**Mechanical**

 **Research Activity Report (Jan 2016- June 2016)**

**1.Research activities of the faculty members:**

|  |  |  |
| --- | --- | --- |
| Number of faculty in the Department | : | 39 |
| Number of faculty with Ph D qualification | : | 10 |
| Number of faculty pursuing Ph D | : | 15 |

**A). Papers published by the faculty members in National and International Journals:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **Name of Faculty** | **Title of the paper** | **Name of the Journal** | **Date** |
|   |   |   |   |   |   |   |
| 1 | K.Pitchandi | Effect of particles density on holdup | ARPN Journal of | Jan 2016 |
|   |   | mass and heat transfer rate in solid |   |
|   |   | Engineering and |   |
|   |   | cyclone heat exchanger |   |
|   |   |   | Applied Sciences |   |
|   |   |   |   |   |
| 2 | N.Muthukrishnan | Study of the Effect of Matrix, Fibre | Arabian Journal for | Jan 2016 |
|   |   | Treatment and Graphene on | Science and Engineering |   |
|   |   | Delamination by Drilling Jute/Epoxy |   |   |   |   |
|   |   | Nanohybrid Composite |   |   |   |   |
| 3 | S.Saravanan |   | Renewable and | Jan 2016 |
|   |   | Use of higher alcohol biofuels in diesel | Sustainable Energy |   |
|   |   | Reviews |   |   |   |
|   |   | engines: A review |   |   |   |
|   |   |   |   |   |   |
|   |   |   |   |   |   |   |
| 4 | S.Saravanan |   | Fuel |   |   | Jan 2016 |
|   |   | Effects of iso-butanol/diesel and n- |   |   |   |   |
|   |   | pentanol/diesel blends on performance |   |   |   |   |
|   |   | and emissions of a DI diesel engine |   |   |   |   |
|   |   | under premixed LTC (low temperature |   |   |   |   |
|   |   | combustion) mode |   |   |   |   |
|   |   |   |   |   |   |
| 5 | S.Saravanan | Effect of Isobutanol Addition to Diesel | Proceedings | of | Jan 2016 |
|   |   | Fuel on Performance and Emissions of a | IMECHE, Part A-Journal |   |
|   |   | DI Diesel Engine with Exhaust Gas | of Power and Energy |   |
|   |   | Recirculation (EGR) |   |   |   |   |
|   |   |   |   |   |   |
| 6 | S.Saravanan | Application of an enhanced Taguchi | Journal | of the Brazilian | Jan 2016 |
|   |   | method for simultaneous | Society | of | Mechanical |   |
|   |   | reduction of smoke and NOx emissions | Sciences | and |   |
|   |   | using oxygenated additives and retarded | Engineering |   |   |
|   |   | injection timing in a stationary diesel |   |   |   |   |
|   |   | engine |   |   |   |   |
|   |   |   |   |   |   |
| 7 | S.Saravanan | Factors Influencing NOx Emission of a | International | Journal of | Jan 2016 |
|   |   | Stationary Diesel Engine Fuelled With | Sustainable Engineering |   |
|   |   | Crude Rice Bran Oil Methyl Ester |   |   |   |   |
|   |   | Blend –Taguchi Approach |   |   |   |   |
| 8 | M.Gajendran | Investigation of Performance and | International Journal of | March |
|   |   | Emission Characteristics using Low | Engineering Research & | 2016 |
|   |   | Reactivity Fuel and Biodiesel Blended | Technology |   |   |
|   |   | Nanoparticles in Diesel Engine |   |   |   |   |
|   |   |   |   |   |
| 9 | A.Balasubramanian | Feasibility Study on Waste Heat | International Journal of | March |
|   |   | Recovery In IC Engine for Operating | Energy, Environment | 2016 |
|   |   | Triple Fluid Absorption Refrigeration | and Economics |   |
|   |   | System |   |   |   |   |
| 10 | M.Gajendran | Investigation on aluminium oxide nano | Journal of Chemical and | April |
|   |   | particles | blended | diesel | fuel | Pharmaceutical Research | 2016 |
|   |   | combustion, performance and emission |   |   |
|   |   | characteristics of a diesel engine |   |   |   |
| 11 | M.Gajendran | Heat transfer enhancement of thermic | Journal of Chemical and | April |
|   |   | fluid by using nanofluids in radiator |   | Pharmaceutical Research | 2016 |
| 12 | S.Arumugam | Experimental | and | mathematical | Journal of Chemical and | April- |
|   |   | modeling in a DICI engine with various | Pharmaceutical Sciences | June 2016 |
|   |   | combustion chambers |   |   |   |   |

**B). Papers presented by the faculty members in National and International conferences/ symposiums/ workshops:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **Name of Faculty** | **Title of the paper** | **Name of the** | **Date** |
|   |   |   | **Conference/** |   |
|   |   |   | **symposium/** |   |
|   |   |   | **workshop** |   |
|   |   |   |   |   |

**C). National and International Conferences/ symposiums/ workshops attended by the Faculty members :**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Name of Faculty** | **Name of the Conference/ symposium/** | **Place** |   |   |   | **Date** |
|   |   | **workshop** |   |   |   |   |   |
| 1 | S Illayavel | Internatinal Conference on trends in | Tamizhan College of |   | 18 Feb |
|   |   | Computational Engineering & Technology | Engineering & Technology | 2016 |
| 2 | M Gajendran | 2nd International Conference on | Karpagam College of |   | 20 Feb |
|   |   | Advancedn Engineering and Technology | Engineering |   |   | 2016 |
|   |   | for Sustainable Development |   |   |   |   |   |
| 3 | A Kumaraswamy | 2nd International Conference on "Human | Saveetha | School | of | 10 Mar |
|   |   | Computer Interactions" | Engineering |   |   | 2016 |
|   |   |   |   |   |   |
| 4 | M Arul Kumar | International Conference on Computer, | Ranganathan | Engineering | 11 Mar |
|   |   | Electrical, Electronics, Management & | College |   |   | 2016 |
|   |   | Information Technology |   |   |   |   |   |
| 5 | V Sridharan | 5th International Conference on Emerging | Saveetha | Engineering | 25 Mar |
|   |   | Trends in Design, Thermal and | College |   |   | 2016 |
|   |   | manufacturing |   |   |   |   |   |
| 6 | A Kumaraswamy | Gear Shifting Using Dual Clutch | Shri | Krishna College | of | 30 Mar |
|   |   | Transmission Technique in Wind Energy | Engineering |   | and | 2016 |
|   |   | Conversion System | Technology |   |   |   |
| 7 | J Sivaramapandian | 3rd National Conference on Research | PSR Engineering College | 31 Mar |
|   |   | Advanced in Mechanical Engineering |   |   |   |   | 2016 |
| 8 | S.Gopinath | 3rd National Conference on Research | PSR Engineering College | 31 Mar |
|   |   | Advanced in Mechanical Engineering |   |   |   |   | 2016 |
| 9 | S .Yeshwant Raj | 1st International Conference on Recent | St.Joseph's | Institute | of | 29 Apr |
|   |   | Trends in Engineering & Technology | Technology |   |   | 2016 |
|   |   |   |   |   |   |   |
| 10 | S. Ponnuvel | National Conference on Processing and | SSN | College | of | 6 May |
|   |   | Characterization of Advanced Engineering | Engineering |   |   | 2016 |
|   |   | Materials (NCPCAEM 2016) |   |   |   |   |   |
|   |   |   |   |   |   |
| 11 | S.Natarajan | Energy Systems Conference | United Kingdom |   | 15 June |
|   |   |   |   |   |   |   | 2016 |

**2) Departmental research activities:**

**A). Symposium, Conferences, Workshop and Guest lectures Conducted:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sl.** | **Name of the Event** | **Place** | **Period** | **Funding** | **National/** | **Convener and** |
| **No.** |   |   |   | **Agency** | **International** | **Faculty In** |
|   |   |   |   |   |   | **charge** |
| 1 | Design of Experiments | SVCE | 22 &23 Jan | SVCE | National | S.Gopinath |
|   | (Industry) |   | 2016 |   |   |   |
| 2 | Green belt training (Students) | SVCE | 20 & 21 Feb | SVCE | National | S.Gopinath |
|   |   |   | 2016 |   |   |   |
| 3 | Green belt training (Students) | SVCE | 5&6 Mar | SVCE | National | S.Gopinath |
|   |   |   | 2016 |   |   |   |
| 4 | Design of Experiments | SVCE | 5&6 Mar | SVCE | National | S.Gopinath |
|   | (Faculty) |   | 2016 |   |   |   |
| 5 | Yellow Belt training | SVCE | 21-23 June | SVCE | National | S.Gopinath |
|   |   |   | 2016 |   |   |   |

**B) Ongoing funded projects in the in the Department:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl.** | **Name of the Project** | **Funding** | **Period &** | **Coordinators** | **Status of** |
| **No.** |   | **Agency** | **Amount** |   | **the** |
|   |   |   | **Sanctioned** |   | **project** |
| 1 | Experimental investigation of effect on | AICTE – | 2013 – 2016 / | Dr. K.Pitchandi | Tenure |
|   | fuel spray characteristic of direct | Under RPS | **16 lakhs** | Mr. P.Raghu | completed |
|   | injection diesel engine fueled with |   |   |   |   |
|   | biodiesel |   |   |   |   |
| 2 | ANN modeling of pulsed metal inert | AICTE – | 2013 -2016 / | Dr. | Ongoing |
|   | gas[P-MIG]welding of magnesium alloy | Under RPS | **18 lakhs** | N.Muthukrishnan |   |
|   | joints |   |   | Mr.V Gurusamy |   |
| 3 | Investigation of vibration characteristics | AICTE – | 2013 -2016 / | Dr. R.Ramesh | Tenure |
|   | of nana silica/micro rubber reinforced | Under RPS | **9.72 lakhs** | Mr. | completed |
|   | carbon fiber composites structural beams |   |   | C.Senthamarai |   |
|   |   |   |   | Kannan |   |
| 4 | Machining and modeling of fibre | AICTE – | 2013 - 2016 | Dr.T.Raja | Tenure |
|   | reinforced polymer composites | Under RPS | **12.25 Lakhs** | Mr. V.Sridharan | Completed |
|   |   |   |   |   |   |

**C). Projects submitted to Funding Agencies by the Department:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sl. | Name of the Project | Funding Agency | Period & | Coordinators |
| No. |   |   | Amount applied |   |
|   | Nil |   |   |   |
|   |   |   |   |   |

**D). Research centre status of the department:**

Yes, our department research center status was renewed up to June 2017

**3)Student Research Activities:**

1)A). List of projects carried out by the students in the department as in house and Industrial project:

**Refer enclosed Annexure –I**

**B). Research Publications by students in National and International Journal:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl.** | **Name of** | **Title of the paper** |   |   | **Journal Name** |   |   | **Date** |
| **No.** | **Student** |   |   |   |   |   |   |   |   |   |   |   |
| 1 | J.Raju | Investigation | of | Performance | and | International Journal of |   | March 2016 |
|   | N.Madhan Raj | Emission | Characteristics | using | Engineering Research & |   |   |
|   |   | Low Reactivity Fuel and Biodiesel | Technology |   |   |   |
|   |   | Blended | Nanoparticles in | Diesel |   |   |   |   |   |
|   |   | Engine |   |   |   |   |   |   |   |   |   |   |
| 2 | B. Gautham | Feasibility Study on Waste Heat | International Journal of Energy, |   | March 2016 |
|   |   | Recovery In IC Engine for | Environment and Economics |   |   |
|   |   | Operating Triple Fluid Absorption |   |   |   |   |   |
|   |   | Refrigeration System |   |   |   |   |   |   |   |
| 3 | N. Madhan Raj | Investigation | on | aluminium oxide | Journal | of | Chemical | and | April 2016 |
|   |   | nano particles blended diesel fuel | Pharmaceutical Research |   |   |
|   |   | combustion, | performance |   | and |   |   |   |   |   |
|   |   | emission characteristics of a diesel |   |   |   |   |   |
|   |   | engine |   |   |   |   |   |   |   |   |   |   |
| 4 | E.Saravanakumar | Heat transfer | enhancement | of | Journal | of | Chemical | and | April 2016 |
|   | N. Madhan Raj1 | thermic fluid by using nanofluids | Pharmaceutical Research |   |   |
|   |   | in radiator |   |   |   |   |   |   |   |   |   |
| 5 | P.Karthik Selvan | Experimental | and mathematical | Journal | of | Chemical | and | April-June |
|   |   | modeling in a DICI engine with | Pharmaceutical Sciences |   | 2016 |
|   |   | various combustion chambers |   |   |   |   |   |   |

C). Research Presentations by students in National and International Conferences/ symposiums/ workshops:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sl. | Name of | Title of the | Name of the | National/ | Venue | Date |
| No. | Student | paper | Conference/ | International |   |   |
|   |   |   | symposium/ workshop |   |   |   |
|   |   |   |   |   |   |   |

D) National and International Conferences/ symposiums/ workshops attended by the students:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sl. | Name of | Name of the Conferences/ | National/ | Venue | Date |
| No. | Student | symposiums/ workshops | International |   |   |
|   |   |   |   |   |   |
|   |   |   |   |   |   |

**4)Sponsorship details of faculty and students:**

**I)Sponsorship for faculty members:**

A)Faculty sponsored for presentation in National Conferences/ symposiums/ workshops: Nil

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sl. | Name of the | Date | Title of the Paper | Name of the | Venue | Sponsorship |
| No | Faculty |   |   | Conferences/ |   | Amount(Rs.) |
|   |   |   |   | symposiums/ |   |   |
|   |   |   |   | workshops |   |   |
|   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |

B) Faculty sponsored for presentation in International Conferences/ symposiums/ workshops: Nil

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sl. | Name of | Date | Title of the Paper | Name of the | Venue | Sponsorship |
| No. | the Faculty |   |   | Conferences/ |   | Amount(Rs.) |
|   |   |   |   | symposiums/ workshops |   |   |
|   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |

C) Faculty sponsored for attending National Conferences/ symposiums/ workshops: Nil

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sl. | Name of the | Date | Name of the Conference/ | Venue | Sponsorship |
| No | Faculty |   | symposium/ workshop |   | Amount(Rs.) |
|   |   |   |   |   |   |
|   |   |   |   |   |   |

**II)Sponsorship for Students:**

A)Students sponsored for presentation in National Conferences/ symposiums/ workshops:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sl. | Name of the | Date | Title of the | Name of the | Venue | Sponsorship |
| No. | Faculty |   | paper | Conference/ |   | Amount(Rs.) |
|   |   |   |   | symposium/ |   |   |
|   |   |   |   | workshop |   |   |
|   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |

B) Students sponsored for presentation in International Conferences/ symposiums/ workshops:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sl.No | Name of the | Date | Title of the | Name of the | Venue | Sponsorship |
|   | Faculty |   | paper | Conference/ |   | Amount(Rs.) |
|   |   |   |   | symposium/ workshop |   |   |
|   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |

C) Students sponsored for attending national Conferences/ symposiums/ workshops:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sl.No | Name of the | Date | Name of the | Venue | Sponsorship |
|   | Faculty |   | Conference/ |   | Amount(Rs.) |
|   |   |   | symposium/ workshop |   |   |
|   |   |   |   |   |   |
|   |   |   |   |   |   |

**5)Research cell(s) /area(s) of research in the department:**

**Faculty members carry out research in the following fields:**

Fluid Mechanics & Machinery, Heat & Mass transfer, Thermodynamics, Composites, Machinability study, Optimization, Tribology, Mechanical behaviour of Engineering Materials, Vibration, I C engines, Heat transfer equipments, Super plastic formation, Friction stir welding, Non-ferrous metal joining processes, metal matrix composites, tribological characterization, multi-layer coating, FEM, Material Characterization, Surface Engineering, Polymeric Materials, Metal Casting, Fluid Power, Mechatronics.

**6)Consultancy work in the department:**

[i]Thermal Engineering lab = Rs. 5,09,200/- (Rupees Five Lakh nine thousand and two hundred Only)

[ii]Western Thomson India (P) Ltd. = Ritz Car worth 3Lakhs + 1 Lakh

[iii]Machine Shop = Rs.17,500/- (Rupees Seventeen thousand and five hundred only)

**7)Patent information:**

|  |  |
| --- | --- |
| **Research Coordinator** | **Head of the Department** |