EXCELLENCE



**REVA**  
UNIVERSITY

Bengaluru, India

# COPY OF THE SANCTION LETTERS RECEIVED FROM GOVERNMENT BODIES FOR DEVELOPMENT AND MAINTENANCE OF INFRASTRUCTURE

2017-18

4 C Sakshin



# ಕರ್ನಾಟಕ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಪ್ರೋತ್ಸಾಹಕ ಸಂಸ್ಥೆ

1

ಮಾಹಿತಿ ತಂತ್ರಜ್ಞಾನ, ವೈವಿಕ ತಂತ್ರಜ್ಞಾನ ಹಾಗೂ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಇಲಾಖೆ, ಕರ್ನಾಟಕ ಸರ್ಕಾರ  
'ವಿಜ್ಞಾನ ಭವನ' ನಂ: 24/2, 3ನೇ ಮಹಡಿ, 2ನೇ ಮುಖ್ಯ ರಸ್ತೆ, ಬನಶಂಕರಿ 2ನೇ ಹಂತ, ಬೆಂಗಳೂರು-560 070  
ದೂರವಾಣಿ/ಫ್ಯಾಕ್ಸ್: 080-26711166 /26711160 ಇ-ಮೇಲ್: ksteps.dst@gmail.com

ಡಾ. ಹೆಚ್. ಹೊನ್ನೇಗೌಡ  
ವಿಶೇಷ ನಿರ್ದೇಶಕರು (ಆಂತ್ರಿಕ), ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಇಲಾಖೆ/  
ವ್ಯವಸ್ಥಾಪಕ ನಿರ್ದೇಶಕರು, ಕೆನ್ಸೆಪ್ಟ್  
ನಂ. ಕೆನ್ಸೆಪ್ಟ್/ವಿತಂದಾಸ/ಕೆಫಿಸ್ಟ್ L1/GRD-272/28/17-18 / 91

ದಿನಾಂಕ: 27.06.2017

ಮಾನ್ಯರೇ,

ವಿಷಯ: ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ದಾರ್ಶನಿಕ ಸಮೂಹದ K-Fist L1 ಯೋಜನೆಯಡಿಯಲ್ಲಿ ಎರಡನೇ ಕಂತಿನ ಅನುದಾನ ಬಿಡುಗಡೆ ಮಾಡುವ ಬಗ್ಗೆ.

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ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಇಲಾಖೆಯು, ಖ್ಯಾತ ವಿಜ್ಞಾನಿ ಭಾರತರತ್ನ ಪ್ರೊಫೆಸರ್ ಸಿ.ಎನ್.ಆರ್. ರಾವ್, F.R.S. ರವರ ಅಧ್ಯಕ್ಷತೆಯಲ್ಲಿ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ದಾರ್ಶನಿಕ ಸಮೂಹವನ್ನು 2008 ರಲ್ಲಿ ಸ್ಥಾಪಿಸಿದ್ದು, ಈ ಯೋಜನೆಯಡಿ ಹಲವಾರು ವೈಜ್ಞಾನಿಕ ಕಾರ್ಯಕ್ರಮಗಳನ್ನು ಕಳೆದ 9 ವರ್ಷಗಳಿಂದ ರಾಜ್ಯಾದ್ಯಂತ ಯಶಸ್ವಿಯಾಗಿ ಅನುಷ್ಠಾನಗೊಳಿಸಿಕೊಂಡು ಬರುತ್ತಿರುವುದು ಸರಿಯಷ್ಟೆ. 2013-14ನೇ ಸಾಲಿನಲ್ಲಿ ತಮ್ಮ ಸಂಸ್ಥೆಯಿಂದ ಸಲ್ಲಿಸಿದ ಪ್ರಸ್ತಾವನೆಯಾದ "Establishing of Cloud Computing Laboratory for image processing and Multimedia Data security" ನ್ನು ವಿ.ಜಿ.ಎಸ್.ಐ. ಯ ಪ್ರಮುಖ ಕಾರ್ಯಕ್ರಮವಾದ Karnataka Fund for Infrastructure Strengthening in Science & Technology in Higher Education Institutions (K-FIST) ನ ಯೋಜನೆಯಡಿಯಲ್ಲಿ ದಾರ್ಶನಿಕ ಸಮೂಹವು ಆಯ್ಕೆ ಮಾಡಿ, ಸರ್ಕಾರ ಆದೇಶ ನೀಡಿರುವುದು ತಮಗೆ ತಿಳಿದ ವಿಷಯವಾಗಿದೆ.

ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಇಲಾಖೆಯ ಅಂಗ ಸಂಸ್ಥೆಯಾದ ಕರ್ನಾಟಕ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಪ್ರೋತ್ಸಾಹಕ ಸಂಸ್ಥೆ (ಕೆನ್ಸೆಪ್ಟ್) ಯನ್ನು ಪ್ರಸ್ತುತ ವರ್ಷದಿಂದ ದಾರ್ಶನಿಕ ಸಮೂಹದ ಕಾರ್ಯಕ್ರಮಗಳ ಉಸ್ತುವಾರಿ ಸಂಸ್ಥೆಯಾಗಿ ನೇಮಿಸಲಾಗಿದೆ. ಆದುದರಿಂದ, ತಮ್ಮ ಸಂಸ್ಥೆಯಿಂದ ಆಯ್ಕೆಗೊಂಡ ಪ್ರಸ್ತಾವನೆಗೆ ಎರಡನೇ ಕಂತಾಗಿ ರೂ. 10.00 ಲಕ್ಷಗಳ ಅನುದಾನದ ಚೆಕ್‌ನ್ನು (ಚೆಕ್ ಸಂಖ್ಯೆ: 522796, ದಿ: 27.06.2017) ನೀಡಲಾಗಿದೆ. ಚೆಕ್ ಸ್ವೀಕರಿಸಿದ ನಂತರ, ಸ್ವೀಕೃತ ರಶೀದಿ (Acknowledgement) ಯನ್ನು ಹಾಗೂ ತಮ್ಮ ಇ-ಮೇಲ್ ವಿಳಾಸಕ್ಕೆ ನಾವು ಕಳುಹಿಸಿರುವ Part-A document ಅನ್ನು ಭರ್ತಿ ಮಾಡಿ ಹದಿನೈದು ದಿನಗಳ ಒಳಗೆ ವಿತಂದಾಸ ಸಂಸ್ಥೆಗೆ ಕಳುಹಿಸುವುದು.

ಈಗಾಗಲೇ ಬಿಡುಗಡೆ ಮಾಡಲಾಗಿರುವ ಮೊದಲನೇ ಕಂತಿನ ಅನುದಾನದಲ್ಲಿ ಉಳಕೆಯಾಗಿರುವ ರೂ. 26,036/-ಗಳನ್ನು ಮತ್ತು ಇದಕ್ಕೆ ಬಂದಂತಹ ಬಡ್ಡಿ ಹಣವನ್ನು ಸದರಿ ಅನುದಾನಕ್ಕೆ ಸೇರಿಸಿಕೊಂಡು ಉದ್ದೇಶಿತ ಯೋಜನೆಗೆ ಮಾತ್ರ ಬಳಸಿಕೊಳ್ಳುವುದು ಹಾಗೂ ಎಲ್ಲಾ ವೆಚ್ಚಗಳನ್ನು ಕರ್ನಾಟಕ ಸಾರ್ವಜನಿಕ ಸಂಗ್ರಹಣೆಯಲ್ಲಿ ಪಾರದರ್ಶಕತೆ ಅಧಿನಿಯಮ, 1999ರ (Karnataka Transparency in Public Procurements Act, 1999 - <http://finance.kar.nic.in/index.htm>) ಅನುಸಾರ ಹಾಗೂ ದಾರ್ಶನಿಕ ಸಮೂಹ ಅನುಮೋದಿಸಿರುವ ವಿವಿಧ ಲೇಖ್ಯಣಿಗಳಿಗೆ ಅನುಗುಣವಾಗಿ ಯೋಜನೆಯನ್ನು ಅನುಷ್ಠಾನಗೊಳಿಸುವುದು.

  
Registrar  
REVA UNIVERSITY  
Yelahanka, Bengaluru - 54.

  
VASU.M  
DGM Accounts & Fin  
REVA UNIVERSITY  
Yelahanka, Bangalore



# COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH

Human Resource Development Group  
CSIR Complex, Library Avenue, Pusa, New Delhi 110 012  
Tel : 011 2584 1037  
Email: [tqsm@csirhrdg.res.in](mailto:tqsm@csirhrdg.res.in), web <http://csirhrdg.res.in>

2018-19

**Hemant Kulkarni**  
Senior Principal Scientist

Ref No. SYM/10115/18-HRD  
April.02, 2019

**Dr Jegadeeswaran N**  
Professor, Dept. of Mechanical Engineering  
Reva University  
Rukmini Knowledge Park, Yelahanka  
Bangalore - 560 064 Karnataka 9880231308

**SUBJECT: CSIR NAL Sponsored 3rd International Conference on Recent Research Emerging Trends in Materials & Mechanical Engineering (ICRRETMME 2019) during Jul 12-13,2019 at Reva University, Bangalore**

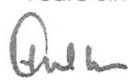
Dear Dr N

With reference to your application on the above subject, we are happy to inform you that Director General, CSIR has been pleased to sanction a grant of Rs.100000/- (Rupees One Lakh Only) subject to the following conditions:

1. The grant received from CSIR should be duly acknowledged by email along with a certificate that the grant would be specifically utilized for the purpose for which it has been sanctioned.
2. The grant may be reimbursed **within three months** from the date of Conference / Seminar/ Workshop etc is over by filling-in the Grant-in-Aid Bill Form in duplicate duly signed and rubber-stamped by the concerned officials, indicating clearly the designation of the official along with **Audited Statement of expenditure** for release of grant (**Current Proforma for Grant-in-aid bill and Audited Statement of expenditure are available on our website URL <http://csirhrdg.res.in/sy.htm>**), If any Utilization Certificates of Previous Grant for symposia (as per Col.No. 16 of the Application Proforma ) not submitted till date, please attach copies of Utilization Certificates also. All the pages of above documents should be self attested by the organizer.
3. Invitation cards should be sent to the Director General, CSIR and Head, HRDG. CSIR may nominate three scientists for the above event and registration fee should not be charged from them. In case of nomination, the Head, HRDG or the undersigned would issue a letter with a copy to the nominee(s).
4. Softcopy (preferably in CD/ DVD in PDF format) of the full paper proceedings of above event should be sent to the undersigned.
5. An overall activity report by the Convener / Organizing Secretary should be made available by email to us with regard to outcome of the gathering, the recommendations and plan of action for future. The names, addresses & email IDs of the participants / delegates should also be sent immediately after the event by email.

  
Registrar  
REVA UNIVERSITY  
Yelahanka, Bengaluru - 64.

**VASU.M.**  
DGM Accounts & Finance  
REVA UNIVERSITY  
Yelahanka, Bangalore

Yours sincerely,  
  
(Hemant Kulkarni)

Copy to: Audit (EMR) HRDG



**REVA UNIVERSITY**  
Rukmini Knowledge Park  
Yalahanka, Bangalore-560064  
PAN : AABTR1107Q  
State Name : Karnataka, Code : 29

**Receipt-2019-20 Voucher**

No. : 41726

Dated : 16-Dec-2019

Particulars	Amount
<b>Account :</b> International Conference -ICRRETCE- 2019 ME & CV	1,00,000.00
<b>Through :</b> Cu Karnataka Bank A/c No 6662000100000901	
<b>On Account of :</b> NEFT-NPL COLLECTION AC /P19121618664857 towards internation conferenec - ICRRETCE-2019 ME & CV for sponsor ship fee from CSIR New Delhi	
<b>Amount (in words) :</b> Indian Rupees One Lakh Only	
	<b>RS 1,00,000.00</b>

Authorised Signatory

Authorozied by :  
Entered by : srinivas  
Approved by :

**VASU.M.**  
**DGM Accounts & Finance**  
**REVA UNIVERSITY**  
Yalahanka, Bangalore

*Srinivas*  
**Registrar**  
**REVA UNIVERSITY**  
Yalahanka, Bengaluru - 56.

## Account Statement

**REVA UNIVERSITY(INR) - 6662000100000901**

**General Details**

Number: 6662000100000901  
 Name: REVA UNIVERSITY  
 Type: Current  
 Currency: INR  
 Branch: REVA GROUP OF  
 EDUCATION  
 INSTITUTIONS

Nickname: REVA UNIVERSITY  
 Status: Active Account  
 Category: CA-MONEY DIAMOND  
 Open Date: 07/10/2014  
 Drawing Power: INR 0.00

Debit Accrued Interest: -NIL

Credit Accrued Interest: -NIL-

Primary Account: Y

Sanction Limit: INR 0.00

**Balance Details**

Available Balance: INR 15,66,957.88  
 Effective Available: INR 15,66,957.88  
 Unclear Balance: INR 0.00  
 System Reserve: -NIL-

Ledger Balance: INR 15,66,957.88  
 Lien Balance: INR 0.00  
 Float Balance: INR 0.00  
 Other Balance: INR 0.00

**Transactions List - -REVA UNIVERSITY (INR) - 6662000100000901**

Date	Description	Cheque No	Debit	Credit	Balance (INR)
16/12/2019	NEFT-NPL COLLECTION AC/P19121618664857			1,00,000.00	27,14,012.97
16/12/2019	NEFT- RTN/KARBN19350998574/Acc ount Does Not Exist/E			2,052.00	26,14,012.97
16/12/2019	By Cash CASH			16,900.00	26,11,960.97
16/12/2019	NEFT-K M KUMAR/KARBN19350998899		4,104.00		25,95,060.97
16/12/2019	NEFT-MACHIHIHINDRANATHA DHANE/KARBN19350998873		2,052.00		25,99,164.97
16/12/2019	NEFT-B S VASUKI/KARBN19350998838		2,052.00		26,01,216.97
16/12/2019	NEFT-MAMTA RAMESH/KARBN1935099878		2,052.00		26,03,268.97
16/12/2019	NEFT-K V JAGANNATH/KARBN1935099 8753		1,818.00		26,05,320.97
16/12/2019	NEFT-shilpa C D/KARBN19350998713		1,818.00		26,07,138.97
16/12/2019	NEFT-M C Mahesh kumar/KARBN19350998645		2,052.00		26,08,956.97
16/12/2019	NEFT-Latha devi puli/KARBN19350998608		4,104.00		26,11,008.97
16/12/2019	NEFT-E K Radhika/KARBN19350998574		2,052.00		26,15,112.97
16/12/2019	NEFT-THIMMAPPA N T/KARBN19350998537		2,052.00		26,17,164.97

Dr. Thirunavukkarasu

2018-19



GOVERNMENT OF KARNATAKA

Vision Group on Science and Technology

Department of Information Technology, Biotechnology and Science & Technology  
Karnataka Government Secretariat, No.702, 7<sup>th</sup> Floor, 4<sup>th</sup> Stage, M. S. Building, Dr.  
Ambedkar Veedhi, Bangalore-560 001

Phone: 080-2203 2013, E-mail: [visiongroup.st@gmail.com](mailto:visiongroup.st@gmail.com) Website: [www.vgst.in](http://www.vgst.in)

No /VGST/GRD-695 / 2017-18 / 2018-19/495

30-01-2019

To,

The Principal,  
Reva University,  
Rukmani Knowledge Park, Kattigenahalli,  
Yelahanka, Near Border Security Bus Stop,  
Bengaluru - 560 064

Dear Sir,

Subject: Approval for the submission of PART -A for purchase the Equipment. - GRD - 695

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With reference to the approval of GRD - 695 Reva University, Rukmani Knowledge Park, Kattigenahalli, Yelahanka under the scheme RGS/F proposed by Dr. Thirunavukkarasu Department of School of Computer Science and Applications the project titled "Design and Development of Efficient Non-Intrusive Image Forensic Investigation Model Using optimized image Descriptors" was released the grant of Rs 5.00 lakhs for the FY: 2017-18 (Cheque no: 384927, Dt: 15-09-2018).

As submitted the PART - A of GRD-695- by the Grantee Institution requesting for the purchase of Equipment from the grants. The details are as follows,

Non- Recurring Budget estimate under E- Tendering process for the FY: 2017-18.

Sl. NO	Submitted in PART- A under non-recurring (ETP) Budget estimate by Grantee Institution	Amount (Rs)
1	MATLAB 2018b	2,33,640.00
	<b>Total</b>	<b>2,33,640.00</b>

**VASU.M.**  
**DGM Accounts & Finance**  
**REVA UNIVERSITY**  
Yelahanka, Bangalore-64

**Registrar**  
**REVA UNIVERSITY**  
Yelahanka, Bengaluru - 64.

Dr. Thirunavukkarasu  
CSA

HCC

**REVA UNIVERSITY**  
Rukmini Knowledge Park  
Yalahanka, Bangalore-560064  
PAN :AABTR1107Q

**2018-19 VGST/KSTEPS/RGS/F/2017-18/GRD-695/61/ SCA**

Ledger Account

V Thirunavukkarasu , School of CSA  
Design and Development of an Efficient.

1-Apr-2019 to 31-Mar-2020

Page 1

Date	Particulars	Vch Type	Vch No.	Debit	Credit
1-4-2019	Dr <b>Opening Balance</b>				<b>5,00,000.00</b>
3-5-2019	Cr Andhra Bank- VGST GRANTS- A/C NO 145210100060841 Payment 2019-20 Cheque 288043 3-5-2019 1,024.00 Cr <i>Ch. No. : 288043 dt. 3-5-2019 being paid as DD t/w expenses for E tendering process for VGST project from VGST/Grd- 695/2017-18 /18-19/495</i>		148765	1,024.00	
31-3-2020	Cr Research Euipt Matlabsoftware -VGST - CSA DEPT Journal-2019-20 <i>Being purchase of matlab softwre from shree sharavani traders no 1*197458+18% gst from vgst-rgs/grd no 695 - csa dept</i>		43214339	2,33,000.00	
	Cr <b>Closing Balance</b>				<b>5,00,000.00</b>
				2,34,024.00	5,00,000.00
				2,65,976.00	5,00,000.00
				<b>5,00,000.00</b>	<b>5,00,000.00</b>

**VASU.M.**

**DGM Accounts & Finance**  
**REVA UNIVERSITY**  
**Yelahanka, Bangalore-64**

*[Handwritten Signature]*

*[Handwritten Signature]*  
**Registrar**  
**REVA UNIVERSITY**  
**Yelahanka, Bengaluru - 64.**

**REVA UNIVERSITY**  
Rukmini Knowledge Park  
Yalahanka, Bangalore-560064  
PAN : AABTR1107Q

**2018-19 VGST/KSTEPS/RGS/F/2017-18/GRD-695/61/ SCA**

Ledger Account

V Thirunavukkarasu , School of CSA  
Design and Development of an Efficient.

1-Apr-2018 to 31-Mar-2019

Page 1

Date	Particulars	Vch Type	Vch No.	Debit	Credit
1-10-2018	Dr Andhra Bank- VGST GRANTS- A/C NO 145210100060841 Cheque/DD 384927 Ch. No. : 384927 dt. 1-10-2018 Being amt received t/e Research grants -School CSA , Prof.V Thirunavukkarasu . ref no KSTEPS /VGST/RGS/F/2017-18/GRD-695/61/2018 -19 DT 15.9.18	Receipt			5,00,000.00
			vgst		
		1-10-2018	5,00,000.00	Dr	
					5,00,000.00
Cr	<b>Closing Balance</b>			5,00,000.00	
					5,00,000.00
				5,00,000.00	5,00,000.00

**VASU.M.**

DGM Accounts & Finance

**REVA UNIVERSITY**

Yelahanka, Bangalore

*[Handwritten Signature]*

*[Handwritten Signature]*  
**Registrar**  
**REVA UNIVERSITY**  
Yelahanka, Bengaluru - 64.



**REVA UNIVERSITY**  
Rukmini Knowledge Park  
Yalahanka, Bangalore-560064  
PAN : AABTR1107Q  
State Name : Karnataka, Code : 29

**Receipt Voucher**

No. : **vgst**

Dated : **1-Oct-2018**

Particulars	Amount
<b>Account :</b> 2018-19 VGST/KSTEPS/RGS/F/2017-18/GRD-695/61 / SCA	<b>5,00,000.00</b>
<b>Through :</b> Andhra Bank- VGST GRANTS- A/C NO 145210100060841	
<b>On Account of :</b> Ch. No. : 384927 dt. 1-10-2018 Being amt received t/e Research grants -School CSA , Prof.V Thirunavukkarasu . ref no KSTEPS/VGST/RGS/F /2017-18/GRD-695/61/2018-19 DT 15.9.18	
<b>Amount (in words) :</b> Indian Rupees Five Lakh Only	
	<b>RS 5,00,000.00</b>

  
**Registrar**  
**REVA UNIVERSITY**  
Yalahanka, Bengaluru - 64.



Authorised Signatory

  
**VASU.M.**  
**DGM Accounts & Finance**  
**REVA UNIVERSITY**  
Yalahanka, Bangalore-64



## SANCTION LETTER

2018-19

<p>डा० एम.डी.एस. त्यागी संयुक्त निदेशक (अनुसंधान) <b>Dr. M.D.S. Tyagi</b> Joint Director (Research)</p>		<p>राष्ट्रीय मानव अधिकार आयोग मानव अधिकार भवन, सी-ब्लॉक, जीपीओ कम्प्लेक्स, आईएनए, नई दिल्ली-110 023 भारत <b>NATIONAL HUMAN RIGHTS COMMISSION</b> Manav Adhikar Bhawan, C-Block GPO Complex, INA, New Delhi-110 023 India Tel. No. 011-24663220, 24663219</p>
No.7/2/2018-PRP&P	27 <sup>th</sup> July, 2018	
To		
<p>Dr. M.L. Kalicharan Director School of Legal Studies REVA University, Rukmini Knowledge Park, Kattegenahalli Bangalore-560064</p>		
<p><b>Subject : Research Project titled "An Empirical Study on Social Issues and Legal Challenges of Transgender : with special reference to South Indian States" by Dr. M.L. Kalicharan, Director, REVA University, Bangalore, Principal Investigator.</b></p>		
Sir,		
<p>Please refer to the research project titled "An Empirical Study on Social Issues and Legal Challenges of Transgender : with special reference to South Indian States" submitted by you to the Commission. The Commission has approved the project with a budget of Rs. 2,50,000/- (Rupees Two Lakhs Fifty Thousand Only). The Terms of Reference of the project are enclosed. You are requested to kindly convey the Acceptance of the same. You are also requested to open a Savings Bank Account in the name of "REVA BANGALORE-NHRC ACCOUNT" as per para 7.1 of TOR and its particulars may be informed to the Commission to enable us to transfer the first installment of the project.</p>		
Yours faithfully,		
		
<p>(Dr. M.D.S. Tyagi) Joint Director (Research) Tel : 011-24663245</p>		

VASU.M.

DGM Accounts &amp; Finance

फोन (का)/Phone (O) 011-24663245, टेलीफोन (का)/Phone (O) 011-2465139, E-mail : dsr.nhrc@nic.in

REVA UNIVERSITY

Yelahanka, Bengaluru

*Anu*  
Registrar  
REVA UNIVERSITY  
Yelahanka, Bengaluru - 64.




**REVA UNIVERSITY**  
Rukmini Knowledge Park  
Yalahanka, Bangalore-560064  
PAN : AABTR1107Q

**2018-19 National Human Rights Commission-LAW**  
Ledger Account

1-Apr-2018 to 31-Mar-2019

Page 1

Date	Particulars	Vch Type	Vch No.	Debit	Credit
6-10-2018	Dr Cu Karnataka Bank Ltd A/c No. 6662500100817201 Cheque/DD New Ref Fund	Receipt			1,00,000.00
	neft no SBIN118279140218	6-10-2018		1,00,000.00 Dr	
				1,00,000.00 Cr	
	<i>neft no SBIN118279140218/recd from SBI Vikas Sadan ( NHRC) towards Reserach Project titled AN Empirical Study on Social issue and Legal Challenges of Transgender.</i>				
					1,00,000.00
Cr	<b>Closing Balance</b>			1,00,000.00	
				<b>1,00,000.00</b>	<b>1,00,000.00</b>

  
**Registrar**  
**REVA UNIVERSITY**  
Yalahanka, Bengaluru - 64.

  
**VASU.M.**  
**DGM Accounts & Finance**  
**REVA UNIVERSITY**  
Yalahanka, Bangalore-64



GOVERNMENT OF KARNATAKA

# Vision Group on Science and Technology

Department of Information Technology, Biotechnology and Science & Technology  
Karnataka Government Secretariat, No.702, 7<sup>th</sup> Floor, 4<sup>th</sup> Stage, M. S. Building, Dr. Ambedkar Veedhi, Bangalore-560 001  
Phone: 080-2203 2013, E-mail: visiongroup.st@gmail.com Website: www.vgst.in

U. Sashikol.

2018-19

No /VGST/GRD-684/2017-18/2018-19/509

01-02-2019

To,

The Registrar,  
Reva University, Rukmini Knowledge Park,  
Kattigenahalli, Yelahanka, Bengaluru - 560 064.

Dear Sir,

**Subject : Approval for the submission of PART -A for purchase the Equipment. - GRD -684 under the scheme K-FIST (L1).**

\*\*\*

With reference to the approval of GRD-684 Reva University, Rukmini Knowledge Park, Kattigenahalli, Yelahanka, Bengaluru proposed by Dr.G.Seshikala, Department of Electronic Communication Engineering, under the scheme K-Fist L1 the project titled "Neuro-Fuzzy Inference approaches for early detection of Lung Cancer" was released the grant of Rs 10.00 lakhs for 1<sup>st</sup> Installment in the FY: 2017-18 (Cheque no.005989Dt 17/09/2018).

As submitted the PART - A, of GRD-685 by the Grantee Institution requesting for the purchase of Equipment from the 1<sup>st</sup> Installment. The details are as follows.

Non-Recurring Budget Estimate under E- Tendering Process for the FY: 2017-18.

SI NO	Submitted in PART -A under Non -Recurring (ETP) Budget Estimate by Grantee Institution	Amount (Rs)
1	Mat lab software+ Toolboxes	5,97,274.00
2	Lung image data set	2,00,000.00
	<b>Total</b>	<b>7,97,274.00</b>

  
Registrar  
REVA UNIVERSITY  
Yelahanka, Bengaluru - 64.

**VASU.M.**  
Accounts & Finance  
REVA UNIVERSITY  
Yelahanka, Bangalore-64

Recurring Budget Estimate for the FY: 2017-18

SI NO	Submitted in PART -A under Recurring Budget Estimate by Grantee Institution	Amount (Rs)
1	Chemicals	60,000.00
2	Glassware	
3	Plastic ware	
4.	Biological Specimen	



Send copy to  
Dr. Seshikala  
Gur

1

Kavitha  
M. file  
Gur

Dr. G. Seshikala

**V.G.S.T PROPOSAL COVER PAGE  
FOR FY:2017-18**

<b>Scheme: -</b>		
<b>PROGRAMME CO-ORDINATOR DETAILS</b>		
1	Name	Dr. G. Seshikala
2	Educational Qualification and Sex	PhD , Female
3	Department	Electronics and Communication
4	a) Date of birth b) Age as on 31-10-2017	22-10-1965 52 yrs 9 days
5	Type of Institution (As Classified on page-2)	Private University PUIN
6	Email ID	<a href="mailto:seshikala.g@reva.edu.in">seshikala.g@reva.edu.in</a>
7	Mobile /Landline No.	9480400238
8	Postal Address	Professor school of ECE, REVA University, Rukhmini Knowledge Park kattegenahalli, Yalahanka, Bengaluru-64
<b>Title of the project</b>		
<b>“Neuro-Fuzzy Inference Approaches for Early Detection of Lung Cancer”</b>		
Name of the Head of the Institution		Dr. M. Dhanamjaya
Email id and Cell No:		<a href="mailto:registrar@reva.edu.in">registrar@reva.edu.in</a>
Name of the Head of the Department		Dr.R.C.Biradar
Email id and Cell No:		<a href="mailto:rcbiradar@reva.edu.in">rcbiradar@reva.edu.in</a>
<b>Name of the College /Institution</b> <b>REVA University</b>		
Postal Address: <b>REVA University</b> Rukmini Knowledge Park, Kattigenahalli, Yelahanka, Bangalore - 560064		
Phone No. and website+91-80-66226622, +91-80-65687563 / 64 / 65 www.reva.edu.in		
For Official Use <b>VASU.M.</b> <b>DGM Accounts &amp; Finance</b> <b>REVA UNIVERSITY</b> <b>Yelahanka, Bangalore-64</b>		
VGSTREFERNCE NO: GRD NO: <i>gim</i>		

Registrar  
REVA UNIVERSITY  
Yelahanka, Bengaluru - 64.

*Handwritten signature*

	"ANFIS based Multicast QoS routing in MANETs".
2	Dr.S S Manvi received "VidyaRatan Award - 2013" by The Economic for Health and Educational Growth, New Delhi.
3	Dr.S S Manvi received VGST (Vision Group of Science and Technology) KFIST (Karnataka Fund for Infrastructure in Science and Technology) award of Rs. 20.00 lakhs for PG and research lab creation in VLSI, Embedded Systems and Communications, 2012-2013.
4	Dr.S S Manvi Participated in Supreme Engineers Award, Dec 2012, ERIL India Ltd.
5	Dr.S S Manvi Travel grant award from AICTE New Delhi to attend International Conference on Future Computers and Communications (ICFCC), Malaysia, 2009
6	Dr.S S Manvi received AICTE research award of Rs. 9.00 Lakhs for project titled "Design and development of fuzzy based resource allocation routing schemes in wireless mobile networks", 2008
7	Dr.S S Manvi received AICTE research award of Rs. 7.57 Lakhs for project titled "QoS support in mobile networks", 2006.
8	Dr.S S Manvi received Travel grant award from AICTE New Delhi to attend ACM conference on Autonomous Agents and Multiagent Systems (AAMAS), Korea, 2006
9	Dr.S S Manvi Received Grants from AICTE (Rs. 0.6 laks) and CSIR (Rs. 0.20 laks) to conduct national seminar on Recent Trends in Computer Communication Networks, March 15-16, 2005
10	Dr.S S Manvi received Travel grant Award from CSIR (Rs. 0.4 laks) and INSA (Rs. 0.2 laks) in 2003 to attend Inf. Conf., at Kathmandu, Nepal
11	Dr.S S Manvi received AICTE research award of Rs. 15.00 lakhs for project on "Establishing Centre for Electronic Design Automation", 1995.
12	Dr S SManvi, Listed in who is who in the world by marquis publications, USA 2006.
13	Dr S SManvi, Listed as one of the top 20 scientists in the areas of software engineering and multimedia communications in journal published by DRDO in 2010.
14	Dr SManvi, received a travel grant award from AICTE new delhi to attend International conference on Future Computers and Communications(ICFCC),Malaysia, April 2009
15	Dr R C Biradar, Listed in who is who in the world by marquis publications, USA 2011
16	Dr R C Biradar Listed as Top 100 Engineering international biographical centre(IBC) cambridge ,London March 2012.
17	Dr B.P Divakar, received Merit award in services (Team) 2008/09, from Hong kong polytechnic University
18	DrB.P.Divakar U.S patent 7, 781, 987, Aug 24, 2010(Eric Cheng,B P Divakar and D H Wang,"Method and system for automatically controlling power supply to a lamp of a vehicle").
19	Dr.VenkataSivareddy, received Outstanding Vounteer award for IEEE Bangalore Section for the year 2012.
20	DrJegadeeswaran received young scientist award VIFRA-2015,venus international foundations.
21	DrGeetha D , Listed in who is who in the world by marquis publications, USA 2011

**VASU.M.**  
**DGM Accounts & Finance**  
**REVA UNIVERSITY**  
**Yelahanka, Bangalore - 64**

*Reg*  
**Registrar**  
**REVA UNIVERSITY**  
**Yelahanka, Bengaluru - 64.**

*Mu*

**REVA UNIVERSITY**  
Rukmini Knowledge Park  
Yalahanka, Bangalore-560064  
PAN : AABTR1107Q  
State Name : Karnataka, Code : 29

**Receipt Voucher**

No. : **VGST-2018**

Dated : **28-Sep-2018**

Particulars	Amount
<b>Account :</b> 2018-19 VGST/KSTEPS/GRD-684/KFIST(L1)/2018- E&C	<b>10,00,000.00</b>
<b>Through :</b> Andhra Bank- VGST GRANTS- A/C NO 145210100060841	
<b>On Account of :</b> Ch. No. : 005989 dt. 28-9-2018 Being amt received from VGST REF : KSTEPT /VGST/K FIST(L1)2017-18/GRD/78/2018 -19 DT 17.9.18. Dr Seshikal School of EC" Neuro Fuzzy"	
<b>Amount (in words) :</b> Indian Rupees Ten Lakh Only	
	<b>RS 10,00,000.00</b>

Authorised Signatory

Authorozied by :  
Entered by : **swamy**  
Approved by :

**VASU.M.**  
**DGM Accounts & Finance**  
**REVA UNIVERSITY**  
**Yelahanka, Bangalore-64**

  
**Registrar**  
**REVA UNIVERSITY**  
**Yelahanka, Bengaluru - 64.**

**REVA UNIVERSITY**  
Rukmini Knowledge Park  
Yalahanka, Bangalore-560064  
PAN : AABTR1107Q

**2018-19 VGST/KSTEPS/GRD-684/KFIST(L1)/2018- E&C**

Ledger Account


Neuro Fuzzy Inference  
Latter dt 17.9.18

1-Apr-2018 to 31-Mar-2019

Page 1

Date	Particulars	Vch Type	Vch No.	Debit	Credit
28-9-2018	Dr Andhra Bank- VGST GRANTS- A/C NO 145210100060841	Receipt	VGST-2018		10,00,000.00
	Cheque/DD 005989	28-9-2018	10,00,000.00	Dr	
	Ch. No. : 005989 dt. 28-9-2018 Being amt received from VGST REF : KSTEPT/VGST /K FIST(L1)2017-18/GRD/78/2018-19 DT 17.9.18. Dr Seshikal School of EC" Neuro Fuzzy"				
					10,00,000.00
	Cr	<b>Closing Balance</b>		10,00,000.00	
				<b>10,00,000.00</b>	<b>10,00,000.00</b>

  
Registrar  
REVA UNIVERSITY  
Yalahanka, Bengaluru - 64.

  
**VASU.M.**  
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Yalahanka, Bangalore-64



**REVA UNIVERSITY**  
Rukmini Knowledge Park  
Yalahanka, Bangalore-560064  
PAN : AABTR1107Q

**2018-19 VGST/KSTEPS/GRD-684/KFIST(L1)/2018- E&C**

Ledger Account

Neuro Fuzzy Inference

Latter dt 17.9.18

1-Apr-2019 to 30-Sep-2020

Page 1

Date	Particulars	Vch Type	Vch No.	Debit	Credit
1-4-2019	Dr <b>Opening Balance</b>				<b>10,00,000.00</b>
3-5-2019	Cr Andhra Bank- VGST GRANTS- A/C NO 145210100060841 Cheque 288044 Ch. No. : 288044 dt. 3-5-2019 being paid as DD t/w expenses for E tendering process for VGST project from VGST/GRD-684/2017 -18/2018-19/509	Payment 2019-20 3-5-2019	148766	1,024.00	
					1,024.00 Cr
31-3-2020	Cr Research Quipt Matlab Software - VGST - ECE Dept being for purchase of MATLAB software and toolboxes no 2*290000+gst paid from VGST project/grd/684/-ECE dept - bill no 3147	Journal-2019-20	43214340	5,80,000.00	
				5,81,024.00	10,00,000.00
	Cr <b>Closing Balance</b>			4,18,976.00	
				<b>10,00,000.00</b>	<b>10,00,000.00</b>

  
**Registrar**  
**REVA UNIVERSITY**  
Yalahanka, Bengaluru - 64.

  
**VASU.M.**  
**DGM Accounts & Finance**  
**REVA UNIVERSITY**  
Yalahanka, Bangalore-64

UTILISATION CERTIFICATE

2019-20

Certified that amount received from DRDO for Rs. 50,000 (Rupees Fifty thousand Rupees only) sanctioned vide letter No. ERIP/ER/19-20/C/013 dated 01 May 2019 and received for organising the Seminar / Symposium / Conference / Workshop on the subject/ topic International Conference on Advances in Computing and Information Technology (IACIT-2019) during 10<sup>th</sup> & 11<sup>th</sup> May 2019 held at School of C&IT, REVA University has been fully/partly utilised for the purpose for which it was granted.

The unspent balance of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) will be refunded through demand draft in favour of CDA(R&D), New Delhi.

(Signature & Name of the Chairman/Treasure)

(Signature & Name of the Organising Secretary)

Seal

**VASU.M.**  
DGM Accounts & Finance Seal  
REVA UNIVERSITY  
Yelahanka, Bangalore-64

*[Handwritten Signature]*

*[Handwritten Signature]*  
Registrar  
REVA UNIVERSITY  
Yelahanka, Bengaluru - 64.



Directorate of Extramural Research and  
Intellectual Property Rights (ER&IPR)  
IIIrd Floor, Room Nos 348 & 349  
DRDO Bhawan, Rajaji Marg, DHQ PO  
New Delhi – 110 011  
erip\_conf@hqr.drdo.in

To

21st May 2019

D. Sunilkumar S. Manvi  
Director,  
School of Computing and Information Technology,  
Reva University, Bengaluru- 560 064  
Karnataka

Sub : Payment regarding "International Conference on Advances in Computing & Information Technology (IACIT-2019)" on 10-11 May 2019 at REVA University, Bangalore, Karnataka

1. An amount of Rs 50,000/- (Rupees Fifty Thousand only) has been transferred by PCDA (R&D), New Delhi in favour of "REVA UNIVERSITY- VC" through ECS mode on account of the subject conference.
2. उपर्युक्त विषय पर 50,000/- (Rupees Fifty Thousand only) की धनराशि ईसीएस मोड के द्वारा "REVA UNIVERSITY- VC" के पक्ष में हस्तांतरित की गई है।
3. The under mentioned documents are to be forwarded (within 60 days after completion of events) to this office as per Instructions and conditions of the grants :-
  - (a) An official Receipt of Rs. 50,000/- duly signed immediately for our records.
  - (b) One copy of the proceedings of the event.
  - (c) Utilisation Certificate duly signed. (Format enclosed) along with statement of Expenditure (Audited).
  - (d) Details of Participants from DRDO (if any)
4. अनुदान के अनुदेशों तथा शर्तों के अनुसार निम्नलिखित दस्तावेजों को भी इस कार्यालय को अग्रेषित किया जाए:-

- क) विधिवत हस्ताक्षरित 50,000/- रुपये की रशीद ।
- ख) इस कार्यक्रम की कार्यवाहियों की एक प्रति ।
- ग) विधिवत हस्ताक्षरित उपयोगिता प्रमाणपत्र दो प्रतियों में (फॉर्मेट संलग्न)
- ख) DRDO प्रतिभागियों की सूची (संलग्न)

Registrar  
REVA UNIVERSITY  
Yelahanka, Bengaluru - 64.

DGM Accounts & Finance  
REVA UNIVERSITY  
Yelahanka, Bangalore

Encls: As above

संलग्नक: यथोपरि

(MM Vashishtha/ एम एम वशिष्ठ)

Asstt. Director/ सहायक निदेशक

चेक स्लिप  
CHEQUE SLIPरक्षा लेखा विभाग  
DEFENCE ACCOUNTS DEPARTMENTनेफ्ट  
NEFT

सेक्शन Section 2006 डी.वी.सं. DV No 3336 / 05/2019  
कार्यालय Office of the PCDA (R&D) NEW DELHI  
चेक जारी करने की तारीख Date of issue of cheque : 07/05/2019  
अभिलेख अनुभाग की डाक सं. Record Section Dak Id : R9785MSB90  
के पूर्व अदेय NPB Date :  
संदर्भ संख्या Ref No : ERIP/ER/19/20/C/013; Bill No : ERIP/ER/19/20/C/013 Date 01/05/2019

मुगतान का विवरण कोष आदाता लोक निधि खाता सं.	In Payment of Treasury Favouring/Pay to For Credit to Public Fund A/c. #	MISC EXPENDITURE submitted vide bill No ...ERIP/ER/19/20/C/013/bill dated 01/05/2019 REVA UNIVERSITY- VC KARNATAKA BANK LTD, REVA GROUP OF EDUCATIONAL, YELLAHANKA/KARB0000666 6662000100000301	राशि (रुपयों में) Amount (in Rs.)
कुल राशि (शब्दों में)	Total in Words :	Fifty Thousand only	Total : 50000/-

कृते र.ले.नि.  
For CDAआधक्षर  
Initialsहस्ताक्षर  
Signatureचेक पर हस्ताक्षर करने वाले अधिकारी के हस्ताक्षर  
(Signature of the Officer  
signing the Cheque)अधीक्षक, ले.प. अनु.  
(Supdt., Audit Section)प्रभारी अधिकारी, ले.प. अनु.  
(Officer, I/c., Audit Section)

सेवा में

REVA UNIVERSITY- VC  
REVA UNIVERSITY  
EXT. BRANCH

BANGALORE

प्रतिलिपि सेवा में Copy To :  
ERIP & ER  
DRDO HQ,VASU.M.  
DGM Accounts & Finance  
REVA UNIVERSITY  
Yelahanka, Bangalore-64

, NEW DELHI -

PCDA (R&amp;D) NEW DELHI

मुगतान की तारीख

Paid on :

चेक संख्या

Cheque No. 78508051901

Invoice No: ERIP/ER/19/20/C/013 Invoice Date: 2019-05-01  
Nature of Expenditure: MISC EXPENDITURERegistrar  
REVA UNIVERSITY  
Yelahanka, Bengaluru - 64.

9/5

Receipt-2019-20 Voucher

No. : 6598

Dated : 9-May-2019

Particulars	Amount
Account :	
PCDA R& D NEW DELHI	50,000.00
New Ref Grant 50,000.00 Cr	
Through :	
Cu Kamataka Bank A/c No 6662000100000301	
On Account of :	
NEft no SBI C600093765205/ recd from PCDA (R&D) new Delhi towards Grant for Misc Expenditure Vide Bill no. ERIP/ER19/20/C/013 /dt.01.05.2019	
Amount (in words) :	
Indian Rupees Fifty Thousand Only	
	<b>RS 50,000.00</b>

Authorozied by :  
Entered by : **srinivas**  
Approved by :



*VASU.M.*

*Srinivas*  
Registrar  
REVA UNIVERSITY  
Yalahanka, Bengaluru - 64.

**VASU.M.**  
DGM Accounts & Finance  
REVA UNIVERSITY  
Yalahanka, Bangalore-64



Dr. H. Hanne Gowda  
Special Secretary (Technical),  
Dept. of IT, BT and S&T, GoK/  
Managing Director, KSTePS

2019-20

No. KSTePS/VGST-K-FIST L1/2018-19/GRD NO.788/315

Date: 17.07.2019

Dear Sir/Madam,

**Sub:** Intimation of selection of the project under the VGST scheme of K-FIST L1 – reg.

Greetings from the Department of Science and Technology, GoK & KSTePS. We are pleased to inform you that the project titled "Development of a Prediction model to identify At-Risk students using heart rate data" submitted under the VGST scheme of K-FIST L1 for the financial year 2018-'19 has been approved by the Government based on the recommendations of Vision Group on Science and Technology under the Chairmanship of Bharat Ratna Prof. CNR Rao, Honorary President, JNCASR.

The total project grant award for a period of 2 years is Rs. 20.00 lakh, which will be released annually @ Rs. 10.00 lakh based on the progress of work. You are requested to take an immediate action to initiate the project at the earliest and to be completed within 2 years after receiving the grant of 1<sup>st</sup> installment from our office.

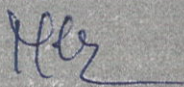
The grant will be paid to the Head of the institution, under whose supervision the Principal Investigator shall be responsible for completion of the stated objectives of the project. The Principal Investigator through the Institution Head shall have to submit the progress report in soft copy once in 6 months without fail. The grants shall be used only for the purposes described in the grant application by following due procedures of KTPP Act. Any deviation from the scheduled plan must have a prior approval from the VGST.

Future release of grants will be based on satisfactory project performance and review. The funding agency has the right to terminate the project, if it is found to be not satisfactorily pursuing and fulfilling the stated project goals and objectives. The whole amount sanctioned or any unspent balance must be returned back to the funding agency within 60 days following the final report of the project. Any publications or other dissemination arising from research supported by VGST grants should be acknowledged.

**VASU.M.**  
DGM Accounts & Finance  
REVA UNIVERSITY  
Yelahanka, Bangalore-64

...2

  
Registrar  
REVA UNIVERSITY  
Yelahanka, Bengaluru - 64.



**REVA UNIVERSITY**  
Rukmini Knowledge Park  
Yalahanka, Bangalore-560064  
PAN : AABTR1107Q  
State Name : Karnataka, Code : 29

**Receipt-2019-20 Voucher**

No. : 41496

Dated : 12-Dec-2019

Particulars	Amount
<b>Account :</b> 2019-20 VGST/KSTEPS/GRD-788/73 /2019-20/272/1 SCA	10,00,000.00
<b>Through :</b> Cu Karnataka Bank A/c No 6662000100000901	
<b>On Account of :</b> RTGS-KARNATAKA SCIENCE AND TECH -SBINH19346135786 towards fund Received	
<b>Amount (in words) :</b> Indian Rupees Ten Lakh Only	
	<b>RS 10,00,000.00</b>

Authorised Signatory

Authorozied by :  
Entered by : srinivas  
Approved by :

**VASU.M.**  
DGM Accounts & Finance  
REVA UNIVERSITY  
Yalahanka, Bangalore-560064

  
Registrar  
REVA UNIVERSITY  
Yalahanka, Bengaluru - 64.

**REVA UNIVERSITY**  
Rukmini Knowledge Park  
Yalahanka, Bangalore-560064  
PAN :AABTR1107Q

**2019-20 VGST/KSTEPS/GRD-788/73/2019-20/272/1.SCA**

Ledger Account

DR S SENTHIL ,SCHOOL of CSA

1-Apr-2019 to 30-Sep-2020

Page 1

Date	Particulars	Vch Type	Vch No.	Debit	Credit
12-12-2019	Dr Cu Karnataka Bank A/c No 6662000100000901 Cheque/DD New Ref Fund RTGS-KARNATAKA SCIENCE AND TECH -SBINH19346135786 towards fund Received	Receipt-2019-20 12-12-2019	41496	10,00,000.00	10,00,000.00
24-1-2020	Cr Cu Karnataka Bank A/c No 6662000100000901 Cheque Ch. No. : 810586 dt. 24-1-2020 being paid to Vision Group of Science and Technology tw activation of E - Tendering process for research project titled " Development of a prediction model to identify At-Risk students using hear rate data".	Payment 2019-20 24-1-2020	43212648	1,000.00	
				1,000.00	10,00,000.00
Cr	<b>Closing Balance</b>			9,99,000.00	
				<b>10,00,000.00</b>	<b>10,00,000.00</b>

*(Handwritten Signature)*

**VASU.M.**  
DGM Accounts & Finance  
REVA UNIVERSITY  
Yelahanka, Bangalore

*(Handwritten Signature)*  
Registrar  
REVA UNIVERSITY  
Yelahanka, Bengaluru - 64.





# ಕರ್ನಾಟಕ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಪ್ರೋತ್ಸಾಹಕ ಸೊಸೈಟಿ

ಮಾಹಿತಿ ತಂತ್ರಜ್ಞಾನ, ಜೈವಿಕ ತಂತ್ರಜ್ಞಾನ ಹಾಗೂ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಇಲಾಖೆ, ಕರ್ನಾಟಕ ಸರ್ಕಾರ  
'ವಿಜ್ಞಾನ ಭವನ' ನಂ: 24/2, 3ನೇ ಮಹಡಿ, 21ನೇ ಮುಖ್ಯ ರಸ್ತೆ, ಬನಶಂಕರಿ 2ನೇ ಹಂತ, ಬೆಂಗಳೂರು-560 070  
ದೂರವಾಣಿ/ಫ್ಯಾಕ್ಸ್: 080-26711166 /26711160 ಇ-ಮೇಲ್: ksteps.dst@gmail.com

ಡಾ. ಹೆಚ್. ಹೊನ್ನೇಗೌಡ

ಸರ್ಕಾರದ ವಿಶೇಷ ಕಾರ್ಯದರ್ಶಿ (ತಾಂತ್ರಿಕ), ವಿತಂಇ/

ವ್ಯವಸ್ಥಾಪಕ ನಿರ್ದೇಶಕರು, ಕೆಸ್ವಿಪ್ಸ್

ನಂ. KSTePS/VGST/K-FIST(L1)/2018-19/GRD-788/73/2019-20/272/11 ದಿನಾಂಕ: 27.12.2019

ಮಾನ್ಯರೇ,

ವಿಷಯ: 2018-19ನೇ ಸಾಲಿನ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ದಾರ್ಶನಿಕ ಸಮೂಹದ K-FIST (L1)  
ಯೋಜನೆಯಡಿಯಲ್ಲಿ ಮೊದಲನೇ ಕಂತಿನ ಅನುದಾನ ಬಿಡುಗಡೆ ಮಾಡಿರುವ ಬಗ್ಗೆ.


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ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಇಲಾಖೆಯು, ಖ್ಯಾತ ವಿಜ್ಞಾನಿ ಭಾರತರತ್ನ ಪ್ರೊಫೆಸರ್ ಸಿ.ಎನ್.ಆರ್. ರಾವ್, F.R.S. ರವರ ಅಧ್ಯಕ್ಷತೆಯಲ್ಲಿ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ದಾರ್ಶನಿಕ ಸಮೂಹ (ವಿತಂದಾಸ) ವನ್ನು 2008ರಲ್ಲಿ ಸ್ಥಾಪಿಸಿದ್ದು, ಈ ಯೋಜನೆಯಡಿ ಹಲವಾರು ವೈಜ್ಞಾನಿಕ ಕಾರ್ಯಕ್ರಮಗಳನ್ನು ಕಳೆದ 11 ವರ್ಷಗಳಿಂದ ರಾಜ್ಯಾದ್ಯಂತ ಯಶಸ್ವಿಯಾಗಿ ಅನುಷ್ಠಾನಗೊಳಿಸಿಕೊಂಡು ಬರುತ್ತಿರುವುದು ಸರಿಯಷ್ಟೆ. 2018-19ನೇ ಸಾಲಿನಲ್ಲಿ ತಮ್ಮ ಸಂಸ್ಥೆಯಿಂದ ಸಲ್ಲಿಸಿದ ಪ್ರಸ್ತಾವನೆಯಾದ "Development of a Prediction model to identify At-Risk students using heart rate data" ನ್ನು ವಿತಂದಾಸದ ಪ್ರಮುಖ ಕಾರ್ಯಕ್ರಮವಾದ **Karnataka Fund for Infrastructure Strengthening in Science and Technology (K-FIST L1)** ಅಡಿಯಲ್ಲಿ ದಾರ್ಶನಿಕ ಸಮೂಹವು ಆಯ್ಕೆ ಮಾಡಿ, ಸರ್ಕಾರ ಆದೇಶ ನೀಡಿರುವುದು ತಮಗೆ ತಿಳಿದ ವಿಷಯವಾಗಿದೆ.

ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಇಲಾಖೆಯ ಅಂಗ ಸಂಸ್ಥೆಯಾದ ಕರ್ನಾಟಕ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಪ್ರೋತ್ಸಾಹಕ ಸೊಸೈಟಿ (ಕೆಸ್ವಿಪ್ಸ್) ಯನ್ನು 2016-17ನೇ ಸಾಲಿನಿಂದ ದಾರ್ಶನಿಕ ಸಮೂಹದ ಕಾರ್ಯಕ್ರಮಗಳ ಉಸ್ತುವಾರಿ ಸಂಸ್ಥೆಯಾಗಿ ನೇಮಿಸಲಾಗಿದೆ. ಆದುದರಿಂದ, ತಮ್ಮ ಸಂಸ್ಥೆಯಿಂದ ಆಯ್ಕೆಗೊಂಡ ಪ್ರಸ್ತಾವನೆಗೆ ಮೊದಲನೇ ಕಂತಾಗಿ ರೂ. 10.00 ಲಕ್ಷಗಳ ಅನುದಾನವನ್ನು ತಮ್ಮ ಸಂಸ್ಥೆಗೆ ದಿನಾಂಕ: 12.12.2019 ರಂದು ಕೆಸ್ವಿಪ್ಸ್‌ನಿಂದ RTGS ಮೂಲಕ (UTR No. SBINR52019121200135786) Registrar, Reva University, Bengaluru ಹೆಸರಿನ ಖಾತೆಗೆ ಜಮಾ ಮಾಡಲಾಗಿರುತ್ತದೆ. ಅದರಂತೆ, ತಾವು ಅನುದಾನ ಸ್ವೀಕರಿಸಿರುವುದಕ್ಕೆ ಸ್ವೀಕೃತಿ ರಶೀದಿ (Acknowledgement) ಯನ್ನು ಕೆಸ್ವಿಪ್ಸ್ ಸಂಸ್ಥೆಗೆ ಕಳುಹಿಸುವುದು.

ಈ ಸಂಬಂಧ, ತಮ್ಮ ಸಂಸ್ಥೆಗೆ ಬಿಡುಗಡೆ ಮಾಡಿರುವ ಅನುದಾನವನ್ನು ಈ ಕೆಳಕಂಡ ಷರತ್ತು ಮತ್ತು ನಿಬಂಧನೆಗಳನ್ವಯ ಉದ್ದೇಶಿತ ಯೋಜನೆಗೆ ಮಾತ್ರ ಬಳಸಿಕೊಂಡು ಅನುಷ್ಠಾನಗೊಳಿಸುವುದು.

  
Registrar  
REVA UNIVERSITY  
Yelahanka, Bengaluru - 64.

  
DGM Accounts & Finance  
REVA UNIVERSITY  
Yelahanka, Bangalore-64 ..2

**ಷರತ್ತು ಮತ್ತು ನಿಬಂಧನೆಗಳು:**

- 1) ಸದರಿ ಪತ್ರದೊಂದಿಗೆ ಲಗತ್ತಿಸಿರುವ ನಮೂನೆಯಲ್ಲರುವಂತೆ ಪ್ರಾಯೋಕತ್ವದ ಸಂಸ್ಥೆ/ ಇಲಾಖೆಯ ಹೆಸರನ್ನು ಕಡ್ಡಾಯವಾಗಿ ತಮ್ಮ ಸಂಸ್ಥೆಗಳಲ್ಲಿ ಸ್ಥಾಪಿಸಲಾಗಿರುವ ವಿತಂದಾಸದ ಸಂಶೋಧನಾ/ಬೋಧನಾ ಕೇಂದ್ರಗಳಲ್ಲಿ ಕಡ್ಡಾಯವಾಗಿ ಬ್ಯಾನರ್/ಬೋರ್ಡ್ ಅನ್ನು ಅಳವಡಿಸುವುದು.
- 2) ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ದಾರ್ಶನಿಕ ಸಮೂಹವು ವಿವಿಧ ಶೀರ್ಷಿಕೆಗಳಿಗೆ ಅನುಗುಣವಾಗಿ ಅನುಮೋದಿಸಿರುವಂತೆ ಕರ್ನಾಟಕ ಸಾರ್ವಜನಿಕ ಸಂಗ್ರಹಣೆಯಲ್ಲಿ ಪಾರದರ್ಶಕತೆ ಅಧಿನಿಯಮ 1999ರ (KTPP ACT) ನಿಯಮಾನುಸಾರ ವೆಚ್ಚ ಮಾಡುವುದು.
- 3) ಸದರಿ ಕಾರ್ಯಕ್ರಮದ ಅನುಷ್ಠಾನಕ್ಕೆ ಬಿಡುಗಡೆ ಮಾಡುತ್ತಿರುವ ಮೊದಲನೇ ಕಂತಿನ ಅನುದಾನವನ್ನು ರಾಷ್ಟ್ರೀಕೃತ ಬ್ಯಾಂಕ್‌ನಲ್ಲಿ ಉಳಿತಾಯ ಖಾತೆಯಲ್ಲಿಟ್ಟು ಅಗತ್ಯಕ್ಕೆ ಅನುಗುಣವಾಗಿ ಅನುದಾನವನ್ನು ಬಳಸುವುದು ಹಾಗೂ ಸದರಿ ಮೊತ್ತಕ್ಕೆ ಬ್ಯಾಂಕ್‌ನಿಂದ ಬಂದಂತಹ ಬಡ್ಡಿ ಮೊತ್ತವನ್ನು ವಿತಂದಾಸದ ಕಾರ್ಯಕ್ರಮಗಳ ನಿಯಮಗಳ ಕ್ರ. ಸಂ. 16 ರನ್ವಯ ಫಲಾನುಭವಿ ಸಂಸ್ಥೆಯು Financial Status Proforma (FSP) ನಲ್ಲಿ ಸಲ್ಲಿಸಿ, ಕೆಸ್ವೆಪ್ಸ್/ವಿತಂದಾಸದ ಪೂರ್ವ ಅನುಮತಿ ಪಡೆದು ಉದ್ದೇಶಿತ ಕಾರ್ಯಕ್ರಮಕ್ಕೆ ಬಿಡುಗಡೆ ಮಾಡಲಾಗುವ ಮುಂದಿನ ಕಂತುಗಳ ಅನುದಾನದ ಜೊತೆ ಸೇರಿಸಿಕೊಂಡು ಬಳಸುವುದು.
- 4) ಪ್ರತಿ 6 ತಿಂಗಳಿಗೊಮ್ಮೆ ಕಡ್ಡಾಯವಾಗಿ ಈ ಯೋಜನೆಯ ಪ್ರಗತಿಯ ವರದಿಯನ್ನು ಸಲ್ಲಿಸುವುದು.
- 5) ಸದರಿ ಅನುದಾನ ಬಿಡುಗಡೆಯಾದ ದಿನದಿಂದ ಒಂದು ವರ್ಷದ ಕಾಲಮಿತಿಯೊಳಗೆ ಅನುದಾನವನ್ನು ಬಳಸಿಕೊಂಡು ಉದ್ದೇಶಿತ ಕಾರ್ಯಕ್ರಮವನ್ನು ಅನುಷ್ಠಾನಗೊಳಿಸುವುದು.
- 6) ಬಿಡುಗಡೆಯಾದ ಅನುದಾನವನ್ನು ಬಳಸಿಕೊಂಡ ನಂತರ ನೋಂದಾಯಿತ ಲೆಕ್ಕಪರಿಶೋಧಕರಿಂದ ಆಡಿಟ್ ಮಾಡಿಸಿ, ಸದರಿ ಪತ್ರದೊಂದಿಗೆ ಲಗತ್ತಿಸಿರುವ ನಮೂನೆ (Format) ಯಲ್ಲಿ ಉಪಯೋಗತಾ ಪ್ರಮಾಣಪತ್ರವನ್ನು (ದ್ವಿಪ್ರತಿಯಲ್ಲಿ) ಮತ್ತು ಕಾರ್ಯಕ್ರಮದ ವರದಿಯನ್ನು ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ದಾರ್ಶನಿಕ ಸಮೂಹ ವಿಭಾಗಕ್ಕೆ ಸಲ್ಲಿಸುವುದು.
- 7) ಯೋಜನೆಗೆ ಸಂಬಂಧಪಟ್ಟ ಎಲ್ಲಾ ಲೆಕ್ಕ ಪತ್ರಗಳನ್ನು ಸಂರಕ್ಷಿಸಿಡುವುದು ಹಾಗೂ ಸರ್ಕಾರ/ಕೆಸ್ವೆಪ್ಸ್ ಸಂಸ್ಥೆಯು ತಪಾಸಣೆ ಹಾಗೂ ಮೌಲ್ಯಮಾಪನಕ್ಕಾಗಿ ಕೋರಿದ ದಾಖಲೆಗಳನ್ನು ಒದಗಿಸುವುದು. ಅಲ್ಲದೆ, ಈ ಯೋಜನೆ ಅನುಷ್ಠಾನಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ಪ್ರತ್ಯೇಕವಾದ ದಾಖಲೆ ಪುಸ್ತಕವನ್ನು ಸಹ ನಿರ್ವಹಿಸುವುದು.


  
Registrar  
REVA UNIVERSITY  
Yelahanka, Bengaluru - 64.

  
VASU.M.  
DGM Accounts & Finance  
REVA UNIVERSITY  
Yelahanka, Bangalore

- 8) ಕೆಸ್ವೆಪ್ಸ್/ವಿತಂದಾಸದ ಅಧಿಕಾರಿಗಳಿಂದ ಕಾರ್ಯಕ್ರಮದ ಅನುಷ್ಠಾನ ಮತ್ತು ಪ್ರಗತಿಯ ಬಗ್ಗೆ ಭೇಟಿ ನೀಡಿ ಪರಿಶೀಲಿಸಲಾಗುವುದು.
- 9) ಅಲ್ಲದೆ, ಈ ಯೋಜನೆಯ ಅನುಷ್ಠಾನಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ಪ್ರತ್ಯೇಕವಾದ ದಾಖಲೆ ಪುಸ್ತಕವನ್ನು ಸಹ ನಿರ್ವಹಿಸುವುದು.

ವಂದನೆಗಳೊಂದಿಗೆ,

ತಮ್ಮ ವಿಶ್ವಾಸಿ,

  
ವ್ಯವಸ್ಥಾಪಕ ನಿರ್ದೇಶಕರು


ಇವರಿಗೆ,

The Registrar  
Reva University  
Rukmini Knowledge Park  
Kattigenahalli, Yelahanka  
Bengaluru - 560 064

ಪ್ರತಿಗಳು:

1. Dr. S. Senthil, Professor & Director, Department of School of Computer Science and Applications, Reva University, Rukmini Knowledge Park, Kattigenahalli Yelahanka, Bengaluru - 560 064.
2. ಡಾ|| ಎಸ್. ಜಿ. ಶ್ರೀಕಂಠೇಶ್ವರ ಸ್ವಾಮಿ, ಸಮಾಲೋಚಕರು, ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ದಾರ್ಶನಿಕ ಸಮೂಹ, 7ನೇ ಮಹಡಿ, 4ನೇ ಹಂತ, ಬಹುಮಹಡಿ ಕಟ್ಟಡ, ಬೆಂಗಳೂರು -01 ಇವರ ಅವಗಾಹನೆಗೆ ಮತ್ತು ಸೂಕ್ತ ಕ್ರಮಕ್ಕಾಗಿ

  
Registrar  
REVA UNIVERSITY  
Yelahanka, Bengaluru - 64.

  
VASU.M.  
DGM Accounts & Finance  
REVA UNIVERSITY  
Yelahanka, Bangalore-64

UTILIZATION CERTIFICATE

Program Name :

Project Title :

Sl. No.	Details	Amount
1	Previous year Balance (Opening Balance (OB), If any )	
2	Grants Received (Cheque No. & Date)	
3	Bank Interest (If any)	
4	Total Available Grants (1+2+3)	
5	Actual Grants Utilized (Statement of Expenditure Enclosed)	
6	Unspent Balance (4-5)	

Certified that Rs. \_\_\_\_\_ of grant-in-aid under (Program Name) was released by Vision Group on Science and Technology (VGST) in favour of \_\_\_\_\_ vide letter No. \_\_\_\_\_ as stated above during the year 20 ...-..... The above grant was sanctioned towards Project Title " \_\_\_\_\_ ". Out of sanctioned grants, a sum of Rs. \_\_\_\_\_ has been utilized for the purpose of which it was sanctioned and Rs. \_\_\_\_\_ remained unutilized at end of the financial year 20...-..., to be carried forward (if the program is continued) or to be refunded (if the program is completed) whichever the case is applicable. Expenditure incurred for the purpose for which the grant was sanctioned is verified with the vouchers produced before me.

Certified that I have satisfied myself that the conditions on which the grant-in-aid was sanctioned have been fulfilled and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Signature with Seal

Chartered Accountant

**VASU.M.****DGM Accounts & Finance (F.N. & M.No)****REVA UNIVERSITY**

Yelahanka, Bangalore

Signature and Address of  
the Project Coordinator

Signature of the Head of Institution and Seal

Registrar

**REVA UNIVERSITY**  
Yelahanka, Bengaluru - 64.

Dr. Hemant

2019-20



## KARNATAKA COUNCIL FOR TECHNOLOGICAL UPGRADATION

### ಕರ್ನಾಟಕ ತಾಂತ್ರಿಕ ಉನ್ನತೀಕರಣ ಪರಿಷತ್ತು

(A Joint Venture of Government of India & Government of Karnataka)  
2<sup>nd</sup> FLOOR, VITC BUILDING, KASTURBA ROAD, BANGALORE - 560 001  
2ನೇ ಮಹಡಿ, ವಿ.ಐ.ಟಿ.ಸಿ., ಕಟ್ಟಡ, ಕಸ್ತೂರಬಾ ರಸ್ತೆ, ಬೆಂಗಳೂರು - 560 001

Ph : 080-2286 6348 / 2286 0772 Fax: 080-22866607 E-mail: md.kctu@gmail.com / md-kctu-ka@nic.in.

Website : [www.kctu.kar.nic.in](http://www.kctu.kar.nic.in)

No. KCTU/R&D/REVA/MR/20/2018-19

Date: 15-09-2018

### Sanction Order

Sub: Sanction of Financial Assistance to M/s. REVA University, Rukmini Knowledge Park, Kattigenahalli, Yelahanka, Bangalore under R&D Scheme.

Ref: 1. Go No. CI/151/SPI/2013(P1), Bangalore, dated 20-09-2013  
2. Application of M/s. REVA University, Rukmini Knowledge Park, Kattigenahalli, Yelahanka, Bangalore for Incentives for Setting up of R&D Centers received from Institution on 21.02.2018.

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KCTU is pleased to inform you that 8<sup>th</sup> State Level Committee (SLC) for sanction of Incentives held on 27-08-2018 has sanctioned Financial Assistance of Rs . 37.835 lakhs (Rs Thirty Seven lakhs Eighty Three thousand Five hundred only) to M/s. REVA University, Rukmini Knowledge Park, Kattigenahalli, Yelahanka, Bangalore for setting up of "Development of Cost Effective Magnetorheological (MR) Fluid and MR damper for two wheeler and Four Wheeler automobiles to Improve Ride Comfort and Stability" R & D Center on the basis of investment to be made on Machinery and Equipments in your institution located at M/s. REVA University, Rukmini Knowledge Park, Kattigenahalli, Yelahanka, Bangalore as per Government Order No. CI/151/SPI/2013(P1), Bangalore, dated 20-09-2013. The Committee noted the total project cost of Rs. 75.67 lakhs and accepted the investment on Machinery and equipments of Rs 75.67 lakhs and sanctioned Rs. 37.835 lakhs being 50% of the same.

You have to execute an undertaking in the prescribed format enclosed to this sanction order. The original undertaking should be on Stamp paper of Rs.200/-. The agreement should be executed by the Head of the Institution. The sanctioned incentive will be released through NEFT/RTGS as per the seniority maintained in KCTU office.

### The following procedures to be followed in implementing the R&D scheme assisted by Government of Karnataka.

1. The R&D Institutions to commence the implementation of the R&D Projects without waiting for the GoK release of financial assistance, on receipt of the Sanction Order.
2. The sanctioned financial assistance to the R&D Centers will be released in 3 installments in the ratio of 50%:40%:10%. This assistance has to be utilized only for the purpose of which it was sanctioned.
3. The Institute has to submit the specific monthly implementation plan of the R&D activity. Accordingly the institution has to submit quarterly progress report for each quarter (for the quarters ending on June, September, December & March).

*[Signature]*  
Registrar  
REVA UNIVERSITY  
Yelahanka, Bengaluru - 64.

*[Signature]*  
VASU.M.  
DGM Accounts & Finance  
REVA UNIVERSITY  
Yelahanka, Bangalore-64

**REVA UNIVERSITY**  
Rukmini Knowledge Park  
Yalahanka, Bangalore-560064  
PAN : AABTR1107Q

**2018-19 KCTU/R&D/MR/20/2018-19 ( ME ) Hemanth**  
Ledger Account

Project Cost 75.67 Lakhs  
Govt Order No CI/151/SPI/2013(P1)  
Institute Contribution Rs 37.835 Lakhs

1-Apr-2019 to 30-Sep-2020

Page 1

Date	Particulars	Vch Type	Vch No.	Debit	Credit
1-4-2019	Cr Opening Balance			37,835.00	
29-6-2020	Dr Cu Karnataka Bank A/c No 6662000100000901 Cheque/DD RTGS-KCTU RESEARCH AND DEVELOPM -CORPH20181697859 being amount recd towards KCTU Mechanical project Fund	Receipt-2019-20 29-6-2020	4467	18,21,972.00	18,21,972.00
				37,835.00	18,21,972.00
				17,84,137.00	
	Cr Closing Balance				18,21,972.00



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**Application form for support to Research and Development Center for Development of Cost Effective Magneto-Rheological (MR) Fluid and MR Damper (Semi-active suspension system) for two wheeler and Four Wheeler Automobiles**

1.	Name and Address of the Institution (To give full Postal address with pin code)	REVA University Rukmini Knowledge Park, Kattigenahalli, Yelahanka, Bangalore - 560064
2.	Constitution of the institution (enclose a copy Of Registration issued by the component authority)	Government notification and status are enclosed
3.	Registration No and Date	No. 770 dated 16.05.2013
4.	Details of any other approvals/registration/ Accreditation with Government of India/Govt Of Karnataka or any other agency.	Accredited by University of Grant commission (UGC)
5.	<b>Name and contact details of the contact person</b>  <b>Name of the Chief Promoter</b> Designation Landline phone No Cell No Email Id <b>Principal investigator:</b>  <b>Co-Principal investigators:</b>	<b>Dr. M. Dhanamjaya</b> Registrar - REVA University 080-66226622 +91 99451 85445 <a href="mailto:registrar@reva.edu.in">registrar@reva.edu.in</a> <b>Dr. Hemanth K.</b> Associate professor School of Mechanical Engineering REVA University <a href="mailto:hemanth.k@reva.edu.in">hemanth.k@reva.edu.in</a> <b>Dr. Devaraj S.</b> Professor School of Mechanical Engineering REVA University <a href="mailto:devaraj.s@reva.edu.in">devaraj.s@reva.edu.in</a>

  
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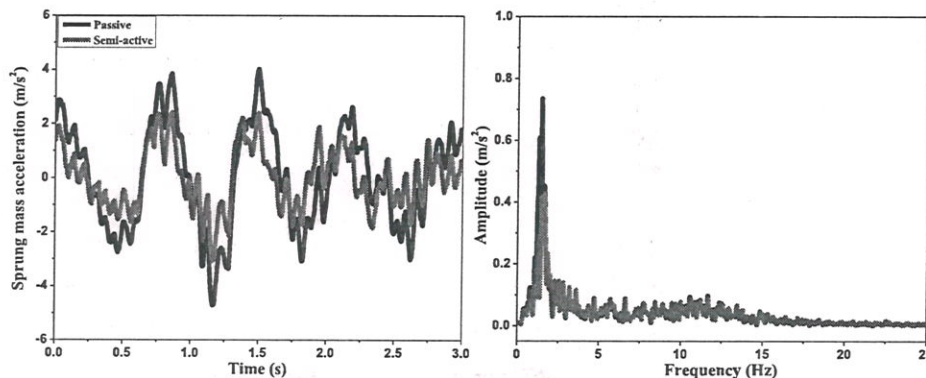
MR fluids are far less sensitive to contamination and extremes in temperature ( $150^{\circ}\text{C}$  and higher).

Currently MR fluid are not available in Indian market, it is supplied by UK based Lord corporation Ltd. and UAE based Arus MR Tech Ltd. but presently none of the Indian companies making MR fluid or MR based products. The first attempt to commercialize the MR damper application in automobiles was made by joint effort of General Motors (GM) and Delphi automotive systems. MR damper systems benefits such as variable damping and ability to adapt to changing road conditions has attracted many of the vehicle manufacturers. MR based suspension systems have been developed for variety of luxury/highly expensive cars such as Audi, Ferrari and land rovers.

Development of low cost MR damper for automobiles running on Indian roads is challenging task. Though many investigations are reported in the area of MR devices, above challenges prevents Indian automotive industries to implement this technology in existing vehicles. Cost involved in these commercial MR fluid dampers are the barrier for its usage in two wheelers, budget cars, trucks, buses and off road vehicles running on Indian roads. The solutions to all these problems will overcome by low cost MR fluid and MR damper.

7. **Details of preliminary investigation done if any of the project**

Studied the ride comfort and stability analysis of a passenger vehicle having MR fluid damper based suspensions system. Ride comfort and stability responses are evaluated under Indian average road condition. The ride comfort and road holding analysis of two degree of freedom quarter car model has been carried out with passive and semi-active (MR damper) suspension system. In semi-active suspension system, MR damper has been modelled by using both non-parametric approach and Bouc-Wen model. Ride comfort in quarter car is mainly affected by vertical movement of the vehicle body



Dynamic analysis has been carried out by using quarter car model with passive and semi-active

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In vehicle suspension system is responsible for isolating forces from the road to the body, for directional control during handling, ride comfort and safety. Good ride comfort requires a soft suspension, whereas a hard suspension is required for stability or handling requirements of the vehicle. Passive and active control systems represent the two extreme reference points for damping strategies used for reducing dynamic response in any vibratory systems. Active control systems are costly and complex; alternatively, semi-active vibration control is one of the solutions to the above problem. Semi-active control system combines the best features of passive and active control approaches, offering the reliability and cost effectiveness of passive devices, yet maintaining the versatility and adaptability of active system.

Semi-active vibration control can be achieved by having a damper with variable damping. MR fluid offers a change in viscosity and hence damping by simple application of magnetic field. Even though the theory is well understood to the research community, but still because of few problems still persists like MR particle settling during vehicle halts, optimal proportion of MR fluid constituents, MR fluid cost and complexity of damper controller design. In order to get better ride comfort and good handling characteristics for the vehicle, few issues has to be addressed to make the MR damper practically viable for end use.

9. **OBJECTIVE OF THE R&D PROPOSAL**

Currently MR fluid are available in Indian market, which is supplied by UK based Lord Corporation Ltd. and UAE based Arus MR Tech Ltd. But presently none of the Indian companies are manufacturing MR fluid or MR damper. MR based suspension systems have been developed for variety of luxury/highly expensive cars such as Audi, Ferrari and land rovers. But cost involved in these commercial MR fluid dampers are very high and it is a barrier for its usage in two wheelers, budget cars, trucks, buses and off road vehicles running on Indian roads. The solutions to all these problems will overcome by low cost in-house MR fluid and in-house MR damper.

1. Preparation and investigation of rheological properties of cost effective in-house MR fluid under different magnetic field and benchmark with commercial MR fluid.
2. Develop and characterize cost effective in-house MR damper for two and four wheeler automobiles.
3. Comparison of dynamic behavior of in-house MR damper with commercial MR damper.
4. Performance evaluation of passive damper, in-house MR damper and commercial MR damper with standard excitations

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VASU.M.  
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Yelahanka, Bangalore

### Justification For Equipments

#### Rheometer

To evaluate performance and quality of synthesized cost effective MR fluid, the rheological properties fluid should be studied under different magnetic flux and different conditions. Prepare different proportion (20-40% volume of Magnetizable particle) MR fluid and characterize it under different magnetic field using rotational plate type rheometer along with external magnetic setup. The result will be compared with commercial MR fluid, in terms of performance and quality.

**Damper testing Machine:** - To evaluate performance and quality of the developed MR damper dynamic behaviour of damper will be studied. In order to carry out this Damper testing Machine is very much essential.

**Density Measuring instrument** is required to measure the density of fluid.

#### Cost Sharing

Sl. No	Particulars	KCTU support In Lakhs	REVA University support In Lakhs
1	Promoters contribution-(REVA University) for Equipments	-	34,83,500
2	Promoters contribution-(REVA University) for consumable	--	3,00,000
3	Loan from Financial Institutions	-	Nil
4	KCTU support for Equipments	34,83,500	-
5	KCTU support for consumable	3,00,000	-
	Subtotal	37,83,500	37,83,500
	<b>Total</b>		<b>75,67,000 /-</b>

  
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17	Whether any Government dues are outstanding? If yes, give details thereof	NO
18	Whether any court cases? If yes give details thereof	NO

**DECLARATION:**

I HEREBY DECLARE THAT THE INFORMATION, STATEMENTS AND OTHER PAPERS GIVEN HEREIN ARE TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE AND CORRECT IN ALL PARTICULARS. INCENTIVE GOVERNMENT RESOLUTION AND PRECAILING GOVERNMENT RULES AND REGULATIONS. I HEREBY ALSO DECLARE THAT THE EQUIPMENT SHOWN FOR THE PROPOSAL HAD/HAS NEVER BEEN PURCHASED BY THE INSTITUTE WITH THE FINANCIAL ASSISTANCE OF THE CENTRAL GOVT OR ANY STATE GOVERNMENT. I ALSO DECLARE THAT I AM AUTHORISED TO SIGN AN APPLICATION AND DETAILS AND DOCUMENTS SUBMITTED. A COPY OF AUTHORISED AND THE RESOLUTION OF THE COMPANY/ORGANISATION IS ENCLOSED.

Note: Any Financial transaction/expenditure statements submitted by the unit must be signed by the authorized signatory of the institute and certified by the chartered accountant.

*[Handwritten Signature]*

(Dr. M. Dhananjaya)  
Signature of Promoter/Authorized  
Signatory  
Registrar  
REVA University  
Bengaluru - 560 064.

*[Handwritten Signature]*

(Dr. Hemanth K.)  
Signature of Principal investigator

Signature of Co-Principal investigators

1. Dr. Devaraj S. *[Handwritten Signature]*
2. Dr. Narayanaswamy *[Handwritten Signature]*



**VASU.M.**  
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REVA UNIVERSITY  
Yelahanka, Bangalore-64

*[Handwritten Signature]*

*[Handwritten Signature]*  
Registrar  
REVA UNIVERSITY  
Yelahanka, Bengaluru - 64.



ITW India Private Limited- Biss Division  
Plot No. 497E, 14th Cross, 4th Phase  
Peenya Industrial Area,  
Bangalore-560 058  
Phone No. 080 2836 0184  
Fax No. 080 2836 0047  
State Name : Karnataka, Code : 29  
E-Mail : gemini@biss.in

Receipt Voucher

No. : RECIBI19-20149

Dated: 2-May-2019

Particulars	Amount
Account : 11013 Dr.Reva University Agst Ref BISS/SA1819/0122 10,70,000.00 Cr	10,70,000.00

Through :

11101 Caner Bank 2454271002233 CA

On Account of :

being the amount received from the above customer

Amount (in words) :

Indian Rupees Ten Lakh Seventy Thousand Only

₹ 10,70,000.00



**VASU.M.**

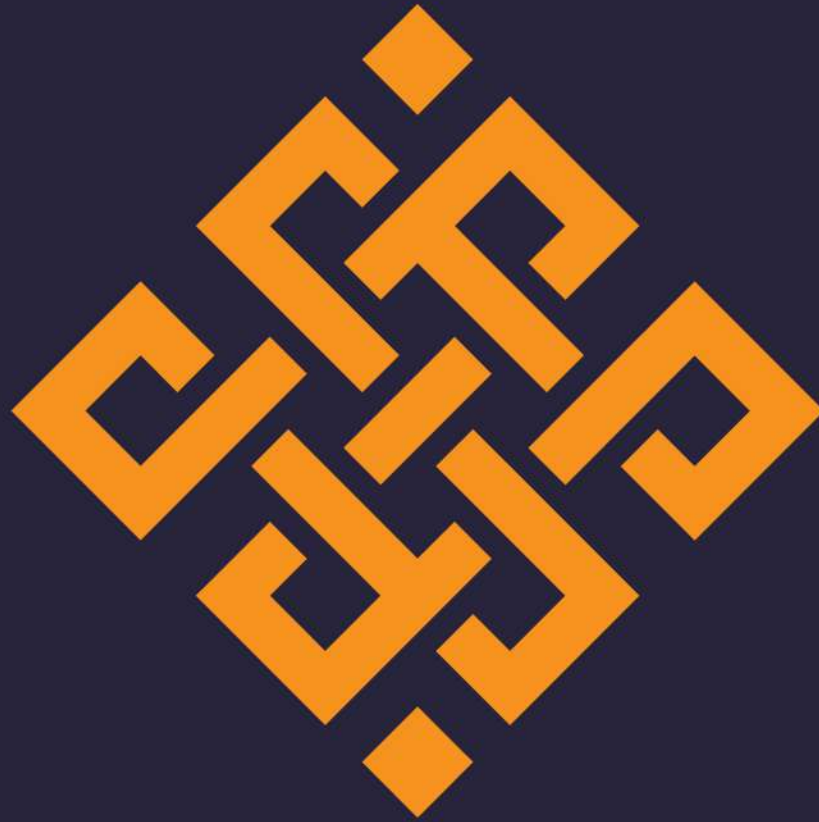
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*M&L*

*Anita*  
**Registrar**  
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UNIVERSITY  
Bengaluru, India

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E-mail: [admissions@reva.edu.in](mailto:admissions@reva.edu.in)