

Seed Money Funded Project 2021-2022

S.No	Title of the Project	Principal Investigator	Order Ref	Order Date	Commencement Date	Period	Dept	Amount
1.	Design and development of Metal-organic framework for the treatment of Alzheimer's disease	Dr. S. Thalamuthu, Asst. Prof (SG)/S&H	NEC/RD-Seed Money/2021/001	24.Dec.21	19.01.22	12 Months	S&H	50000
2.	Synthesis and Characterization of Some Potential Phosphotriesterase Mimics	Dr.B. Annaraj, Asst. Prof / S&H	NEC/RD-Seed Money/2021/002	24.Dec.21	19.01.22	12 Months	S&H	50000
3.	Establishment of Centre for image processing	Dr. V. Gomathi, Prof & Head /CSE	NEC/RD-Seed Money/2021/003	17.Feb.22	01.03.22	12 Months	CSE	462000
4.	Development of Sustainable Bio-compatible Hydroxyapatite /Alumina coatings on Additive manufactured, and Laser irradiated Co-Cr-Mo alloy	Dr. P. Harihara Sakthi Sudhan, Asst. Prof (SG) / MECH	NEC/RD-Seed Money/2021/004	17.Feb.22	22.02.22	24 Months	MECH	500000
5.	Surfactant assisted nano materials for energy applications	Dr. A. Nicholson, Asst. Prof / S&H	NEC/RD-Seed Money/2021/005	17.Feb.22	02.03.22	12 Months	S&H	50000
6.	Establishment of PCB and antenna fabrication laboratory	Dr. I. Paulkani, Asst. Prof /ECE	NEC/RD-Seed Money/2021/006	17.Feb.22	26.02.22	12 Months	ECE	601800
7.	Pozzolanic reactivity of corn husk an corn cob ash in cement based composites	Dr. C. Chella Giffa, Asst. Prof /CIVIL	NEC/RD-Seed Money/2021/007	17.Feb.22	07.03.22	12 Months	CIVIL	85000
Total Amount								1798800

Seed Money Funded Project 2022-2023

S.No	Title of the Project	Principal Investigator	Funding Agency	Order Date	Commencement Date	Period	Dept	Amount
1	Evaluation of Heat Transfer Characteristics of Additive Manufactured Boron Nitride Nanotubes Dispersed AISi10Mg Nanostructures	Dr. R. Harichandran, Professor, Mech	NEC/RD-Seed Money/2023/001	27.Jul.23	12.08.23	12 Months	MECH	250000
2	Modelling and simulation of Ferroelectric Vertical Tunnel Field Effect Transistors for Memory Devices	Dr. T. S. Arun Samuel, Prof/ECE	NEC/RD-Seed Money/2023/002	27.Jul.23	24.08.23	24 Months	ECE	900000
Total Amount								1150000


Dr. K. Kalidasa Murugavel, M.E., Ph.D.,
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 K.R. NAGAR, KOVILPATTI - 626 503,
 THOOTHUKUDI-DIST

Deans R&D



24.03.2023

Minutes of the Meeting

The selection of project proposals for seed money funding for the academic year 2022-2023 review meeting was convened on 09/03/2023 (Thursday) at 10.30 AM in NEC – Conference Hall with the following panel members:

S. No	Name of the Members with designation	
1.	Dr. S. Shanmugavel	Director
2.	Dr.K. KalidasaMurugavel	Principal
3.	Dr. M. A. Neelakantan	Dean (R&D)
4.	Respective Head of the Departments	

The meeting was convened with the following agenda

- Seed money fund approval for the academic year 2022-2023
- Any other item with the permission of the chair

The following seed money proposals were presented and discussed in the meeting

1. The proposal submitted by Dr. R. Muthukkumar, Prof/IT for the research project titled "Enhancing Road Safety using IoT-based Drivers' Fatigue and Drowsiness Detection System for Public Transportation" has been reviewed

- PI is asked to modify the seed money proposal for a single driver and asked to resubmit it.
- Based on the revised proposal titled "Enhancing Road Safety using IoT-based Drivers' Fatigue and Drowsiness Detection System for Public Transportation" for a single driver for an amount of Rs. 2,82,249/- has been reviewed
- This project must have an outcome of a smart wearable device for driver during driving, collaborative research work in intra and inter institution level, publish 2 SCI publications, and patent publication

2. The proposal submitted by Dr.T. S. Arun Samuel. Prof/ECE for the research project titled "Modelling and simulation of Ferroelectric Vertical Tunnel Field Effect Transistors for Memory Devices" for Rs 9,00,000/- has been reviewed.

- This project should have an outcome of creation of nano electric lab, 5 SCI publications per year, 5 student projects leading to patent publication, provide course for minor degree verticals, consultancy work and to conduct 2 intra and 1 inter workshops per year.


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3. The proposal submitted by Dr. A. Saravana Selvan, AP(SG)/ECE, for the creation of an "Embedded IR Thermography Research Lab" for an amount of Rs. 4,36,500/- has been reviewed
 - PI is asked to do elaborative literature survey, industrial consultation and based on this the proposal has to be resubmitted.
4. The proposal submitted by Dr. J. Naskath, AP(SG)/CSE, for the "AIOT-based E-campus Environment" project has three modules.
 - PI is asked to modify the seed money proposal for single module.
 - Based on the revised proposal titled "Powered Automatic Sanitary Napkin" for an amount of Rs. 1,90,500/- has been reviewed
 - The project ensures an outcome of implementation of the product IOT Powered Automatic Sanitary Napkin in NEC ladies hostel during the academic year 2023-24.
5. The proposal submitted by Dr. R. Harichandran, Prof/Mech for the project titled " Evaluation of Heat Transfer Characteristics of Additive Manufactured Boron Nitride Nanotubes Dispersed AlSi10Mg Nanostructures" for an amount of Rs. 2,50,000/- has been reviewed.
 - This project should have an outcome of 4 SCI publications and 3 student projects leading to patent publications per year.

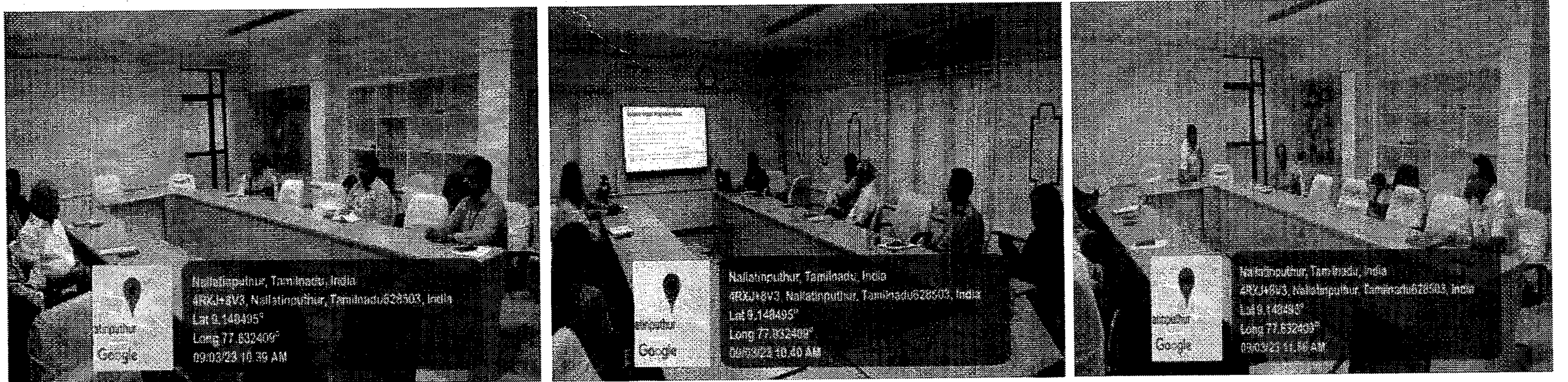
The following seed money proposals may be approved for funding.

S.No	Application No	Project Title	Investigator(s)	Amount in Rupees	Order No
1.	NEC/RD/Seed Money/22-23/Appl: 1R2	Enhancing Road Safety using IoT-based Drivers' Fatigue and Drowsiness Detection System for Public Transportation	PI: Dr.R.Muthukkumar. Prof/IT Co PI: Mr. P. G. Siva Sharma Karthick, AP/IT Mrs. J. Beno Ranjana, Phd Scholar	2,82,249/-	NEC/RD-Seed Money/2022-2023/001
2.	NEC/RD/Seed Money/22-23/Appl: 2R1	Modelling and simulation of Ferroelectric Vertical Tunnel Field Effect Transistors for Memory Devices	PI: Dr.T.S.Arun Samuel, Prof/ECE Co PI: Mr. M. Sathish Kumar, AP(SG)/ECE Mr. I. VivekAnand, AP(SG)/ECE	9,00,000/-	NEC/RD-Seed Money/2022-2023/002
3.	NEC/RD/Seed Money/22-23/Appl: 3R2	IOT Powered Automatic Sanitary Napkin	PI: Dr.J.Naskath, AP(SG)/CSE Co PI: Dr. R. Rajakumari, AP(SG)/CSE Dr. B. Shunmuga Priya, AP(SG)/CSE Dr. M. Syed Rabiya, AP/CSE	1,90,500/-	NEC/RD-Seed Money/2022-2023/003


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4.	NEC/RD/Seed Money/22-23/Apl: 4R1	Evaluation of Heat Transfer Characteristics of Additive Manufactured Boron Nitride Nanotubes Dispersed AlSi10Mg Nanostructures	PI: Dr.R. Harichandran, Prof/Mech Co PI: Dr. R.V. Maheswari, Prof/EEE Dr. C. Balamurugan, AP(SG)/ECE	2,50,000/-	NEC/RD-Seed Money/2022-2023/004
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Photos:



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24.3.23
Dean (R&D)

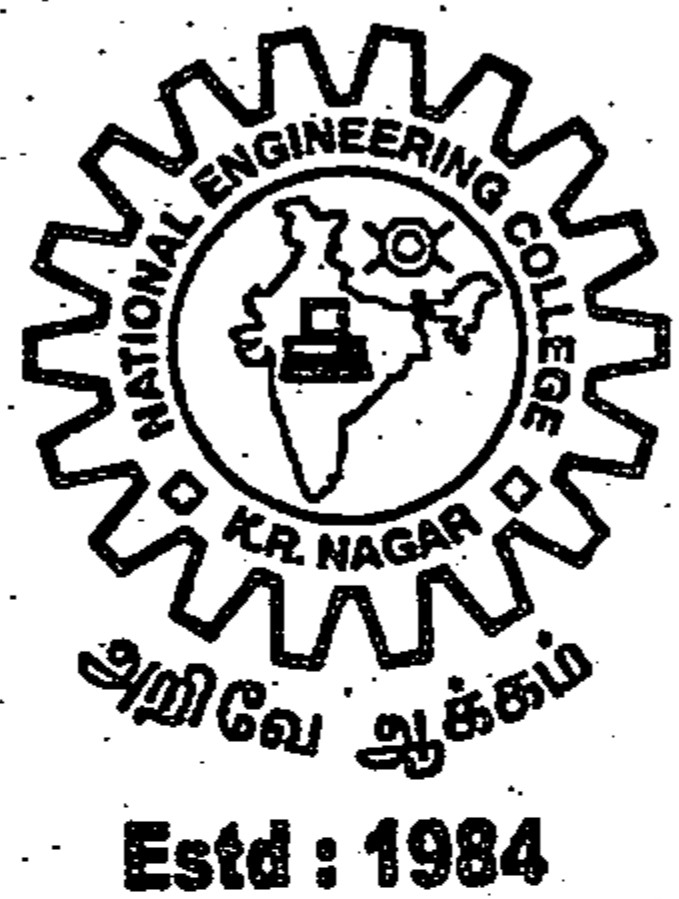
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28/3.
Principal

[Signature]
28/3/23
Director

Copy to:-

1. The Director, National Engineering College, Kovilpatti
2. The Principal, National Engineering College, Kovilpatti
3. Dean(R&D), National Engineering College, Kovilpatti
4. All Hod's, National Engineering College, Kovilpatti
5. The Principal Investigator
6. To file

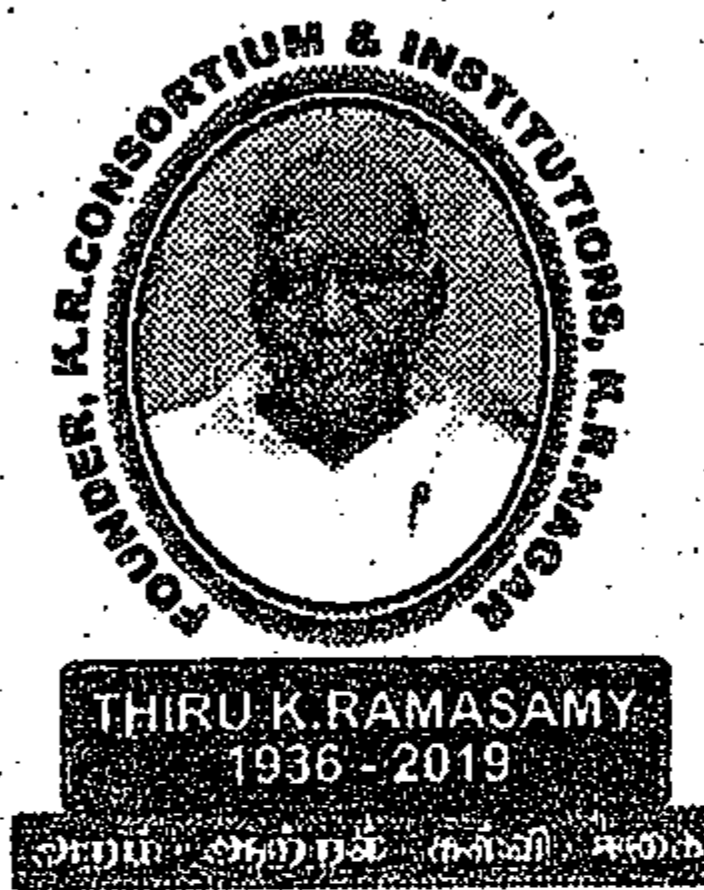
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NATIONAL ENGINEERING COLLEGE

(An Autonomous Institution Affiliated to Anna University, Chennai)

MANAGING COMMITTEE
K.R.NAGAR, KOVILPATTI - 628 503.
THOOTHUKUDI DISTRICT.



CHENNAMMAL RAMASAMY
CHAIRMAN

R.ARUNACHALAM
CORRESPONDENT

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04632 - 222 502, 230 227
Email : principal@nec.edu.in
Fax : 04632 - 232 749

FILE NO. NEC/RD-SeedMoney/2023/001

Dated: 27.Jul.2023

ORDER

Subject: Seed Money sanction of the research project titled "Evaluation of Heat Transfer Characteristics of Additive Manufactured Boron Nitride Nanotubes Dispersed AlSi10Mg Nanostructures" under the guidance of Dr. R.Harichandran, Professor, Department of Mechanical Engineering, National Engineering College, K.R.Nagar, Kovilpatti-628503 - Release of grant.

1. Sanction of National Engineering College, R&D Seed Money is hereby accorded to the above mentioned project at a total cost of Rs. 2,50,000/- (Rs. Two Lakh Fifty Thousand Only) with the break-up of Rs. 50,000/- (Rs. Fifty Thousand Only) under Capital (Non-recurring) head and Rs. 2,00,000/- (Rs. Two Lakh Only) under General (Recurring) head for a duration of 12 months. The items of expenditure for which the total allocation of Rs. 2,50,000/- has been approved are given below:

The sanction of this fund may be considered as R&D seed money for the Department of Mechanical Engineering, National Engineering College.

Sl.No	Specifications	Price in Rs.
A	Non Recurring	
1.	Fabrication of AlSi10Mg/BNNT composites through SLM	50,000
B	Recurring	
2.	Amorphous Boron, Nano Iron Oxide and magnesium oxide, Ammonia gas with Cylinder, Argon gas, Silicon substrate, Alumina boat, Quartz tube	1,50,000
3.	Characterization of BNNTs, AlSi10Mg/BNNT composites	50,000
Total Cost of the Project		2,50,000

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Received
R.H. 12/07/23

2. The principal investigator should inform the Commencement of the project to the R&D section through Principal NEC.
3. The Principal Investigator will maintain separate accounts for the project.
4. As per the time schedule given by the Principal Investigator in the project, the progress report should be submitted to the Dean R&D through Principal NEC.
5. The project File no. **NEC/RD-Seed Money/2023/001** may also be mentioned in all research communications arising from the above project with due acknowledgement for **the Management of National Engineering College.**
6. Deliverables:

Sl.No	Expected outcome of the Project	Time Schedule
1.	Publication of review paper on BNNTs based Materials and their impact on mechanical and thermal behaviour.- 1 No	1-6 Months
2.	Publication of paper on thermal characterization of BNNTs/AlSi10Mg- 2 Nos	6-12 Months
3.	Publication of paper related to BNNTs based polymer materials- Radiation shielding material-1 Paper	12- 18 Months
4.	Project Proposal Submission – 1 No	18-24 Months

7. Release of the further fund will be based on the progress of the project
8. Sanction of the grant is subject to the conditions as detailed in the Terms & Conditions of Research policy of National Engineering College.
9. Facility created through seed money can be utilized by other faculty members for their research work.

To
Dr. R.Harichandran,
 Professor
 Department of Mechanical Engineering
 National Engineering College

Copy to

- i) Director
- ii) Principal
- iii) Dean R&D
- iv) Account section

A. Suresh Kumar
 Chairman/Correspondent

27/7/23
27/7/23

K. Kalidasa Murugavel

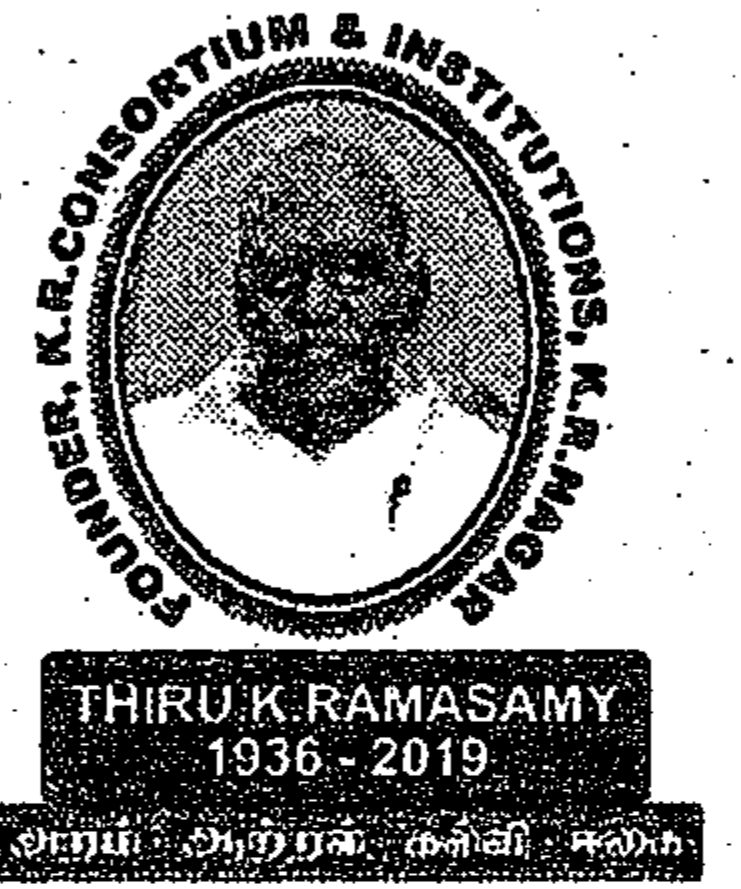
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NATIONAL ENGINEERING COLLEGE

(An Autonomous Institution Affiliated to Anna University, Chennai)

MANAGING COMMITTEE
K.R.NAGAR, KOVILPATTI - 628 503.
THOOTHUKUDI DISTRICT.



CHENNAMMAL RAMASAMY
CHAIRMAN

R.ARUNACHALAM
CORRESPONDENT

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04632 - 222 502, 230 227
Email : principal@nec.edu.in
Fax : 04632 - 232 749

FILE NO. NEC/RD-SeedMoney/2023/002

Dated: 27.Jul.2023

ORDER

Subject: Seed Money sanction of the research project titled "Modelling and Simulation of Ferroelectric Vertical Tunnel Field Effect Transistors for Memory Devices" under the guidance of Dr. T. S. Arun Samuel, Professor, Department of Electronics and Communications Engineering, National Engineering College, K.R.Nagar, Kovilpatti-628503 - Release of grant.

1. Sanction of National Engineering College, R&D Seed Money is hereby accorded to the above mentioned project at a total cost of Rs. 9,00,000/- (Rs. Nine Lakhs Only) with the break-up of Rs. 9,00,000/- (Rs. Nine Lakhs Only) under Capital (Non-recurring) head for a duration of 12 months. The items of expenditure for which the total allocation of Rs. 9,00,000/- has been approved are given below:

The sanction of this fund may be considered as R&D seed money for the Department of Electronics and Communications Engineering, National Engineering College.

S.No	Specifications	Price in Rs.
A	Non Recurring	
1.	TCAD -Single user	9,00,000
Total cost of the Project		9,00,000

2. The principal investigator should inform the Commencement of the project to the R&D section through Principal NEC.

Page 1 of 2

Received

31/7/23

Dr. T. S. Arun Samuel

Verigo

Dr. K. Kalidasa Murugavel, M.E., Ph.D.,
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3. The Principal Investigator will maintain separate accounts for the project.
4. As per the time schedule given by the Principal Investigator in the project, the progress report should be submitted to the Dean R&D through Principal NEC.
5. The project File no. **NEC/RD-Seed Money/2023/002** may also be mentioned in all research communications arising from the above project with due acknowledgement for **the Management of National Engineering College.**
6. Deliverables:

Sl.No	Expected outcome of the Project	Time Schedule
1.	Ferroelectric Vertical Tunnel Field Effect Transistors for Memory devices. - 2Nos of publications	1-6 Months
2.	TFET based Bio sensor - 4 Nos of publications	6-12 Months
3.	MOSFET based Bio Sensor -4 Paper of publications	12- 18 Months
4.	Project Proposal Submission - 1 No	18-24 Months

7. Release of the further fund will be based on the progress of the project
8. Sanction of the grant is subject to the conditions as detailed in the Terms & Conditions of Research policy of National Engineering College.
9. Facility created through seed money can be utilized by other faculty members for their research work.

To

Dr, T. S. Arun Samuel,

Professor

Department of Electronics and Communications Engineering

National Engineering College

Copy to

- i) Director
- ii) Principal
- iii) Dean R&D
- iv) Account section

A. Arun Kumar
Chairman/Correspondent
27/7/23

K. Kalidasa Murugavel

Dr. K. Kalidasa Murugavel, M.E., Ph.D.,
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