

December – May

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Research Newsletter



Volume 01 | Issue 02

Research Advisory Board

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Retired Group Director
DRDO Bangalore

Dr. M. Thirumoorthy

DRDO Hyderabad

HIGHLIGHTS

No. of Scopus indexed publications : **192**

No. of Web of Science indexed publications : **29**

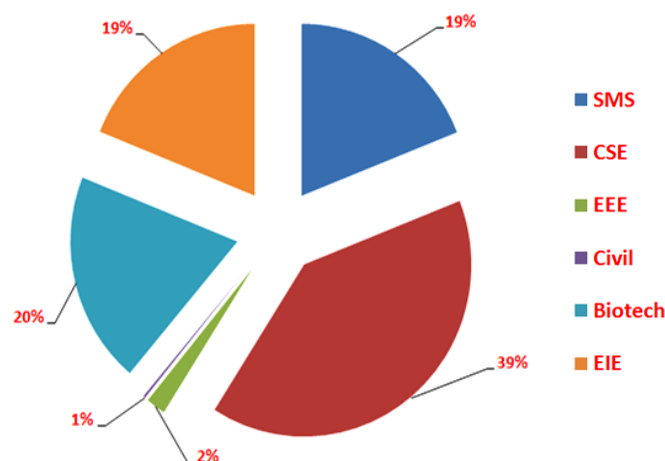
No. of funded projects : **20**
(ongoing)

Total value of funded projects : **Rs. 3,07,37,080**
(ongoing)

No. of Ph.D. degrees awarded : **15**

No. of research programmes organized : **09**

ONGOING CONSULTANCY ACTIVITIES



Total revenue generated: **Rs. 2,60,834**

National Award : Top Performing Engineering College – Research and Development



BIT has been recognized with the national award under the category "**Top Performing Engineering College - Research and Development**" by Society for Engineering Education Enrichment, Noida in 2019. It was awarded by Shri D Nandakumar, Former President, Indian Chamber of Commerce and Industry (ICCI). BIT tops the 834 Engineering Institutions across India under various categories, such as, publications in Scopus / Web of Science indexed journals, number of citations, publications with highest impact factor, number of PhD scholars and number of female researchers.

SOLIDWORDS WORLD 2019 - Texas, United States



Participant : Mr Balamurugan T, Dept. of Mechanical Engineering

Amount : Rs. 1,00,000 (**Granted**) **Sponsoring Agency :** AICTE

Place : Texas, United States **Period :** 10.02.2019 to 13.02.2019

SAUVC 2019 - Singapore



Participant(s) : Mr Selvamuthukumar (Mentor), Dept. of Mechanical Engg
and a team of 12 student members (ECE – 03 & Mech – 09)

Amount : Rs. 10,00,000 (**Granted**)

Sponsoring Agency : AICTE

Place : NUS - Singapore

Period : 08.03.2019 to 11.03.2019

Microbial recovery of biogenic methane from coal



Investigator:

Dr. R. Ravikumar, Professor,
Dept. of Biotechnology

Funding agency :

DST

Amount :

Rs.1,02,03,600

Nature of work :

Coal to Bio-energy

UGC SPONSORED RESEARCH PROJECT

Surface modification of one-dimensional metal oxide nanostructures



Investigator:

Dr K Senthil, Professor, Physics

Funding agency :

UGC DAE-CSR

Amount :

Rs. 7,00,000

Nature of work : Ion
implantation for spintronics and
gas sensing applications

GRANT FOR ORGANIZING PROGRAMMES

Artificial intelligence techniques in data analytics and information retrieval



Convenor: Dr. C. Palanisamy, Principal,
Department of Information Technology

Funding agency : AICTE-FDP

Amount : Rs.4.63.000

Liquid Crystals Nanoscience



Convenor: Dr. M. L. N. Mohan, Professor,
Department of ECE

Funding agency : DAE-BRNS

Amount : Rs.75,000

FINANCIAL SUPPORT FOR PARTICIPATING IN COMPETITION ABROAD

32nd ASCE NCCC 2019 - Florida, USA



Participant(s) : Mr Manjunath N V (Mentor), Dept. of Civil Engg and a team of 15 student members

Sponsoring Agency : AICTE & ASCE Foundation

Amount : Rs.10,00,000 (AICTE) & \$1505.73 (ASCE)

Place : Florida Institute of Technology, USA

Period : 06.06.2019 to 09.06.2019

DST FUNDED NATIONAL CONFERENCE

Big Data Analytics for Cyber Intelligence and Cyber crimes against Women



Convenor: Dr. A. Bazila Banu, Associate Professor, Department of CSE

Funding agency : National Commission for Women

Amount : Rs.62,000

MODERNIZATION OF LAB (SPONSORED BY AICTE)

Modernization of 'Electrical Machines' Lab



Investigator: Dr R Senthil Kumar, Professor, Department of EEE

Funding agency : AICTE - MODROBS

Amount : Rs.13,88,000

SERB SPONSORED PROJECT

Prototype Design and Field Testing of an Elephant Early Warning System



Investigator: Dr. Sanjoy Deb, Associate Professor, Department of ECE

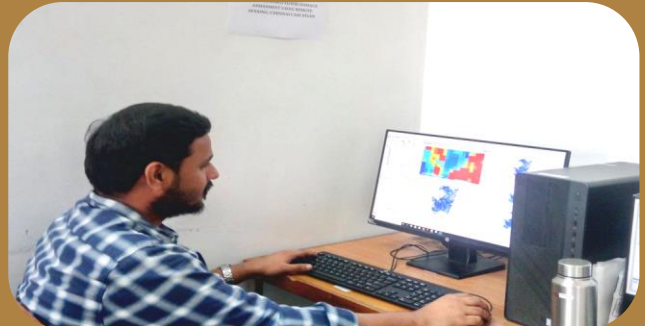
Funding agency : SERB

Amount : Rs.9,83,000

Nature of work : Roadkill Prevention System

DST SPONSORED RESEARCH PROJECT

Land use based flood damage assessment using remote sensing



Investigator: Dr. K. Premalatha, Professor, CSE

Funding agency : DST-NRDMS

Amount : Rs.10,50,000

Nature of work : Assessment of flood damage

PhD Awarded - BIT Faculty Members

Name of the faculty member

Dept.

Dr Arunkumar M
*Biometrics and
Machine Learning*



ECE

Dr Hamsagayathri P
*Antenna Design and
Fabrication*



ECE

Dr Matheswaran A
Power Convertors



EEE

Dr Rajalashmi K
*Optimization
Techniques*



EEE

Dr Srinivasan M
Power Quality



EEE

Dr Vairavel K S
Multi Model Biometrics



EIE

Dr Indirani C
General Topology



Maths

Name of the faculty member

Dept.

Dr Anne Dorathy A
*English Language
Teaching (ELT)*



English

Dr Mathankumar P
*Unconventional
Machining*



Mechanical

Dr Santhosh N
Ocean Technology



Mechanical

Dr Rajiev R
Manufacturing



Mechanical

Dr Gobalakrishnan
Nano-finishing



Textile

Dr Janarthanan M
Medical Textiles



Textile

GRANTS SANCTIONED BY TNSCST

The following faculty members have been granted Rs. 7,500/- per project under TNSCST Project Scheme.



Dr. S. Tamilselvi (Biotech)



Mr. N. Bhuvanesh (Mech)



Dr. K. Babu (Civil)



Dr. K. Rajalashmi (EEE)



Dr. K. S. Vairavel (EIE)



Dr. K. Saravanan (Fashion Tech)

RESEARCH PROJECT SPONSORED BY SERB

Investigation of Medicinal Plants from Western Ghats for Flavonoids



Investigator: Dr. R. Praveena, Asst. Prof (Selection Grade), Department of Chemistry

Funding agency : DST - SERB

Amount : Rs. 15,88,950

Nature of work: Experimental and Theoretical Validation

AICTE's Sponsorship to BIT

SAMRIDDHI – Scheme for SC/ST Students to establish Start-Ups



Convenor: Dr. K. Balakrishnan, Professor, Department of Biotechnology

Funding agency : AICTE

Amount : Rs.13,00,000

ICMR Sponsored Workshop

Advanced Composites for orthopedic Implants













Convenor: Dr. N. Natarajan, Professor, Department of Automobile Engineering

Funding agency : ICMR

Amount : Rs.69,000

GRANTS SANCTIONED BY VARIOUS FUNDING AGENCIES

Funding Agency	Grantee	Amount Sanctioned (in Rs.)	
Tamil Nadu State Council for Science and Technology	Mr G Prasad (Aero)	50,000	
Tamil Nadu State Council for Science and Technology	Dr N Vinothkumar (Maths)	20,000	
Indian Academy of Sciences	Mr S Vignesh (Mechatronics)	46,460	
Indian National Science Academy	Mr G Prasad (Aero)	60,000	
Council of Scientific & Industrial Research	Dr S Logeswari (CSE)	2,00,000	

Funding Agency	Grantee	Amount Sanctioned (in Rs.)	
IET	Mr M S Arunkumar (CSE)	46,000	
DBT - CTEP	Dr K Subramanian (Biotech)	1,00,000	
Indian Academy of Sciences	Ms K Deepika (Biotech)	41,460	
TNSCST - RFRS	Dr V N Vijayakumar (Physics) & Ms P Subasri (Physics)	3,00,000	 
PMKVY	Principal - BIT	13,45,000	

PhD AWARDED – FULL TIME RESEARCH SCHOLARS OF BIT

Name of the faculty member

Dept.

Dr Naresh Kumar M

Ligno-cellulosic ethanol production from rice straw



Biotech

Dr Jeevitha D

Molecular Physics



Physics

TRAINING SESSION ORGANIZED

Scopus Indexing and Research Metrics



Invited Expert : Dr. Shikha Gupta,
Research Intelligence – Elsevier

FINANCIAL SUPPORT FOR PARTICIPATING IN COMPETITION ABROAD

6th Delta Advanced Automation Contest - Wujiang, China



Participant(s) :

Mr R Sivabalakrishnan (Mentor),
Dept. of Mechatronics and a team
of 03 student members
(Mr. T. Tharunselvan,
Mr. K. C. Suhas, Mr. E. Sanjay
Krishnan)

Amount :

Rs.6,78,000

Sponsoring Agency :

Delta Electronics, Wujiang, China

Period :

23.07.2019 to 26.07.2019

PROGRAMME(S) ORGANIZED

Research Interaction



Invited Expert : Dr Syed Shahabuddin, Senior Research Fellow, RCNMET, Sunway University, Malaysia.

Web of Science - Scientific Citation Indexing Source



Invited Expert : Mr S Aamir Hussain, Intellectual Property & Science, Clarivate Analytics

DST FUNDED ONGOING RESEARCH PROJECT

Open Source Tool for Land Use Monitoring System



Investigator: Dr K Balakrishnan, Professor, Biotech
Funding agency : DST – NIMAT **Amount :** Rs.3,00,000
Nature of work : Development of tool for land use monitoring system

DST SPONSORED AWARENESS CAMP

NIMAT - Entrepreneurship Awareness Camp (EAC)



Convenor: Mrs M Senthamarai, Assistant Professor (Level II), Department of Biotechnology

Funding agency : DST – NIMAT

Amount : Rs.1,00,000

SELECTED RECENT PUBLICATIONS

1. **Kalil Rahiman, M.**, & Santhoshkumar, S. (2019). Comparative studies of oxygenated fuel synthesis with diesel from the measurements of density, speed of sound and refractive index. *Journal of Thermal Analysis and Calorimetry*, 136(1), 295-304.
2. **Jegadheeswaran, S.**, **Sundaramahalingam, A.**, & Sanjay D. Pohekar. (2019). High-conductivity nano-materials for enhancing thermal performance of latent heat thermal energy storage systems. *Journal of thermal analysis and calorimetry*.
3. Saravanakumar, S., & **Thangaraj, P.** (2019). A computer aided diagnosis system for identifying Alzheimer's from MRI scan using improved adaboost. *Journal of Medical Systems*, 43(3).

4. Selvakumar, S., & **Soundara, B.** (2019). Swelling behaviour of expansive soils with recycled geofoam granules column inclusion. Geotextiles and Geomembranes, 47(1), 1-11.
5. **Raja Sekar, K., Jegadheeswaran, S.**, Kannan, R., & Manigandan, P. (2019). Perforated wall in controlling the separation bubble due to shock wave -boundary layer interaction. International Journal of Turbo and Jet Engines.
6. **Prem, P.**, Sathik, J., Sivaraman, P., Matheswaran, A., & Abdel Aleem, S. H. E. (2019). A new asymmetric dual source multilevel inverter topology with reduced power switches. Journal of the Chinese Institute of Engineers, Transactions of the Chinese Institute of Engineers.
7. Kishor, M. H., & **Madhu Mohan, M. L. N.** (2019). Investigations on smectic X* and re-entrant smectic C* orderings in hydrogen bonded ferroelectric liquid crystals. Journal of Molecular Liquids, 273, 504-524.
8. **Indu Rani, B.**, Boopathy, S., Arul Kumar, N., & Sangameswaran, A. S. (2019). A low cost solar powered vehicle—a boon for physically challenged persons. Disability and Rehabilitation: Assistive Technology.
9. Chen, T., Rajaji, U., Chen, S., Govindasamy, M., Paul Selvin, S. S., Manavalan, S., & **Rameshkumar, A.** (2019). Sonochemical synthesis of graphene oxide sheets supported Cu₂S nano-dots for high sensitive electrochemical determination of caffeic acid in red wine and soft drinks. Composites Part B: Engineering, 158, 419-427.
12. Vandarkuzhali, S., Anbu Anjugam., Karthikeyan, S., Viswanathan, B., & **Pachamuthu, M. P.** (2019). Arachis hypogaea derived activated carbon/Pt catalyst: Reduction of organic dyes. Surfaces and interfaces, 13, 101-111.

11. **Kirupa Sankar, M., Ravikumar, R.,** Naresh Kumar, M., & Uthandi, S. (2019). Development of co-immobilized tri-enzyme bio-catalytic system for one-pot pre-treatment of four different perennial lignocellulosic biomass and evaluation of their bio-ethanol production potential. *Bio-resource Technology*, 269, 227-236.
12. Batcha, Munavar Hussain Mohammed., Haruvegowda, Doreswamy Beeranahally., Chikkbhadraiah, Shobha Neelasandra., **Vijayakumar, V. N.,** Khaji, Fakruddin. (2019). Optical, Thermal, and Detailed Statistical Parameter Study on Nanoparticles Dispersed into Liquid Crystalline Composites Using MATLAB Program. *Brazilian journal of physics*, 49 (4), 508-516.
13. **Gopalakrishnan, M., Punitha, V., Saravanan, D.** (2019). Water in Textiles and Apparels : Water conservation in textile wet processing. CRC Press, United States (*Book Chapter*)
14. Thamaraimanalan, T., **Sampath, P.** (2019). A low power fuzzy logic based variable resolution ADC for wireless ECG monitoring systems. *Cognitive systems research*, 57, 236-245.
15. Mascarenhas, Jefferson dos Santos., Chowdhury, Hemal., **Thirugnanasambandam, M.,** Chowdhury, Tamal., Saidur, R. (2019). Energy, exergy, sustainability, and emission analysis of industrial air compressors. *Journal of cleaner production*, 231, 183-195.

Address for Communication

*Research & Development,
Bannari Amman Institute of Technology,
Sathyamangalam - 638 401, Erode District, Tamil Nadu
profresearch@bitsathy.ac.in / officeresearch@bitsathy.ac.in*

Edited by : Dr. S. Jeeadheeswaram, Mr. S. Vignesh