

MECHANICAL

ENGINEERING



E-MAGAZINE

2014-2015

Department achievements:

- The Mechanical Engineering Department U.G program has been provisionally granted accreditation for 2 years by NBA from 06-08-2014 .
- The Mechanical Engineering Department has been recognized as Research Department by Anna University – Chennai.

Faculty achievements:

Dr. D. Valavan (Principal)

International Conference

1. Emission Analysis of Pongamia Bio Diesel in CI Engine with variable Compression Ratio, Proceeding of the International Conference on advances in Bio Technology (ICABCMS-15), held at SCT, Namakkal, March 13-14, **2015**.

International Journals

1. Valavan.D, Balasundaram.R, Baskar.N, “ Heuristic Based Approach for BI-Criteria Optimization of Minimizing Makespan and Total Flow Time of Flow shop Scheduling”, International Journal of Mechanical & Mechatronics Engineering IJMME-IJENS Vol:14 No:02, pp 1-11, **2014**. ISSN :2077-124X(online), 2227-2771(Print). (IF- 1.504), Annexure-II of Anna University **Indexed in Scopus**
2. Valavan.D, Balasundaram.R, Baskar.N, “Minimizing Total Flow Time In Permutation Flowshop Scheduling by Two-Phase Approach”, International Review of Mechanical Engineering (IREME) Vol:8 No:03, pp 631-637, 2014. ISSN : 1970-8742(online), 1970-

8734(Print). May-2014 Annexure – II of Anna University **Indexed in Scopus and cited by 1**

3. Valavan.D, Chandrasekar.M, Rajkumar.S, “A review on the thermal regulation techniques for non integrated flat PV modules mounted on building top” Elsevier – Energy and Buildings November 2014. Annexure – I of Anna University **Cited by 1 and indexed by web science**

Dr. G.Jayaprakash (Head of Department):

1. Dr.G.Jayaprakash, Prof.& Head, Mechanical Engineering Department delivered a lecture titled “Kinematics of Linkage Mechanisms” in Anna University::Chennai sponsored FDTP on Kinematics of Machinery held in K.Ramakrishnan College of Engineering, Trichy on 25.12.2014.
2. Dr.G.Jayaprakash, Prof.& Head, Mechanical Engineering Department delivered a lecture titled “Robot programming and languages” in Anna University::Chennai sponsored FDTP on Robotics held in K.Ramakrishnan College of Engineering, Trichy on 23.06.2014.
3. Dr.G.Jayaprakash , Prof & Head, Mechanical Engineering Department has contributed for the book titled, “Automation, Production and Computer Integrated Manufacturing” of Pearson publication.
4. Dr.G.Jayaprakash , Prof & Head, Mechanical Engineering Department has been selected as reviewer for the international conference “ICAD&M’14” organized by mechanical engineering department of NIT-Trichy.

International Conference

1. Thamilvanan.j1,Sarangan.j2,Dhandapani.k.p3,Jayaprakash,govindarajal4,“Experimental Investigation on the Effect of Cooling Rate after Normalizing on Mechanical Properties of t23 steel and its weldment”, International Conference on advances in Mechanical Engineering (icame-2015) University College of Engineering ,Villupuram.

2. Paper titled, "Optimal Tolerance Allocation through Tolerance Chain Identification System" has been published in the proceedings of the International Conference on Emerging Trends in Mechanical & Industrial Engineering (ICETMIE-2015) conducted in ITM University, Gurgoan on 25th June 2015.

International Journals

1. Jayaprakash, G., Sivakumar, K. and Thilak, M. "Optimization of tolerance design for mechanical assembly under thermal impact using FEA" Int. Journal of Advanced Manufacturing Technology, Vol. 72, No. 1-4, **2014**. Indexed in Web of Science
2. Thilak, M, Sivakumar. K & Jayaprakash.G. "Optimal Allocation of Machining Tolerance through Tolerance Charting", International Review of Mechanical Engineering, Vol.6, No.:6, pp.1366-1373, **2015**. Index in Scopus

Dr.N.Baskar (Professor)

International Journals

1. B.Sureshkumar, N.Baskar, Experimental Investigation of machining parameters in drilling operation using conventional and CNC machines on Titanium Alloy, International journal of Engineering and Technology, Vol , 6 No: 2 , 872-880, 2014.
2. R. Balasundaram, D.Valavan and N. Baskar, Heuristic Based Approach for BI-Criteria Optimization of Minimizing Makespan and Total Flow Shop Scheduling, International Journal of Mechanical and Mechatronics Engineering(IJMME) – IJENS, Vol.14, No:2, 1-11, 2014.
3. R. Balasundaram, D. Valavan and N. Baskar, Minimizing Total Flow time in permutation Flowshop Scheduling by Two-Phase Approach, International Journal of Mechanical and Mechatronics Engineering(IJMME) – IJENS, Vol.8, No:3, 1-11, 2014.

4. T. Deepan Bharathi Kannan, G. Rajesh Kannan, B. Sureshkumar, Dr. N. Baskar, Application of Artificial Neural Network Modelling for Machining Parameters Optimization in Drilling Operation, *Procedia Materials Science*, Vol: 5, 2014, 2242-2249
5. Balasundaram .R, Kannan .G, Baskar .N, and Siva Sankar .R, "Rule Based Heuristic Approach For Minimizing Total Flow Time in Permutation Flow Shop Scheduling", *TEHNICKI VJESNIK- TECHNICAL GAZETTE – Croatia*. Accepted for publication in Vol.22/No.1, February 2015. IF-0.62 ISSN: 1848-6339 (online), 1330-3651 (print).
6. R. Gayatri and N. Baskar, "Performance Analysis of Non-Traditional Algorithmic Parameters in machining operation", *International Journal of Advanced Manufacturing Technology*, 2015, &&:443460.
7. Annamalai, N, Sivaramakrishnan, V and **Baskar, N. 2015**, "Modeling of Cold Work Tool Steel – Bohler K110 for Enhancing Production and Quality Characteristics in Electric Discharge Machining", *International Journal of Applied Engineering Research*, Vol. 10, No. 76, pp. 225-230. (Annexure II).- **Indexed in Scopus and Google Scholar**
8. Balasundaram,R. Kannan,G. **Baskar, N.** and Siva Sankar.R. **2015** "Rule Based Heuristic Approach For Minimizing Total Flow Time in Permutation Flowshop Scheduling", *TEHNICKI VJESNIK-TECHNICAL GAZETTE – Croatia*. Vol.22, No.1, pp.25-32, (Annexure –I)- **Indexed in Web of Science**
9. Balasundaram, R. Valavan, D. Srinivasan, D and **Baskar, N. 2015**, "Learning Effective Dispatching Rule for Minimizing Total Flow Time in Permutation Flowshop Scheduling", *International Journal of Applied Engineering Research*, Vol. 10, No. 6, pp. 14357-14370. (Annexure – II) - **Indexed in Scopus and Google Scholar**
10. Rekha, R. **Baskar, N.** Padmanaban, K. and Venkatraman, V. **2015**, "Application of Regression Analysis and Evolutionary Algorithms for Modeling and Optimization of Cylindrical Grinding Process Parameters for the Prediction of Surface Roughness of AISI 316", *International Journal of Applied Engineering Research* , Vol. 10, No. 5, pp. 12593-12610 . - **Indexed in Scopus and Google Scholar**

11. Kannan, S. **Baskar, N.** Suresh kumar, B and Varatharajulu, M. **2015**, "Investigation On Optimum Cutting Condition in Face Milling Of Copper with HSS Cutter using Response Surface Methodology and Genetic Algorithm", International Journal of Applied Engineering Research , Vol.10(57), Spl. Issue, pp.243-247. (Annexure II) - **Indexed in Scopus and Google Scholar**
12. Kannan, S. **Baskar, N.** Varatharajulu , M. and Suresh kumar, B **2015**, "Modeling and Optimization of Face Milling Parameters on Brass Component using Response Surface Methodology and Genetic Algorithm", International Journal of Applied Engineering Research , Vol.10 (76), Spl. Issue, pp.219-224. (Annexure II) - **Indexed in Scopus and Google Scholar**
13. Varatharajulu, M. Loganathan, C. and **Baskar, N.** **2015**, "Influence of cutting parameters on burr height and burr thickness in drilling of Duplex 2205 using Solid Carbide" International Journal of ChemTech Research, Vol. 8, No. 2, pp. 768 – 777. (Annexure II) - **Indexed in Scopus and Google Scholar**
14. Varatharajulu, M. Loganathan, C. **Baskar, N** and Kannan, S. **2015**, "Influence of cutting
15. parameters on burr height and burr thickness in drilling of Duplex 2205 using High speed
16. steel" International Journal of Applied Engineering Research, Vol. 10, No. 76, pp. 381 –
17. 388. (Annexure II) - **Indexed in Scopus and Google Scholar**
18. Ramesh, K and **Baskar, N.** **2015**, "The simple Genetic Algorithm Approach for
19. Optimization of Nesting of sheet metal parts in Blanking Operation", Journal of
Advanced Manufacturing systems, Vol. 14, No. 1, pp 41-53. (Annexure-II) - **Indexed in Scopus**
20. Ramesh, K and **Baskar, N.** **2015**, "Nesting of sheet metal parts using parallel genetic algorithm", International Journal of Applied Engineering Research, Vol. 10 No.55. (Annexure-II)- **Indexed in Scopus and Google Scholar**
21. Gayatri, R. and **Baskar, N.** **2015**, "Evaluating Process Parameters of Multi-pass Turning Process using Hybrid Genetic Swarm (HGSS) Algorithm", Journal of Advanced Manufacturing systems, Vol 14, No. 4, pp. 215-233, DOI:10.1142/S0219686715500146. - **Indexed in Scopus**

22. Gayatri, R. and **Baskar, N. 2015**, "Performance analysis of non-traditional algorithmic parameters in machining operation " International Journal of Advanced Manufacturing Technology, Vol. 77, pp. 443-460. DOI 10.1007/s00170-014-6452-9. **Indexed in Web Science. Cited by 1.**

International Conference

1. Balasubramaniam, V. **Baskar, N** and Sathiya Narayanan, C. **2014**, "Optimization of electrical discharge machining parameters using artificial neural network with different electrodes", 5th International & 26th AIMTDR 2014', 12th-14th December 2014, IIT Guwahati, Assam, India. pp. 152-1- 152-4. **Cited by 1.**
2. Annamalai, N. Sivaramakrishnan, V & **Baskar, N. 2014**, "Response Surface Modeling of Electrical Discharge Machining Process Parameters for EN 24 Low Alloy Steel", 5th International & 26th All India Manufacturing Technology, Design and Research Conference (AIMTDR 2014) December 12th –14th, IIT Guwahati, Assam, India. pp 150-1 to 150-6, ISBN: 978-8-19274-612-8.
3. Rekha, R and **Baskar, N. 2014** "NN-GA Based Modelling and Optimization of Cylindrical Grinding Process", 5th International & 26th All India Manufacturing Technology, Design and Research Conference (AIMTDR 2014) December 12th–14th, 2014, IIT , Guwahati, Assam, India , 269-1- 269-5
4. Kannan, S. **Baskar, N** and Suresh kumar, B. **2014**, "Selection of Machining Parameters in Face milling Operations for Copper Work piece Material Using Response Surface Methodology and Genetic Algorithm", Proceeding, 5th International & 26th All India Manufacturing Technology (AIMTDR 2014), Design and Research Conference (ISBN: 978-8-19274-610-4), IIT Guwahati, Assam, India. pp. 137/1-137/6.

5. Gayatri, R. **Baskar, N** and Malarvizhi, M, **2014**, “Process Parameter Optimization in Multi-Pass Turning Operation using Hybrid Firefly Swarm Algorithm”, 5th International & 26th All India Manufacturing Technology, Design and Research Conference, Indian Institute of Technology, Guwahati, Dec 12-14, 2014, Proceedings of AIMTDR 2014 ISBN : 978-8-19274-612-8.
6. Gayatri, R and **Baskar, N. 2014**, “Evaluating Process Parameters of Multi-pass Turning Process using Hybrid Genetic Swarm (HGSS) Algorithm”, International Conferences on Advances in Design & Manufacturing, National Institute of Technology, Trichy, Dec 5-7, 2014 Vol 2:568-573.
7. R.Rekha, N.Baskar, “Regression Modeling and Simulated Annealing Approach for Multi-Objective Optimization of Cylindrical Grinding Process Parameters”. International Conference on Advances in Design and Manufacturing (ICAD&M'14 National Institute of Technology, Trichy, Dec 5-7, **2014** , 1515-1520.
8. S.Premalatha and N.Baskar , An Analysis of Hybrid Data Mining Simulated Annealing Algorithm (HDSA) For Single Machine Scheduling Problem, International Conferences on Advances in Design & Manufacturing, National Institute of Technology, Trichy, Dec 5-7, **2014** , 1413-1419.
9. J. Sathishkumar, V. Shrinivasan, P. Prakash, M. Ganesan and N. Baskar , Experimental Investigations and Analysis of Machining Parameters for Machining EN8 Material, International Conferences on Advances in Design & Manufacturing, National Institute of Technology, Trichy, Dec 5-7, **2014** , 286-289.
10. R.Rekha, N.Baskar, “NN-GA based modeling and optimization of cylindrical grinding process.” 5th International & 26th All India Manufacturing Technology, Design and Research Conference (AIMTDR 2014) December 12th–14th, **2014**, IIT Guwahati, Assam, India

11. R.Gayatri and N.Baskar, Evaluating Process Parameters of Multi-Pass Turning Process Using Hybrid Genetic Simulated Swarm (HGSS) Algorithm, International Conference on Advances in Design & Manufacturing, National Institute of Technology, Trichy December 5-7, volume No.2 , 2014, , 568 – 573.
12. S.Premalatha and N.Baskar, An Analysis of Hybrid Data Mining Simulated Annealing Algorithm (HDMA)for Single Machine Scheduling, , International Conference on Advances in Design & Manufacturing, National Institute of Technology, Trichy December 5-7, volume No.3 , 2014, , 1413 – 1418.
13. *R.Gayatri, N.Baskar and M.Malarvizhi* , Process Parameter Optimization in Multi-Pass Turning Operation using Hybrid Firefly Swarm Algorithm , 5th International and 26th All India Manufacturing ,Technology, Design and Research Conference , AIMTDR 2014 , Machining, IIT, Guwahati, December 12-14 , 2014, 112-1 – 112-7.
14. *S. Kannan, N. Baskar and B. Sureshkumar*, Selection of Machining Parameters in Face Milling Operations for Copper Work Piece Material Using Response Surface Methodology and Genetic Algorithm , 5th International and 26th All India Manufacturing ,Technology, Design and Research Conference , AIMTDR 2014 , Machining, , IIT, Guwahati , December 12-14, 2014, 137-1 – 1137-6.
15. *N. Annamalai, V. Sivaramakrishnan and N.Baskar*, Response Surface Modeling of Electric Discharge Machining Process Parameters for EN 24 Low Alloy Steel , 5th International and 26th All India Manufacturing ,Technology, Design and Research Conference , AIMTDR 2014 , Advanced Manufacturing - I , , IIT, Guwahati, December 12-14,2014, 150-1 – 150-7.
16. *V.Balasubramaniam, N.Baskar and C.Sathiya Narayanan*, Optimization of Electrical Discharge Machining Parameters using Artificial Neural Network with Different Electrodes , 5th International and 26th All India Manufacturing ,Technology, Design and Research Conference , AIMTDR 2014 , Advanced Manufacturing - I , , IIT, Guwahati , December 12-14,2014, 152-1 – 152-4.
17. Annamalai, N, Sivaramakrishnan, V & **Baskar, N 2015**, “Modeling of Cold Work Tool Steel-Bohler K110 for Enhancing Production and Quality Characteristics in Electric Discharge Machining”, International Conference of Trends in Engineering & Technology,

Science & Humanities and Management, (ICTETSHAM'15), Tamizhan College of Engineering and Technology, Kanyakumari, Tamilnadu, February 19th & 20th.

BOOK CHAPTERS:

1. Deepan Bharathi.T Kannan, G. Rajesh Kannan, Sureshkumar, B. and **Baskar, N. 2014**, "Application of Artificial Neural Network Modeling for Machining Parameters Optimization in Drilling Operation", Procedia Materials Science, Vol. 5, pp. 2242 – 2249. - **Indexed in Google Scholar.**

Mr.M.R Anantha Padmanaban

International Journals

1. Anantha Padmanaban, M.R, Devakumaran, K., Ghosh, P.K, "Variation of Chemical Composition in Multi Pass Conventional and Pulsed Current Gas Metal Arc Weld Deposition on High Strength Low Alloy Steel under Different Groove Size", Defence Technology, pp. 147-156, Vol. 11, Issue. 2, Feb **2015**.

Ms.R.Rekha (Assistant Professor)

International Journals

1. A. Palanisamy, R.Rekha, S.Sivasankaran, C.SathiyaNarayanan , "Multi-Objective Optimization of EDM Parameters Using Grey Relational Analysis for Titanium Alloy (Ti–6Al–4V)" Applied Mechanics and Materials Vols. 592-594 (**2014**).

2. Rekha, R. Baskar, N. Padmanaban, K. and Venkatraman, V. **2015**, "Application of Regression Analysis and Evolutionary Algorithms for Modeling and Optimization of Cylindrical Grinding Process Parameters for the Prediction of Surface Roughness of AISI 316", ,International Journal of Applied Engineering Research , Vol. 10, No. 5, pp. 12593-12610 . - **Indexed in Scopus and Google Scholar**

International Conference

1. Rekha, R and **Baskar, N. 2014** "NN-GA Based Modelling and Optimization of Cylindrical Grinding Process", 5th International & 26th All India Manufacturing Technology, Design and Research Conference (AIMTDR 2014) December 12th–14th, 2014, IIT , Guwahati, Assam, India , 269-1- 269-5.
2. R.Rekha, N.Baskar, "Regression Modeling and Simulated Annealing Approach for Multi-Objective Optimization of Cylindrical Grinding Process Parameters". International Conference on Advances in Design and Manufacturing (ICAD&M'14 National Institute of Technology, Trichy, Dec 5-7, **2014** , 1515-1520.

Ms. A. Mercy Vasan (Assistant Professor)

National Journals

1. David Andrews V.Raghuvaran S.,Mercy Vasan A."Comparative Study and Analysis of pollution Control in Air Filter and Exhaust Unit of Diesel Engine Vehicles using Titanium Dioxide as Nanoparticle", Journal Of Basic and Applied Engineering Research, ISSN:2350- 0077,Vol.3,No.7, pp.560-563, 2015.

International Journals

1. Vivekanandan M. Mercy Vasan A.Gopalakrishnan V. “,3D CFD Simulation of a Circulating Fluidized bed boiler riser and cyclone”,DD-25,International Journal Of Scientific and Engineering Research,TITCON’15 ,ISSN:2229-5518,Vol.6.**2015. Indexed in Google Scholar**
2. A.Mercy Vasan,V.Gopalakrishnan,N.Prasanna,R.Ramachandran,” Development of an optimum CFBC Cyclone separator with REPDS for low pressure drop and denudation rates using CFD”,International Journal of Applied Engineering Research ISSN 0973-4562 Volume 10, Number 13 (**2015**)© Research India Publications :::
<http://www.ripublication.com> (Annexure II)
3. A.Mercy Vasan,V.Gopalakrishnan, R.Cyril Joshua,N.Prasanna,C.Ganesh,” Development of Variable Load Pneumatic Coal Feeder using Eductor”,International Journal of Applied Engineering Research ISSN 0973-4562 Volume 10, Number 13 (**2015**)© Research India Publications <http://www.ripublication.com> (Annexure II)
4. A.Mercy Vasan,V.Gopalakrishnan, N.Prasanna, S.Gowtham,”Cfd analysis of multiphaseTransient flow in a cfb riser”,International Journal of Applied Engineering Research, ISSN 0973-4562 Vol. 10 No.85 (**2015**)© Research India Publications; <http://www.ripublication.com/ijaer.htm> (Annexure II).

Mr.M.Ganesan (Assistant Professor)

International Journals

1. Antony luki. A and Ganesan. M, (**2014**) “Flow Analysis and Characteristics Comparison of Double Pipe Heat Exchanger Using Enhanced Tubes”, IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE), e-ISSN: 2278-1684, p-ISSN: 2320-334X pp. 16-21 - **Impact Factor - 1.753 - Indexed in Google Scholar - Cited by 4**

2. M. Ganesan, S. Karthikeyan and N. Karthikeyan, **(2014)** “Prediction and Optimization of Cylindrical Grinding Parameters for Surface Roughness Using Taguchi Method”, IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE) e-ISSN: 2278-1684, p-ISSN: 2320-334X pp. 39-46 - **Impact Factor - 1.753 - Indexed in Google Scholar - [Cited by 2](#)**
3. N. Sathiya Narayanan, M. Ganesan, V. Prem Kumar, P. Vijayakumar and N. Baskar, **(2015)** “Constrained Machining Parameters Optimization Of En8 Steel Using Taguchi Approach”, International Journal of Innovative Research in Technology, Volume 1, Issue No. 11, pp. 262-267, ISSN: 2349-6002. **Impact Factor - 2.1**
4. P. Reginald Elvis, S. Karthikeyan, **M. Ganesan**, S. Paramaguru, K. Amarnath, **(2015)** “ A Study On Influence Of Drilling Parameters On Surface Roughness In Machining Of Aa2219- Tib₂/Zrb₂ In-Situ Metal Matrix Composite”, International Journal of Innovative Research in Technology, Volume 1, Issue No. 11, pp. 412-418, ISSN: 2349-6002. **Impact Factor - 2.1**
5. N. Sathiya Narayanan, M. Ganesan, V. Prem Kumar, P. Vijayakumar, N. Baskar, **(2015)** “Application Of Taguchi Method For Optimizing Surface Roughness In Cnc Turning Of En 8 Steel”, International Journal of Innovative Research in Technology, Volume 1, Issue No. 11, pp. 440-445, ISSN: 2349-6002. **Impact Factor - 2.1**
6. Ganesan. M and Marimuthu. P, **(2015)** “Prediction of Axial Shortening on Friction Welding of AISI 4340 Steel Joints using Design of Experiments”, International Journal of Applied Engineering Research, Vol. 10, No. 55, pp. 3927-3931, ISSN: 0973-4562.
Annexure - II - Indexed in Scopus.
7. Ganesan. M and Marimuthu. P, **(2015)** “Effect of Axial Shortening on Friction Welded AISI 304L Stainless Steel Joints”, International Journal of Applied Engineering Research, Vol. 10, No. 55, pp. 4044-4047, ISSN: 0973-4562. **Annexure - II - Indexed in Scopus.**

International Conference

1. J. Sathishkumar, V. Shrinivasan, P. Prakash, M. Ganesan and N. Baskar, "Experimental Investigations and Analysis of Machining Parameters for Machining EN8 Material", International Conferences on Advances in Design & Manufacturing, National Institute of Technology, Trichy, Dec 5-7, **2014** , 286-289.
2. Ganesan. M and Marimuthu. P. Prediction of Axial Shortening on Friction Welding of AISI 4340 Steel Joints using Design of Experiments - International Conference on Advances in Applied Engineering and Technology (ICAAET 2015), 14th -16th May **2015**, Syed Ammal Engineering College, Ramanathapuram, Tamilnadu, India. Paper id. 747.
3. Ganesan. M and Marimuthu. P. Effect of Axial Shortening on Friction Welded AISI 304L Stainless Steel Joints - International Conference on Advances in Applied Engineering and Technology (ICAAET 2015), 14th -16th May **2015**, Syed Ammal Engineering College, Ramanathapuram, Tamilnadu, India. Paper id. 991.

Mr.M.Sridharan (Assistant Professor)

International Journals

1. M.Sridharan, E.Sivaprakash & S.Naveenkumar , "Experimental Investigation of Photovoltaic Bifacial Solar Cells with Thermal Air and Water Collectors" International Journal of Applied Engineering Research ISSN 0973-4562 (**2015**), PP.11362-11365. Indexed in **Google Scholar**.
2. R.Selvendiran, D.Manikandan, K.Suresh Babu, M.Sridharan, "A Comparative Study On Productivity Enhancement In Single Slope Single Basin Solar Still" , International Journal of Applied Engineering Research ISSN 0973-4562 (**2015**), PP.11405-11409.Indexed in **Google Scholar**.
3. M Sridharan, N Prasanna, E SivaPrakash and R VaradhaRajan "Experimental Investigation on Series Solar Flat Plate Collectors with Variable Mass Flow Rates", International Journal of Innovative Research in Science, Engineering and Technology,

Volume 3, Special Issue 3, March **2014**, ISSN (Online): 2319 – 8753 and ISSN (Print): 2347 – 6710. - Indexed in **Google Scholar**.

4. M Sridharan, E SivaPrakash, RC Joshua, S Karthikeyan "Performance Improving Methods for Series Solar Flat Plate Collectors and Introduction of New Verification Tool' , International Journal of Innovative Research in Science, Engineering and Technology, Volume 3, Special Issue 3, March **2014**, ISSN (Online): 2319 – 8753 and ISSN (Print): 2347 – 6710. - Indexed in **Google Scholar**.
5. M. Sridharan, E. Siva Prakash, N. Prasanna, "Steady State Analysis on Efficiency Improving Methods for Series Flat Plate Solar Water Heaters", Applied Mechanics and Materials, Vols. 592-594, pp. 1784-1788, Jul. **2014**, Indexed in **Scopus**.

International Conference

1. M.Sridharan, "MATLAB simulation of transparent glass PV/T hybrid water collectors" **IEEE Explore Library**, INSPEC Accession Number: 15490865, Pages: 1 – 7,**2015**

Mr. S. Sathiya Narayanan (Assistant Professor)

International Conference

1. S. Sathyanarayanan, "Experimental Investigation Of Capillary Pumped Loop (Cpl) System In Enhancing Electronic Component Cooling" in the proceedings of "ICARET 2014" Organized by Arm College Of Engineering, Chennai on 18th April, **2014**-19th April, 2. ISBN 978-81-9089A80-6-5
2. Performance and Emission Analysis of an Alternate Fuel, International Journal of Mechanical, Civil, Automobile and Structural Engineering (IJMACS), ISSN 2395-6755, Volume 1, Issue 1, April 2015

3. Experimental Study on SI Engine Fuelled with Petrol and n-Butanol Blends, KrishtiSanskriti Publications, Volume 2, Number 7, April-June 2015, pp 535-539, Print ISSN 2350-0077, Online ISSN 2350-0255
4. CFD Analysis of a Heat Exchanger used in a Sugar Mill, 2nd International Conference on Trends in Technology for convergence held on 8th and 9th April 2015, Published by IJERT.

Mr. N. Sathiya Narayanan (Assistant Professor)

1. N. Sathiya Narayanan, "Studies on Thermo-Chemical Characterisation of Hybrid Bio Bass", International Journal of Innovative Research in Science, Engineering and
2. N. Sathiya Narayanan, M. Ganesan, V. Prem Kumar, P. Vijayakumar and N. Baskar, **(2015)** "Constrained Machining Parameters Optimization Of En8 Steel Using Taguchi Approach", International Journal of Innovative Research in Technology, Volume 1, Issue No. 11, pp. 262-267, ISSN: 2349-6002. Impact Factor - 2.1
3. N. Sathiya Narayanan, M. Ganesan, V. Prem Kumar, P. Vijayakumar, N. Baskar, **(2015)** "Application Of Taguchi Method For Optimizing Surface Roughness In Cnc Turning Of En 8 Steel", International Journal of Innovative Research in Technology, Volume 1, Issue No. 11, pp. 440-445, ISSN: 2349-6002. Impact Factor - 2.1

International Conferences

1. N Sathiya Narayanan, "Optimization of drilling parameters using firefly algorithm" in the proceedings of "ICRAMID" Organized by Ponglesy College of Engineering, Nagarcoil on 08 Mar **2014**.
2. N Sathiya Narayanan, "Studies On Thermo-Chemical Characterization Of Hybrid Bio-Mass" in the proceedings of "ICIET'14" Organized by K.L.N College of Engineering, Madurai on 21 Mar **2014**. Impact Factor 1.672

3. N Sathiya Narayanan, "Experimental Investigation Of Capillary Pumped Loop (Cpl) System In Enhancing Electronic Component Cooling" in the proceedings of "ICARET 2014" Organized by ARM College of Engineering and Technology, Chennai on 18 Apr **2014**.
4. N Sathiya Narayanan, "Introduction of Helical Fluid flow through double start screw type heat exchanger design" in the proceedings of "SET" Organized by VIT University, Vellore on 06 May **2014**.
5. N Sathiya Narayanan, "Constrained Machining Parameters Optimization of EN 8 Steel Using Taguchi Approach" in the proceedings of "INCAPIE'15" Organized by Department of Production, NIT-Trichy on 20-Feb-**2015**.
6. N Sathiya Narayanan, "Application of Taguchi Method for optimizing surface Roughness in CNC Turning of En 8 Steel" in the proceedings of "ICABCMS 2015" Organized by Selvam College of Technology on 13-Mar-**2015**.
7. N Sathiya Narayanan, "Lean Manufacturing Principles for Reducing Lead time of steering knuckle production" in the proceedings of "ICABCMS 2015" Organized by Selvam College of Technology, Namakkal on 14-Mar-**2015**.
8. N Sathiya Narayanan, "Modelling and Optimization of EDM Process Parameters on Machining of Al 6061-B4C Metal Matrix Composites using RSM" in the proceedings of "AMMA 2015" Organized by Dept. of Metallurgical and Materials Engineering, NIT-Trichy on 10-Apr-**2015**.

Mr. P. Reginald Elvis (Assistant Professor)

International Journal

1. P. Reginald Elvis, S. Karthikeyan, M. Ganesan, S. Paramaguru, K. Amarnath, **(2015)**
" A study on influence of drilling parameters on surface roughness in machining of aa2219- tib₂/zrb₂ in-situ metal matrix composite", international journal of innovative

research in technology, volume 1, issue no. 11, pp. 412-418, issn: 2349-6002. **Impact factor - 2.1**

2. Participated in FDP on "Finite Element Analysis" conducted by Centre For Faculty Development, Anna University Chennai – 600025, at MIT Campus, Anna University, from 4th to 10th December 2014.

Mr.S. Karthikeyan

International Journals

1. P. Reginald Elvis, S. Karthikeyan, M. Ganesan, S. Paramaguru, K. Amarnath, (2015) " A Study On Influence Of Drilling Parameters On Surface Roughness In Machining Of Aa2219- Tib₂/Zrb₂ In-Situ Metal Matrix Composite", International Journal of Innovative Research in Technology, Volume 1, Issue No. 11, pp. 412-418, ISSN: 2349-6002. **Impact Factor - 2.1**
2. M. Ganesan, S. Karthikeyan and N. Karthikeyan, (2014) "Prediction and Optimization of Cylindrical Grinding Parameters for Surface Roughness Using Taguchi Method", IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE) e-ISSN: 2278-1684, p-ISSN: 2320-334X pp. 39-46 - **Impact Factor - 1.753 - Indexed in Google Scholar - [Cited by 2](#)**

Mr.A.Maria Jackson

International Conference

1. A.Maria Jackson, Dr.R.Panneer, "Comparative Study of Chosen Tolerance Analysis for Development of New Framework" in the proceedings of "ICMME 15" Organized by

Department of mechanical Engineering, Sri Chandra Sekara Maha Vidyalaya,
Kancheepuram on 03-Apr-**2015**.

2. Dr.R. Panneer, A.Mariajackson(2015), "Comparative Analysis of chosen Tolerance Stack up Methods and Development of an improved Tolerance Analysis Method" Applied Mechanics and Materials Vols. 813-814 (**2015**) pp 954-958, © (2015) Trans Tech Publications, Switzerland - Indexed in **Google Scholar**

Mr.M.Sriram Prasanth

National Conference

1. "Experimental Studies On Biogas Generation By Codigestion Of Ipomea Carnea With Cow Dung" Teqip-li Sponsored National Conference On Issues In Power Quality And Renewable Energy System-Cipres'14 organised by the Department Of Electrical And Electronics Engineering, BIT campus ,Anna university, Tiruchirappalli on 29th -30th April **2014**.

International Conference

1. "Overview Of Biogas Technology" In The International Conference On Green Technology For Environmental Pollution Prevention Control (ICGTEPC-2014) held at National Institute of Technology, Tiruchirappalli on 27th -29th September **2014**.

Mr. B Johnson Joseph Jebakumar

International Journals

1. B. Johnson, L. Godson Asirvatham, C.T. Muthiah, "Experimental Investigation on natural convective heat transfer coefficient of Ag/water nanofluids in an enclosure", IJMER, **2014**, Impact Factor: 1.227

International Conference

1. B. Johnson, L. Godson Asirvatham, C.T. Muthiah, "Experimental Investigation on natural convective heat transfer coefficient of Ag/water nanofluids in an enclosure" in the proceedings of "International conference on advances in engineering and management" Organized by Revo Technologies and Enterprises on **2014**. ICAEM2014 page no. 20

Mr.E.Navin Prasad

International Journals

1. Navin prasad E, Janakiram S, Prabu T, Sivasubramaniam S, "Design and Development of Horizontal Small wind Turbine blade for Low Wind Speeds", international journal of engineering science and advanced technology, pp. 075-084, vol. 4, issue. 1,**2014**.

International Conference

1. Navin Prasad E, "Value Analysis and Reengineering (Energy Analysis of Building by using HAP Software)" in the proceedings of "Emerging Paradigms in Management Research" Organized by Vivekanandha Institute of Management Studies, Tiruchengode.,**2014**

National Conferences

1. Navin Prasad E, "Design and Development of Horizontal Wind Turbine Blade for Low Wind Speeds" in the proceedings of "National Conference on New and Renewable Energy Technologies" Organized by Mechanical Engineering Department, PSG College of Technology on May-**2014**.

Mr. J. Sivasubramanian

International Journals

1. J.Sivasubramanian, A.S.Praveen, S.Suresh, J.Sarangan, S.Raghuraman, "Microstructure And Characterization Of Thermal Sprayed Ni-Cr/Al₂O₃ Coating", International Journal of ChemTech Research, pp. 1948-1951, Vol. 6, Issue. 3, June **2014**, Impact Factor: 0.5. Indexed by Scopus.
2. Sivasubramanian j,A.S.Praveen, S.Suresh, J.Sarangan, "Erosion Wear Behaviour Of Plasma Sprayed NiCrSiB/Al₂O₃ coating", International journal of refractory metal and Hard materials, pp. 209-218, Vol. 52, June 2015, Impact Factor: 1.989, Indexed by Scopus.

International Conference

1. Sivasubramanian j,a.s. Praveen, S.Suresh, J.Sarangan, S.Raghuraman, "Microstructure and Characterization Of Thermal Sprayed Ni-Cr/Al₂O₃ Coating" in the proceedings of "ICMCT" Organized by Dept. Of Material Science, VIT University on 10 Mar **2014**.

Mr.S. Paramaguru

National Conferences

1. Paramaguru.S, Varadharajan.R, "Snake Robotics" in the proceedings of "SPARK'11" Organized by Roever Engineering College, Perembalur. **FIRST PRIZE, 2014**.

International Journal

1. P. Reginald Elvis, S. Karthikeyan, M. Ganesan, S. Paramaguru, K. Amarnath, **(2015)**
“ A Study On Influence Of Drilling Parameters On Surface Roughness In Machining Of Aa2219- Tib₂/Zrb₂ In-Situ Metal Matrix Composite”, International Journal of Innovative Research in Technology, Volume 1, Issue No. 11, pp. 412-418, ISSN: 2349-6002. **Impact Factor - 2.1**

Mr.K. Amarnath

International Journal

1. P. Reginald elvis, s. Karthikeyan, M. Ganesan, s. Paramaguru, K. Amarnath, (2015) “ a Study on Influence of Drilling Parameters on Surface Roughness in Machining of aa2219- tib₂/zrb₂ in-situ metal matrix composite”, International Journal of innovative research in technology, volume 1, issue no. 11, pp. 412-418, issn: 2349-6002. **Impact factor - 2.1**

Department Activities:

Technical Symposium

Prudentia'14 was a resounding success and the Department of Mechanical Engineering hosted a variety of interesting technical events on the 18th and 19th of September, 2014.

1. “Manifesto”, an event organized by M.Balachandran and G,Jagadeesh drew about 30 participants.
2. “Hovercraft”, organized by R.Srinivasan and K.S.Arunraj had 18 participants.
- 3.” Prakriya”, organized by J.F.Christie and R.Raja Kumaran attracted 89 participants.
- 4.”Wasser Dronz”, organized by S.V.Anirudh and M.Andrew Hudson Raj had 86 participants.

5. Paper presentation contest received several competent technical papers .

The events were well attended by students from several neighbouring colleges and demonstrated the organizing skills of our students.

SPORTS:

M.Prasad, of II year Mechanical, Section "B", made us proud by representing the Anna University team in the All India inter-University football tournament, at Gwalior in December 2014.

Seminars/ Conferences/ Training Programs/
Workshop/Faculty Development Programs organized.

Short term course on 3D modeling software (Pro/E)

Pro/E course was conducted by the Department of Mechanical Engineering of Saranathan College of Engineering from 08-12-2014 to 12-12-2014 for the benefit of our students. This course started with the brief introduction about design, manufacturing process, followed by fundamental concept of sketch, part modeling, assembly, detailing, plotting and industrial applications. In this course 25 students of our second year Mechanical Engineering department have participated and got benefited.



Staff members who handled this course

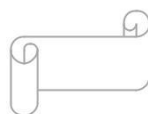
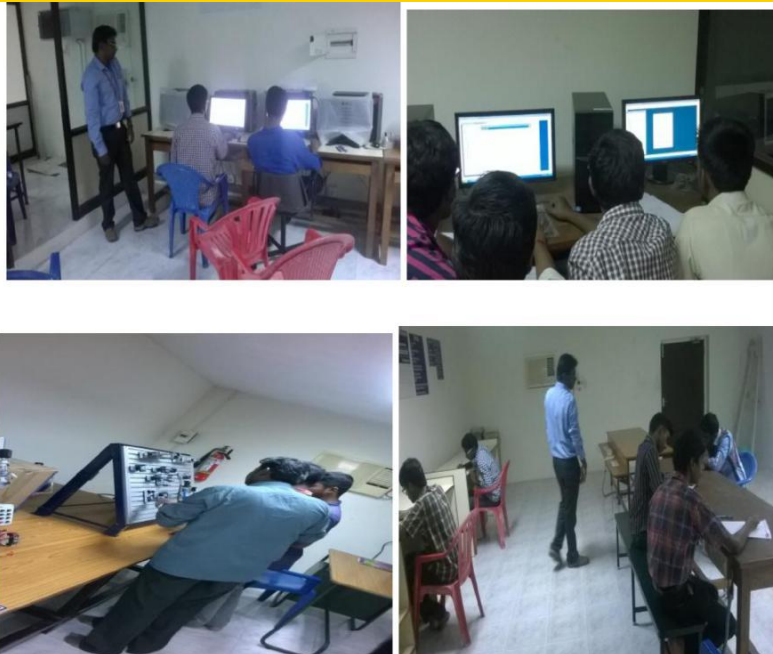
1. Mr. S. Karthikeyan - Asst. Prof. / Mech.
2. Mr. M. Ganesan - Asst. Prof. / Mech.
3. Mr. S. Paramaguru - Lecturer / Mech.
4. Mr. K. Amarnath - Lecturer / Mech.

Short term course on Industrial Automation

Industrial Automation course was conducted by the Department of Mechanical Engineering of Saranathan College of Engineering on 15th & 16th December 2014 for the benefit of our students. This course dealt with hydraulic & pneumatic circuit formation and simulation of sequencing circuits using Automation Studio software and in PLC.

In this course 25 students of third year Mechanical Engineering department participated. Staff members who handled this course:

1. Mr. R. S. Baliah - Prof. / Mech.
2. Mr. N. Sathiya Narayanan - Asst. Prof. / Mech.
3. Mr. P. Reginald Elvis - Asst. Prof. / Mech.
4. Mr. P. Sasikanth - Lab. Asst / Mech.





Two day FDP on “Enhancing the Competency of Teaching”

A two day Faculty Development Program on "Enhancing the Competency of Teaching", organized by the Department of English to our faculty members was attended by the following faculty members.

1. Mr.A.Maria Jackson
2. Mr.K.Amarnath
3. Mr.P.Reginald Elvis
4. Mr.B.Johnson
5. Mr.S.Paramaguru

Course on ANSYS 11.0

Short Term Course on ANSYS 11.0 Sessions was conducted from 15.12.2014 to 19.12.2014 The objective was to

- To trigger innovative and creativity power of the students in the areas of mechanical system analysis.
- To give introduction on various platforms of ANSYS 11.0.
- To bridge gap between theoretical knowledge & practical knowledge.

Course Content:

Introduction to Ansys-2-D & 3-D Analysis-Structural Analysis-Beams-Variou structural components-Thermal Analysis-Fins & Various Thermal Components-Couple field analysis-Harmonic & Modal analysis-Axi-symmetric analysis.

Coordinators:

1. Mr.R.Kumar Assistant professor
2. Mr.M.Sridharan Assistant professor
3. Mr.A.Ranjith Raj Assistant professor
4. Mr.Johnson Assistant professor.

Skilled Assistant:

Mr.S.Paramaguru Lecturer.

Overall Coordinator:

Dr.G.Jayaprakash (Hod/Mech)

Visit to Automobile Laboratory at NIT Trichy:

Third year Mechanical Engineering students visited the automobile lab of NIT Trichy on 12-03-15. They were explained the various functions of the automobile systems by NIT Faculty.

Project EXPO:

Project EXPO was conducted for first and second year mechanical students. The expo showcased 30 projects done by third year mechanical students. Three of these projects were selected and awarded prizes.

Guest Lectures and Presentations:

S.No	Events	Date	Guest/speaker/Participants
1.	Expert Lecture on “ CNG – An Overview”	01-09-14	Mr.Jeyakumar Joshua, Retired Engineer.
2.	Expert Lecture on “ Career in Industrial Safety”	09-09-14	Mr.D.Jagan Narayanan, Manager, Vijay Inst. of Safety Training, Trichy.
3.	Expert Lecture on “	10-09-14	Dr.K.Padmanaban, CEO, PCFCT,Chennai.



	Opportunities in the field of Mechanical Engineering ”		
4.	Presentation on how to crack GATE examination	10-02-15	Mr. Phanny, Gate In Trichy (GIT) staff
5.	Autodesk Inventor – An introduction	11-02-15	GADS software education resource person.
6.	Recent trends in Welding Technology	03-07-15	Dr. Devanathan, Deputy Manager, WRI, BHEL
7.	Geometric Dimensioning and Tolerancing	11-07-15	M. Gowtham, Sr. Cad Engineer, CADD Centre, Trichy.
8.	Innovation in the field of Engineering	14-07-15	RenoldElsen, Research Scholar, NIT Trichy
9.	Mechatronics and its Applications	08-08-15	Mr. Indhusekaran, Asst. Prof., TRP Engineering College, Trichy.



Dr.Devanathan, Deputy Manager, WRI, BHEL delivered a guest lecture to our third year mechanical engineering students on the topic “Recent trends in welding technology” on 03/07/15 @ 9:30 am in our mechanical block seminar hall.



Mr. Gowtham, Sr. CAD Engineer, CAD Centre, Trichy delivered a guest lecture to our final and pre final year mechanical engineering students on the topic “Geometric Dimensioning and Tolerancing (GD&T)” on 11/07/15 @ 9:30 am in our mechanical block seminar hall.

Student Achievements:

Final year students:

Co-Curricular Activities

1. J. Sathish Kumar, V.Shrinivasan, P.Prakash of Section "B", Dept. Of. Mech.Engg., presented a paper, "Experimental Investigations and Analysis of Machining Parameters for Machining EN8 Material", at ICAD&M'14, at NIT, Trichy.
2. Constrained Machining Parameters Optimization of En8 Steel using Taguchi Approach presented by V. Prem Kumar, P. Vijaya Kumar at INCAPIE-2015 at NIT, Trichy.
3. DhineshBabu P, Karthick G, Jayasimman A, John Praveen Raj S, Kuamr R, Kevin Joseph, AnnamalaiSathapanS, BarathSundar H, attended Automeet(Dismantling and assembling of car and bike engines) at MIT Chennai during February 2015.
4. Anandharaj M, Karthikeyan L R, Ananth T, Yogeswaran, Naveen Kumar A, Praveenkumar S, Yuvaraj J, Dhiliepan R, Gunasekaran M, Thirunavukarasu M, Aravind K, Arun R, DhineshBabu P, ManzurAligan A, Kamalakannan R, Audithya R K, Arulmani S, attended a workshop on Aeromodelling at NIT Trichy in March.
5. Karthikeyan L R, Arun R, ManzurAligan A, Ranjith J, Aswin S, Manoj Kumar S, Hari Krishnan G, attended the Automobile workshop at GCT Coimbatore in July 2015.
6. ManzurAligan A has published a paper in 'IJART' journal volume-2 pg. 511-545.
7. ManzurAligan A, John Praveen Raj S, NandhaKrishanan T V, Kamalakannan R, Kishore B, Audithya R K, Naveen Kumar A, Anandh R, Govindarajalu M, Underwent in-plant training at Southern Railway Golden rock Trichy in June.
8. NandhaKrishanan T V, Kamalakannan R, attended a workshop on recent trends in automobile industry at Kumaraguru College of Engineering.
9. Yuvaraj J, Yogeswaran, Naveen Kumar A, Gunasekaran M, Thirunavukarasu M, Harish Anand Y, Rafique S, Dinesh Babu S, NandhaKrishanan T V, Kamalakannan R, Kishore B, attended a workshop on IC Engines at PSG College of Technology, Coimbatore.
10. NandhaKrishanan T V, Hari Krishnan G, attended a workshop on vehicle overhauling at Amrita University.
11. Kishore B, Aswin C, attended an automobile workshop at NIT Karaikal in March 2015.
12. Mohamed Azarutheen S, Jayasimman A, Karthick G, Kevin Joseph J, Manoj Kumar B, Aswin C, underwent in-plant training in Rane Engine valves at Pudukottai.
13. MugeshSivagnanam K, underwent in-plant training at Ashok Leyland Chennai in December 2014.
14. MugeshSivagnanam K, underwent in-plant training at TVS Lucas in December 2014.

15. Dhiliepan R, Siva Kumar G, attended Autotrix at NIT Trichy in March 2014.
16. Hari Krishnan G, underwent in-plant training at ICF Perambur in May 2015.
17. Aravind K, Aravindan J, AnnamalaiSathapan S, Aswin S, underwent in-plant training at Rane TRW power steering.
18. Mukesh Kumar T P, Mohamed Azarutheen, Aravind K, Anbarasan T, Aravindan J, Arulmani S, Gowtham M, attended a workshop on vehicle overhauling at Sastra University Trichy.
19. Ananth T, Benjamin Franklin, Ajin, GunaSekeran G, Manikandan A V, Ananthan M attended an automobile workshop at ACET in February 2015.
20. Gowtham M, presented a paper at Anna University Pattukottai.
21. Anbarasan T underwent in-plant training at Veasons in January 2015
22. Anbarasan T, attended Design Workshop at NIT Trichy in March 2015
23. Yuvaraj J, Harish Anand Y, Rafique S, Dinesh Babu S, Anbarasan T, underwent in-plant training at HAPP in May 2015
24. Manoj Kumar S, Hari Krishnan G, underwent in-plant training at Seri SeyonPolypets Pondicherry in July 2015
25. Ebron Raja S, Kishore Kumar B, Elanthiraiyan M, Karthik K, Gokul Dharma R, KeertiVaassan K K, Kevvine L, underwent in-plant training at Ambika Sugar Mills
26. Ebron Raja S, Kishore Kumar B, Elanthiraiyan M, Karthik K, Gokul Dharma R, KeertiVaassan K K, Kevvine L, underwent in-plant training at Goodwin Motors.
27. Ebron Raja S, Kishore Kumar B, Elanthiraiyan M, Karthik K, Gokul Dharma R, KeertiVaassan K K, Kevvine L, attended a workshop on Automotive Emission Control conducted by IIT Bombay.
28. Gunasekaran M, Anandharaj M, attended a workshop on Advanced Piping Technology at JJ College of Engineering.
29. Naveen Kumar A underwent in-plant training at Railway Diesel Shop in December 2014
30. Aravinth K, Ananthan M underwent in-plant training at NLC, Neyveli Mine I Yard in June 2015.
31. Aravinth K underwent in-plant training at Ashok Leyland, Chennai in June 2015.
32. Anandh R and Govindarajulu M underwent in-plant training at Central Railway Workshop in December 2014.
33. Anandh R and Govindarajulu M undertook an internship at MDM Hyundai Motors, Kadapa, Andhra Pradesh.
34. Anandh R and Govindarajulu M underwent in-plant training at Brakes India Pvt Ltd Chennai.
35. Karthikeyan L R attended a workshop on RC Cars at Vellammal Engineering College.
36. Ajay S, Arockia Praveen Kumar J, Gokul Singh M, Mohamed Hasan Sheriff N, participated and won third place in Junkyard Wars event held during Synergy 2k15 at NIT Trichy.
37. Ajay S participated and won third place in Fix them up event held during Synergy 2k15 at NIT Trichy.

38. Arockia Praveen Kumar J, participated in Fix them up event held during Synergy 2k15 at NIT Trichy.

Extra-curricular Activities

1. Esron Raja S won the Bronze medal in 4x400 m relay in Anna University, Chennai zone 13 sports meet.
2. Aswin C, has participated and won in badminton in the intra college sports meet.
3. Kodeeshvaran was appointed a member in National Basketball Club, Pollachi in November 2014.
4. Ajay S, was part of a band that participated in light music event at Kurushastra, conducted by Sastra University.
5. Aravinth K won an award for Best Social Film in the Neyveli Book-Fair Film Festival.

Third Year Students:

Co-Curricular Activities

1. Aswin Kumar C, Aravinth C, Raj Kumar S, Prasanna S, Abu BakkarSiddik J, Participated in "Line Follower Robot Competition" at 'Sri Krishna College of Engg and Tech, Coimbatore" in September 2014
2. Aswin Kumar C, Aravinth C, Raj Kumar S, Arul S, Gurumoorthy G, Albert D, S Balasubramanian, R MathanBabu, M.B.M. Manikandan underwent in-plant training at Harihar Alloys, Trichy.
3. Aswin Kumar C, Raj Kumar S, Prasanna S, Godwin Lourdu Daniel A, participated in "Product development workshop" IIT Madras in January 2015.
4. Aswin Kumar C, Raj Kumar S, Prasanna S, Aravinth C, has participated in "Non-destructive testing workshop" at TRP college of Engg, Trichy in July 2015.
5. Prasanna S, Abisheik B, KathirSelvanm, Albert D, S Balasubramanian, R MathanBabu, M.B.M. Manikandan, S Mohamed Nasurudeen, B S Mathan Kumar participated in "IC engines workshop" at PSG college of Engg, Coimbatore in Feb 2015.
6. Aravinth C, Abu BakkarSiddik J, participated in "3D printing workshop" at Sri Krishna college of Engg& Tech-Coimbatore in September 2014.
7. Arul S, Guru Moorthy M, Abu BakkarSiddik J, have participated in "Engine assembly workshop" at Coimbatore Institute of Tech in February 2015.
8. Vigneshwaran S, Naveen Kumar B, Mani Selvam S, Ashok M, Prasath S, have participated in "NDT workshop" at TRP Engg College, Trichy.
9. Vigneshwaran S, Aravinth C, participated in "Aero-modelling workshop" at NIT Trichy.
10. Albert D, P Kishore Kumar, S Balasubramanian, M.B.M. Manikandan, Moorthy M, participated in "Robotics by Techniques Workshop" at M.Kumarasamy College of Engineering, Karur.
11. M Moorthy has presented a paper on "Optimization Techniques" at Tamil Nadu College of Engineering.

12. M Moorthy, Albert D, S Balasubramanian, R Mathan Babu, M.B.M. Manikandan underwent in-plant training at Kothari Sugar and Chemicals Ltd.
13. V Karthikeyan, Senkathir V, R Allen Rishivanth, MattuvarKulali M participated in Autotrix event at NIT Trichy.
14. K. S. Prabakar, Senkathir V, Hari Prakash S P, Arun Jenifer P, participated in Quadcopter workshop at Amrita VishwaVidhyapeetham
15. Senkathir V participated in Automotive Engine Workshop at Saranathan College of Engineering .
16. Senkathir V participated in Dismantling and Assembling workshop at Thiagaraja College of Engineering.
17. Senkathir V participated in CNC workshop at Saranathan College of Engineering.
18. Senkathir V participated in Shackles 2k15 at AlagappaChettiar College of Engineering.
19. Senkathir V participated in Automotive Designing workshop at VIT.
20. Thiraviam B underwent in-plant training at SreSaradhambal Automobiles.
21. Thiraviam B participated in Automobile workshop at GCT Coimbatore.
22. Vishnupriyan A participated in Engine Demo Workshop at Anna University.
23. MuhammedHaaris participated in Cybernora15 at Sri Krishna College of Engineering.
24. MattuvarKulali M participated in Finite Element Method and its Application workshop at Anna University.

25. MattuvarKulali M underwent in-plant training at All India Radio.
26. MattuvarKulali M underwent in-plant training at Southern Railways.

Extra-curricular Activities

1. S. S. Suraj participated in Men Singles, Open Doubles, and Youth Boys Table tennis tournaments at Anna Stadium Tiruchirapalli in August 2015
2. S. S. Suraj participated in Men Singles, Open Doubles, and Youth Boys Table tennis tournaments at TiruchyJilla Naidu MahajanaSangam in July 2015

Creative work of students:

Interstellar:

- S. MuhammedHarris, III year Mechanical Engineering, Section "A"

Well yes, this blog is about a movie. But not just any movie, it's about one of the all-time greatest sci-fi movie. It's the most manifested creation from one of the greatest Maestro, Christopher Nolan. Anyway for some reasons I place this movie Interstellar, second to another work of him, Inception.

The 3rd semester exams were going on. And we had 6 days of holiday for Manufacturing Technology. And then this movie was released in our city like after a month from initial release. We wanted to go this movie so badly, so I put the semester back and went on a night show, guess what it was a

house-full. Even my physics teacher from school was there.

From next day I decided to start studying properly, but seriously could not do it. Because the movie was so fresh in my mind and I was thinking 'where is the logic?' and 'what is the theories that support the scenes in the movie?' Every page I turn there was Mathew McConaughey pushing the book. And the funny thing was, I was not alone. Everyone who watched this, was mind blocked. The sad part was I only just cleared the paper. Moral, don't go to movie before exam especially Nolan's

Well the reason I'm writing about this movie and not about any other movie, is because it doesn't actually look like movie rather like a sandwich of many theories, given in the awesomest (it's not a word, but sound cool though) way. By the way, I recommend that you better watch the movie before reading this.

Plot Synopsis:

In Earth's future, a global crop blight and second Dust Bowl are slowly rendering the planet uninhabitable. Professor Brand (Michael Caine), a brilliant NASA physicist, is working on plans to save mankind by transporting Earth's population to a new home via a wormhole. But first, Brand must send former NASA pilot Cooper (Matthew McConaughey) and a team of researchers through the wormhole with a space shuttle named Endurance and across the galaxy to find out which of three planets could be mankind's new home.

Plan A:

While the Endurance team is away, Brand will continue to work on an advanced equation that, if solved, will allow humans to harness fifth-dimensional physics – specifically gravity. Should Brand succeed, NASA will be able to defy our traditional understanding of physics and launch an enormous space station (carrying the remainder of Earth's surviving population) into space. The very facility that Cooper and Murph stumble upon at the beginning of the film isn't just a NASA research station – it's a construction site for humankind's space-traveling ark.

Plan B:

Should Brand fail in his calculation and/or the Endurance take too much time investigating potential home worlds, NASA has harvested a bank of fertilized human embryos that can be used to ensure humanity's survival – after everyone on Earth is wiped out. To ensure genetic diversity, NASA procured DNA from a wide range of sources – so that future generations would not be limited to reproduction between Endurance crew members. In this scenario, the Endurance team would settle down on the most habitable planet and raise the first generation of embryos – with each subsequent generation helping to raise a new set of embryos (as well as reproduce naturally).

Endurance and Artificial gravity:

The team travels in space ship called Endurance and it keeps rotating and the reason for that is down here. A rotating

spacecraft will produce the feeling of gravity on its inside hull. The rotation drives any object inside the spacecraft toward the hull, thereby giving the appearance of a gravitational pull directed outward. Often referred to as a centrifugal force, the "pull" is actually a manifestation of the objects inside the spacecraft attempting to travel in a straight line due to inertia. The spacecraft's hull provides the centripetal force required for the objects to travel in a circle (if they continued in a straight line, they would leave the spacecraft's confines). Thus, the gravity felt by the objects is simply the reaction force of the object on the hull reacting to the centripetal force of the hull on the object, in accordance with Newton's Third Law.

Wormhole:

The Endurance team in the movie, will decide to travel to the other side through a wormhole placed near Saturn.

A wormhole, or Einstein-Rosen Bridge, is a hypothetical topological feature that would fundamentally be a shortcut connecting two separate points in space-time that could connect extremely far distances such as a billion light years or more, short distances, such as a few feet, different universes, and in theory, different points in time. A wormhole is much like a tunnel with two ends, each in separate points in space-time.

For a simplified notion of a wormhole, space can be visualized as a two-dimensional (2D) surface. In this case, a wormhole would appear as a hole in that surface, lead into a 3D tube (the inside

surface of a cylinder), then re-emerge at another location on the 2D surface with a hole similar to the entrance. An actual wormhole would be analogous to this, but with the spatial dimensions raised by one. For example, instead of circular holes on a 2D plane, the entry and exit points could be visualized as spheres in 3D space.

Time is relative:

The team decides to go to Miller's planet, 1 out of 3. The problem was that the planet was near to Gargantua (black hole), so the time on the planet goes slow. So slow that one hour in that planet is 7 years in Earth. Once the team, after about 3 hours, return from the planet back to the ship where Romilly was waiting, they ask him 'How long he was waiting?' There was a heavy silence in the theatre and when he replied that he was waiting for about 23 years, there was a huge gasp from everyone that echoed so loud.

Interstellar is based on the ideas of theoretical physicist Kip Thorne – specifically the notion that while we observe the universe in three dimensions, there could be at least five dimensions. In certain theories, it is posited that certain forces (in this case gravity) bleed through dimensions – meaning that, based on Newton's Laws, what we perceive as a finite calculation could actually have infinite implications.

The concept is outright exemplified in the first planet that the Endurance team visits. In general, time on our side of the wormhole moves faster than time in the uncharted side. Due to close proximity with

gravitational anomalies from a nearby black hole (Gargantua), time on the other side is exponentially slower – relative to the distance between an object and the black hole’s gravitational pull. As a result, time on Miller’s planet moves significantly slower: for every hour that the team spends on the water planet, seven years pass back home – a primary reason that Cooper is motivated to get off the planet as soon as possible (even before they realize it’s a death trap). Cooper knows that three hours on planet’s surface will cost him decades of time with his family.

As Amelia suggests, the effect of gravity from the black hole on time was to blame for the Endurance team’s unfortunate visit to Miller’s planet in the first place – since what they perceived as years of positive beacon readings were actually mere minutes for Miller (who was killed by a wave moments after she landed).

The concept is further hammered home when, following the mission, Amelia and Cooper reunite with Romilly, who stayed behind on the Endurance to gather data (far from Gargantua) – and, in the three hours his team was gone, has lived twenty-three full years alone without them. Similarly, the crew receives video messages from back home and we see that Cooper’s children, Tom and Murph have also aged – now full grown adults (played by Casey Affleck and Jessica Chastain, respectively).

As the team moves farther from the black hole, the disproportion in space-time reduces – meaning that when they arrive at Mann’s planet, there’s significantly less

urgency (though the once brave astronaut has been twisted by his longer stretch of time alone).

5D:

In physics, the fifth dimension is a hypothetical extra dimension beyond the usual three spatial dimensions and one time dimension of Relativity. The Kaluza–Klein theory used the fifth dimension to unify gravity with the electromagnetic force.

A tangible effect of gravity on space-time is also responsible for Cooper’s ability to communicate with young Murph when inside the Tesseract. Inside the machine, gravity bleeds through to other dimensions in time and space, allowing Cooper to spell out a message (“S-T-A-Y”) by pushing books off of Murph’s shelf – or communicate map coordinates to the past version of himself by spreading dust across the floor (in binary language). Most importantly, the fifth-dimensional communication through gravity (made visible by three-dimensional objects back on Earth) enables Cooper to gently manipulate the hands on Murph’s watch – transferring the data that TARS acquired with Morse coded watch ticks. Subsequently, translating that coded data gives Murph all the information she needs to drastically advance humanity’s understanding of space and time – as well as complete Plan A.

As for how Cooper survives his time inside the Tesseract, and how he intends to reunite with Amelia? Nolan simply reapplies the same theory that has been present the entire film. Given that time moves slower near the gravity pull of the black hole,

Cooper's ejection from the Tesseract is only seconds for him, but over half a century for the rest of humanity. Keep in mind, if the ratio of time on Miller's planet was 1 hour for every 7 years on Earth, the proportion would be skewed exponentially at the absolute center of the Tesseract singularity. As a result, while it appears to Earthbound humans that TARS and Cooper have been floating out in space for nearly ninety years, they were actually only out there for mere seconds as they perceived it.

SALAAM TO KALAM

- Koushik Kumar, IV year Mechanical Engineering

Dr. Avul Pakir Jainulabdeen Abdul Kalam is a man of excellence, leader, scientist, patriot, politician, guide, support, well wisher, friend, fire spark and more. It is very obvious that the missile man of India has conquered a place in the heart of each and every citizen of the nation. Through his power of words and friendly nature he has become the owner of pride internationally. During his address at European Union Parliament in France he inspired the parliamentarians by his statement "yathumooreyavarumkelir" to express his wish to maintain a better cooperation and relationship with all the nations and to achieve peace in the world.

The turnover that he has made from a newspaper selling boy to the president of the nation is really a miracle that shows his hard work. His passion for studies impresses everyone and his work experience on expandable rocket project at DRDO, developing PSLV and SLV-III in ISRO, Pokhran-II nuclear tests and missile tests are still seem to be milestones for many scientists and engineers. But he considers his invention for polio affected people as the most memorable one for him which shows the kindness of his heart. More than everything his love and affection for children, students and youngsters make him unique. He is a very good well wisher and advisor to students, spending the rest of his life motivating them to build a developed India by 2020 keenly. Even his last breath was felt in the place of students.

He is really a role model to every Indian and the youngsters of today have to follow the path of the brave missile man. Let the pillars of future India fulfill the dream of Dr. Kalam. Mother India salutes the holy spirit with respect by saying a salaam to Kalam.

"You made the youngsters and

Students of the nation to dream...



I lost my track

Now I sit on a stone that's slippery

Recount, the things that made God angry

No desert as dry as my life

So drought become my path

It is the paper that is unique that made things
bleak

Now I own a sin which I didn't buy

My days of loyalty as became a tattered page

It is the friend from my childhood

He was a fiend loyal and true

Alongside me in autumn and spring

No mood that's too bad separated us

Neither caste nor religion distinct us

But now he betrayed and stabbed

me Because of the unique paper

You can find fates of million in

it It builds you roof

But now, with a roofless

night So cold and bitter

I walk, slip, rise and fall

No doors did open when I knocked

All heart so dark to care me

Every eye too blind to see me

All talks too short too short to sprint away

But there was a time,

When sun was shining

I was loved and praised

Like a prince in the couch

So many hands to serve

With the unique paper

Now I'm crying so did the heaven as rain

I feel like dying, so did the thunder struck

The whole world did shrink, lost its beauty

I felt the end, with her words

The sun melted away and pacific did roar

No pen did write nor songs anymore lured

All flowers lost there fragrance

People went insane, the time did freeze

All in my heart as I saw my love depart

Bidding farewell

My legs made no ground till I'm here

Now sitting in the slippery stone

And believe God has no anger

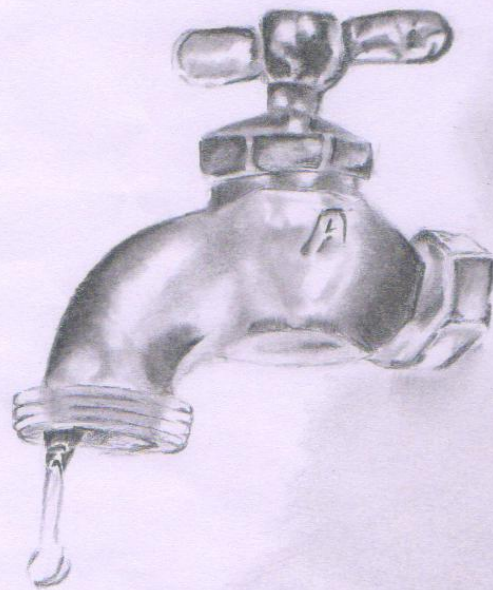
Only peoples are mad at the unique paper

There comes the sun in the horizon

Like a sun that is true and pure

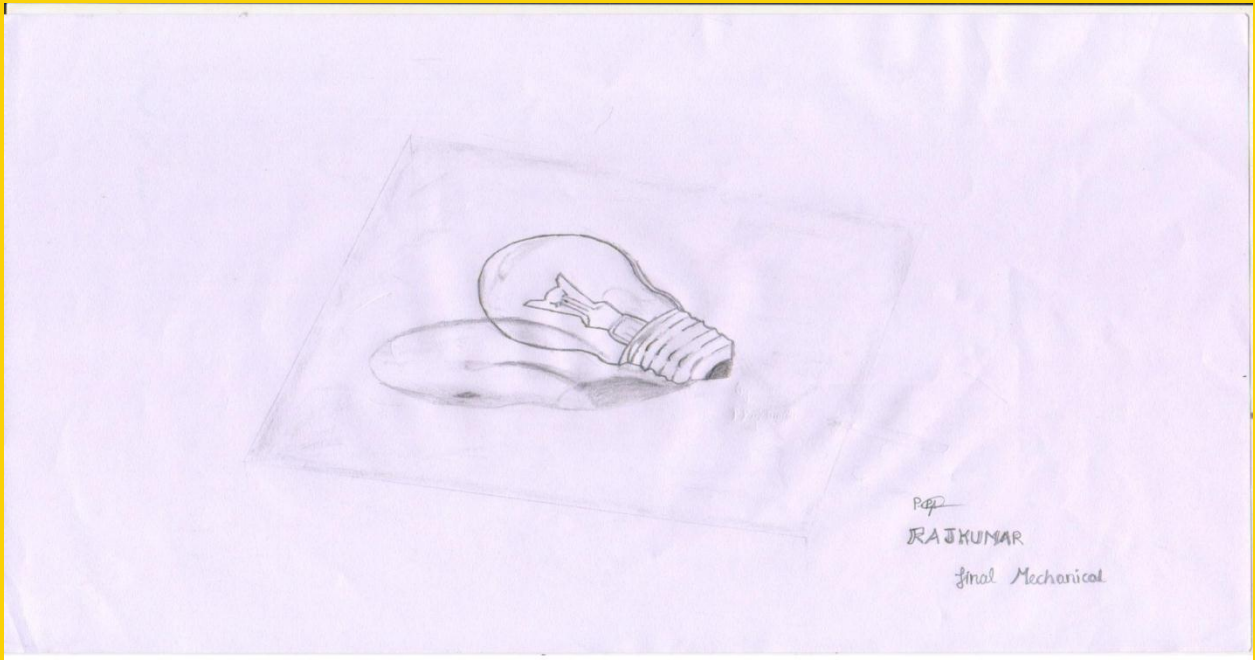
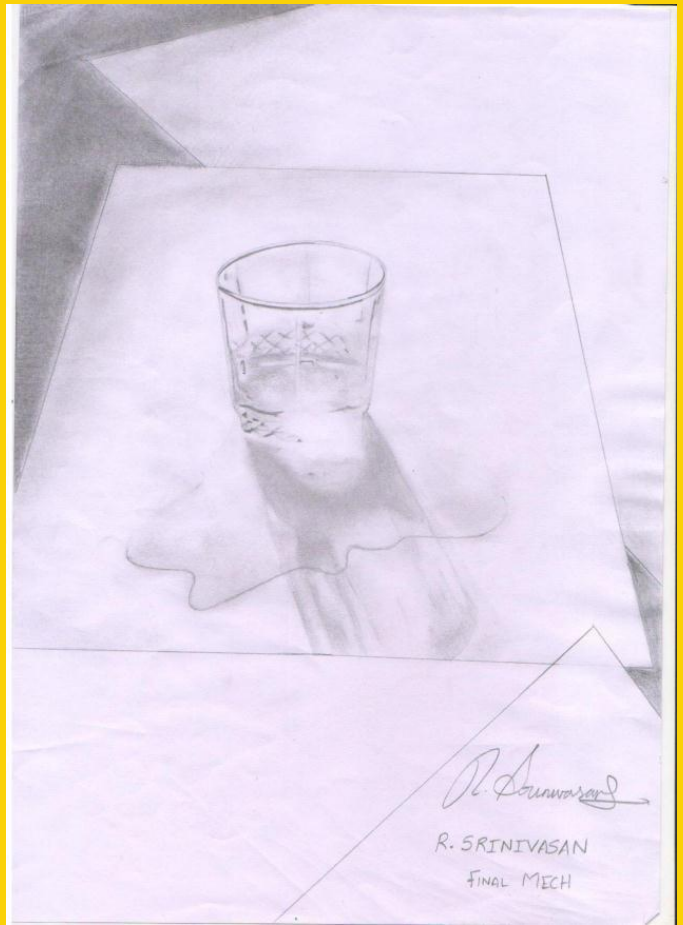
I'll rise nice and wise

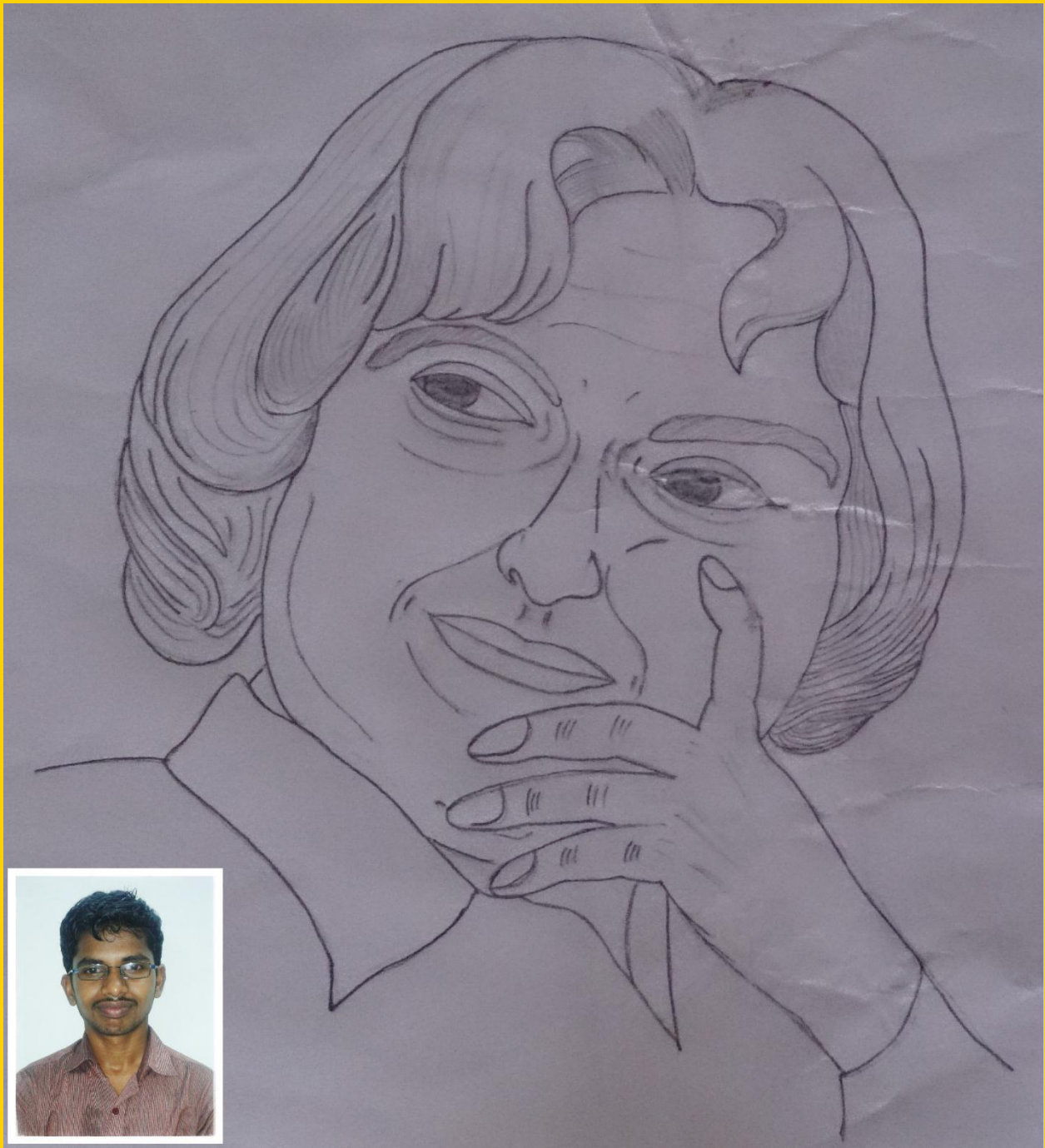
With no lust for the unique paper



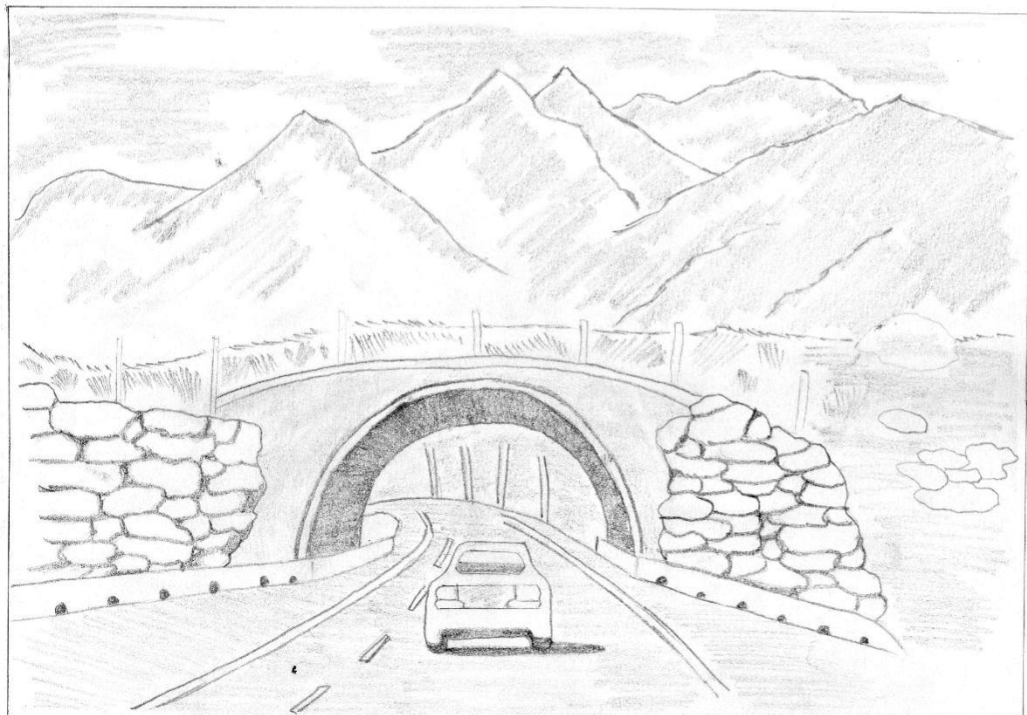
S. Alphonse

S. Alphonse Infant Leo
final year Mechanical



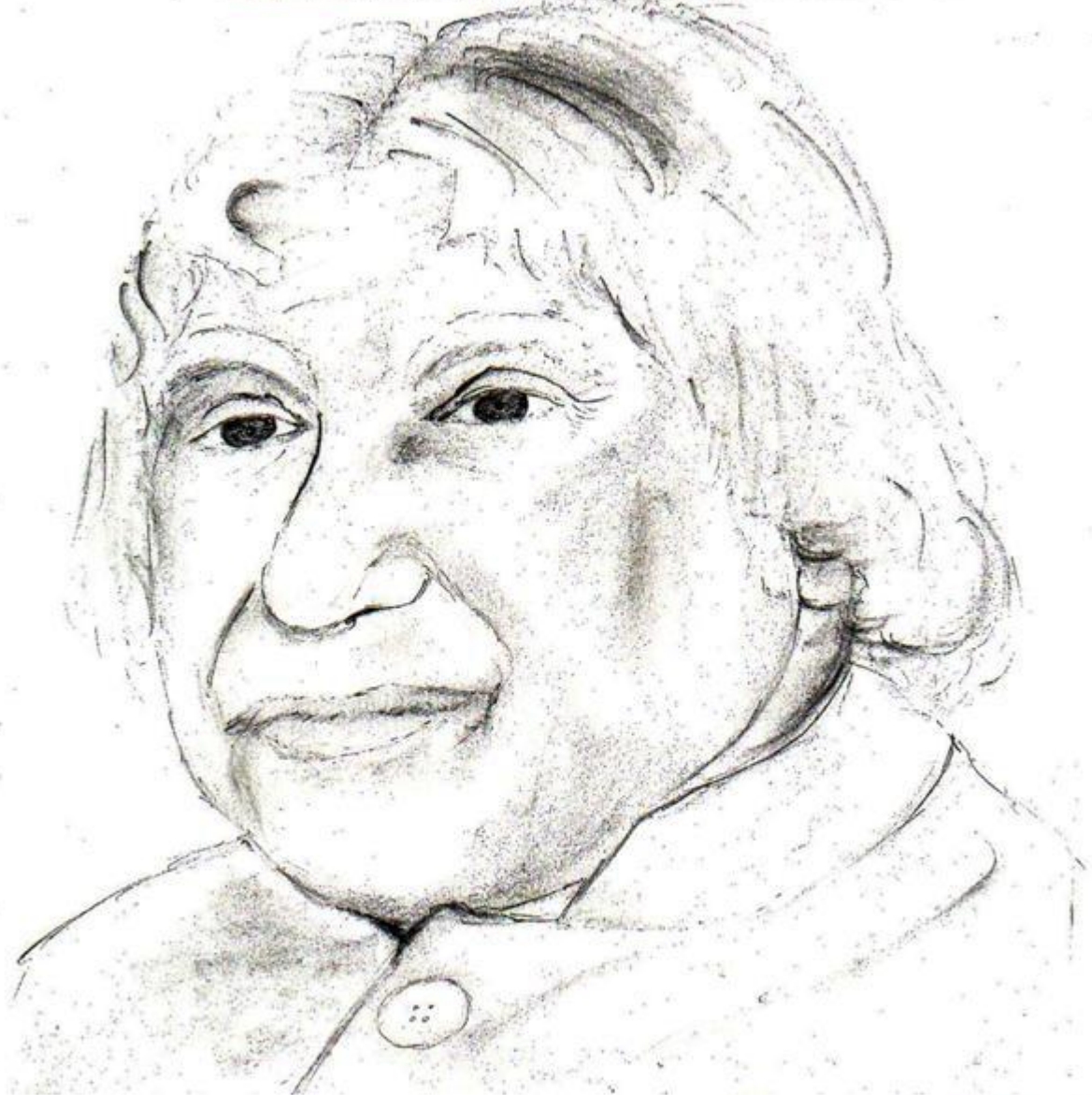


Sketched by Karthik B, IV Year Mechanical Engineering



Sketched by BarathSundar, IV year Mechanical Engineering.

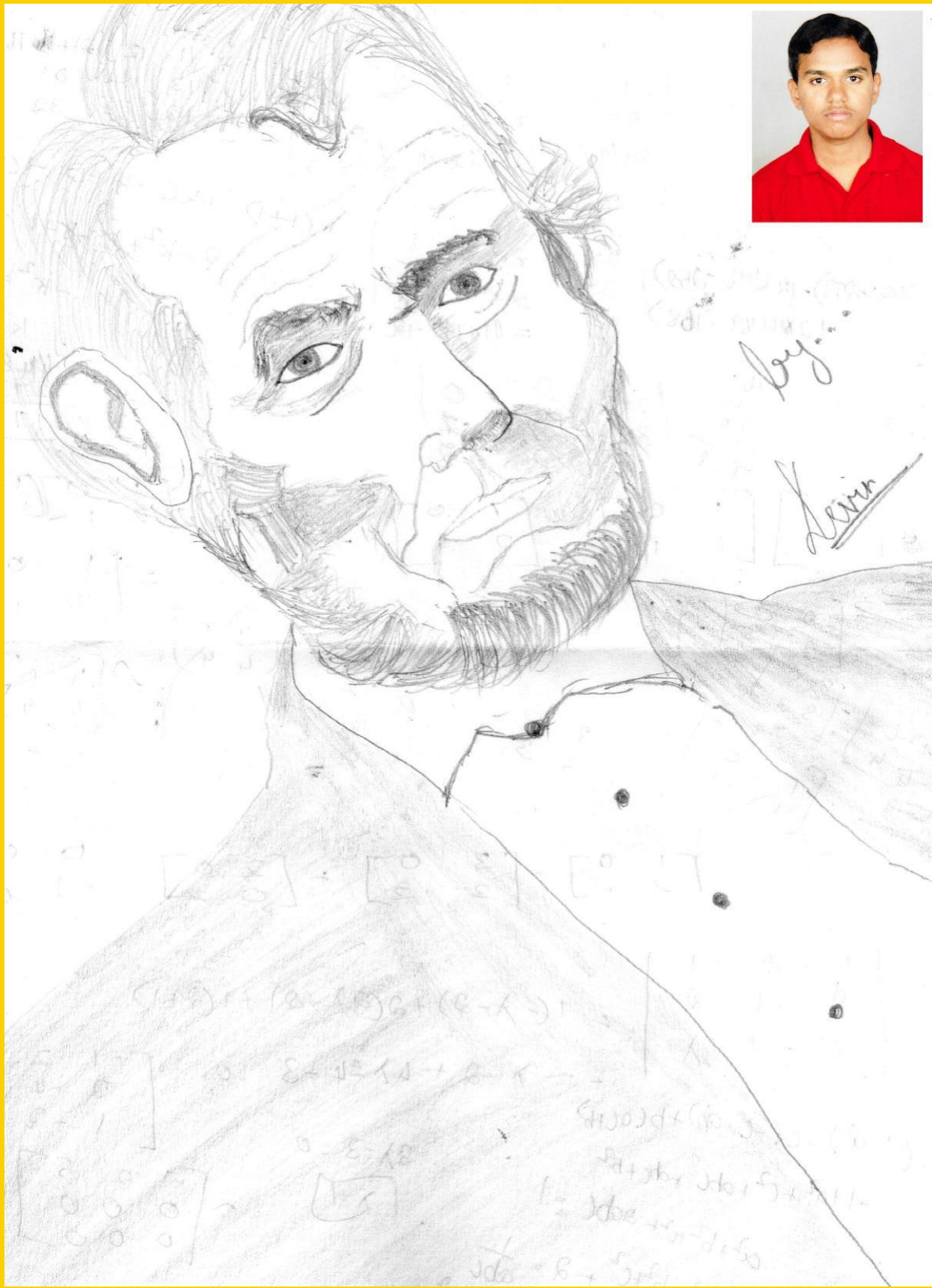
Dr. A.P.J. ABDUL KALAM



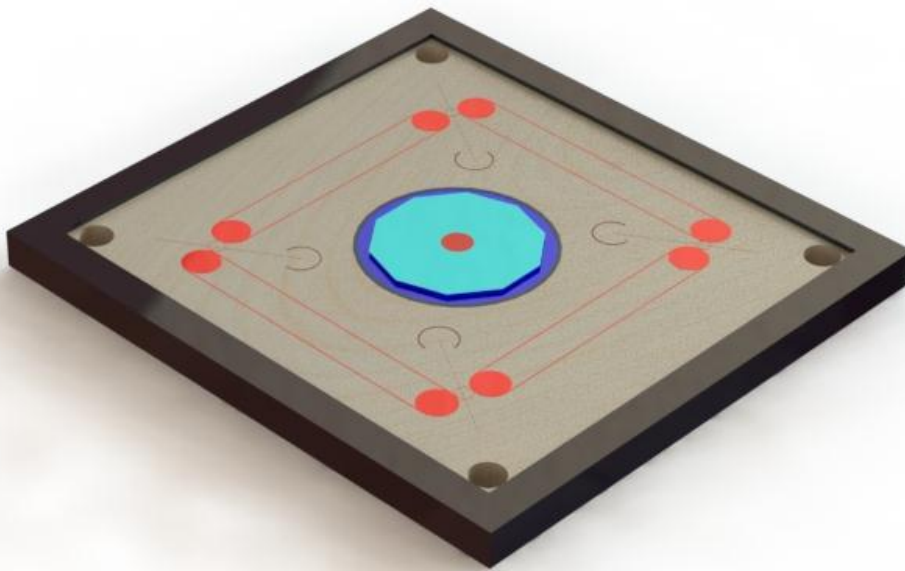
A. VARADHARAJAN

IV - MECH - B

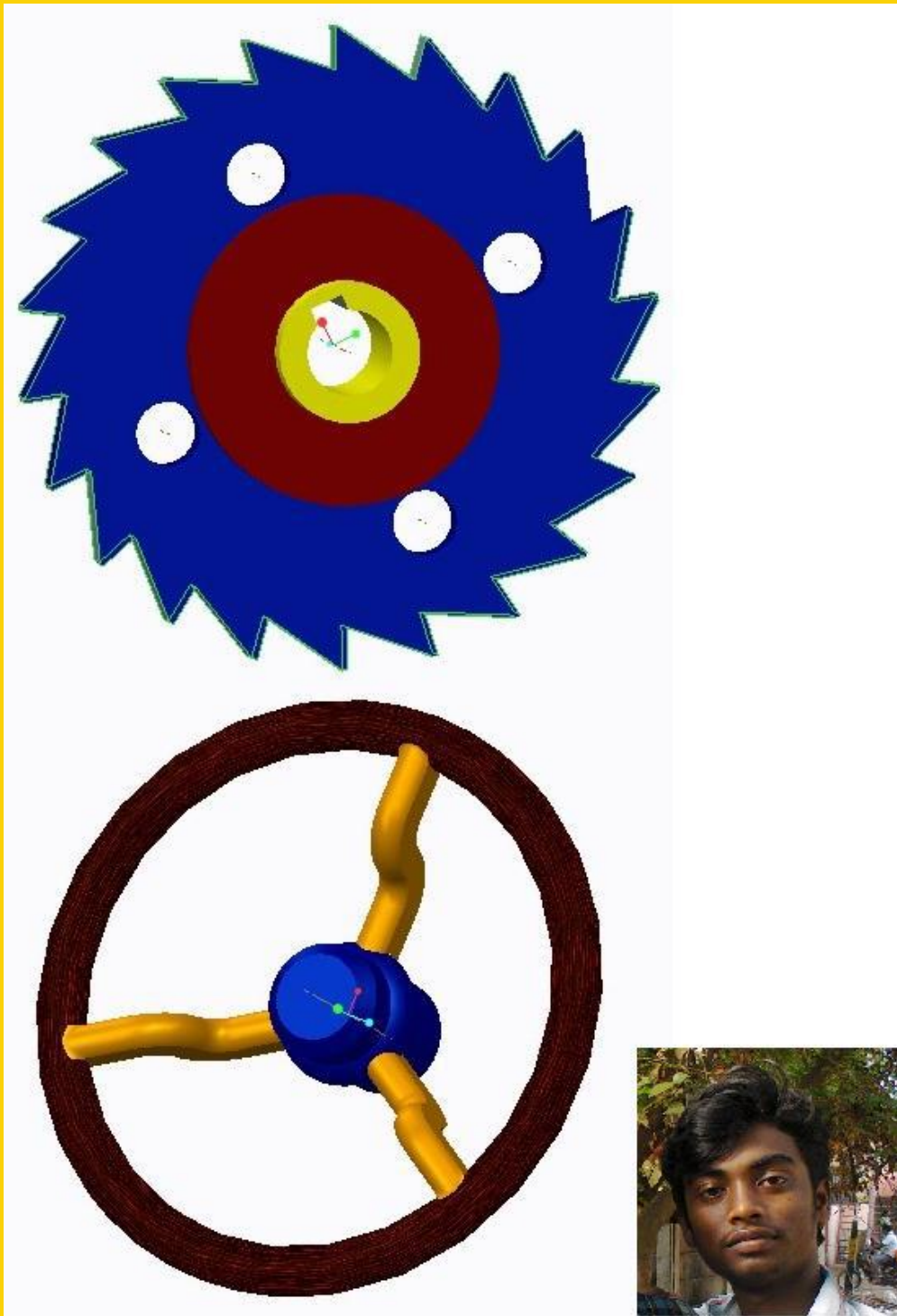




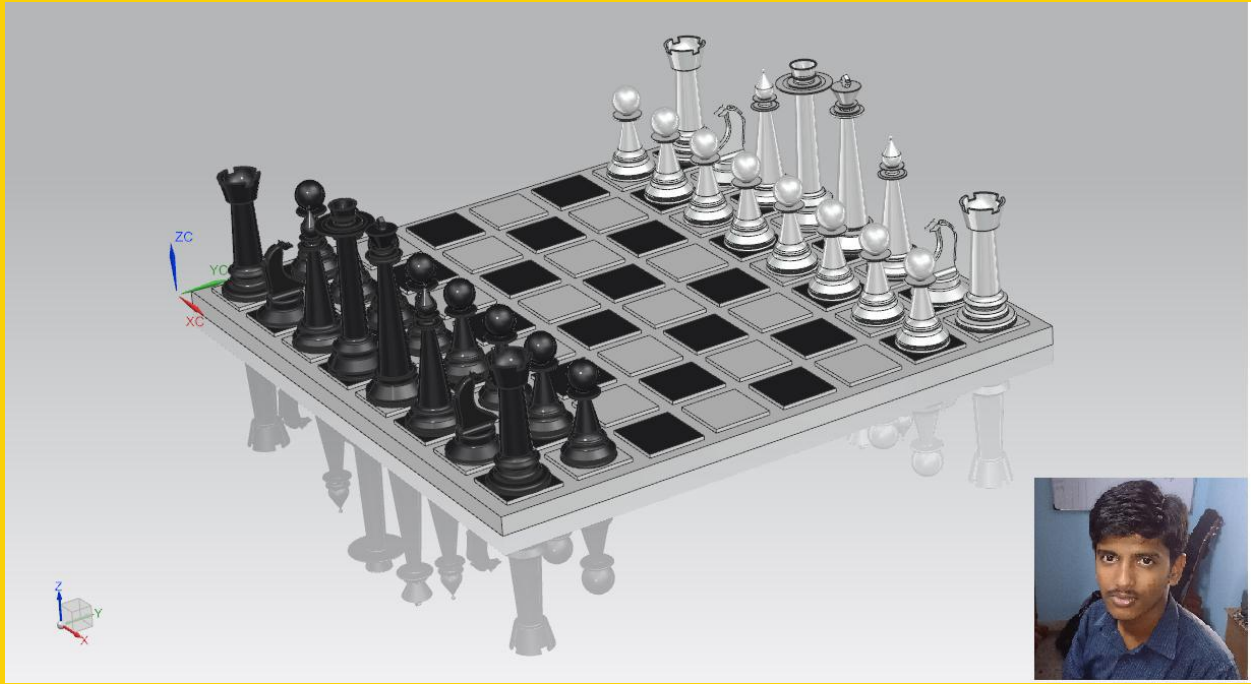
Sketched by Kevin Joseph J, IV year Mechanical Engineering



Modelled by ManzurAligan, IV year Mechanical Engineering



Cutting Tool and
Steering Wheel, modelled by Anbarasan T, IV year Mechanical Engineering



Modelled by Arockia Praveen Kumar J, IV year Mechanical Engineering



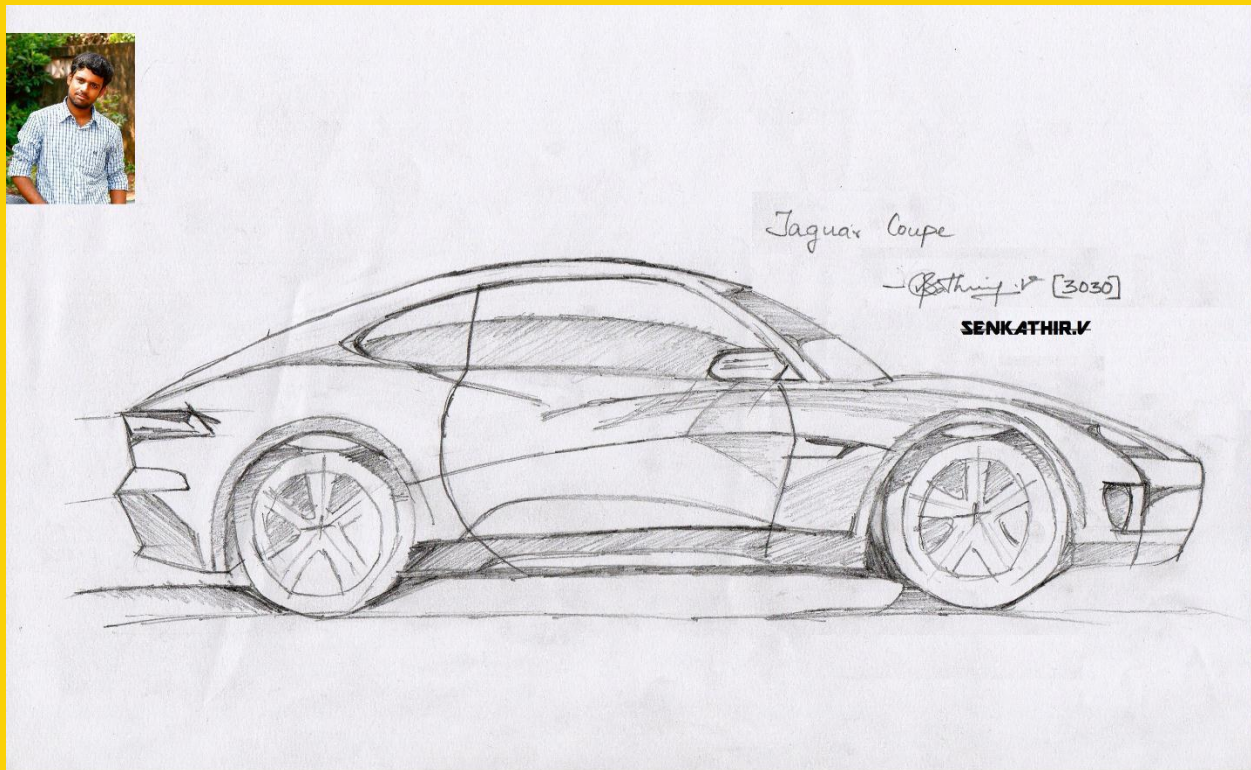
yuvrajaravind's photography



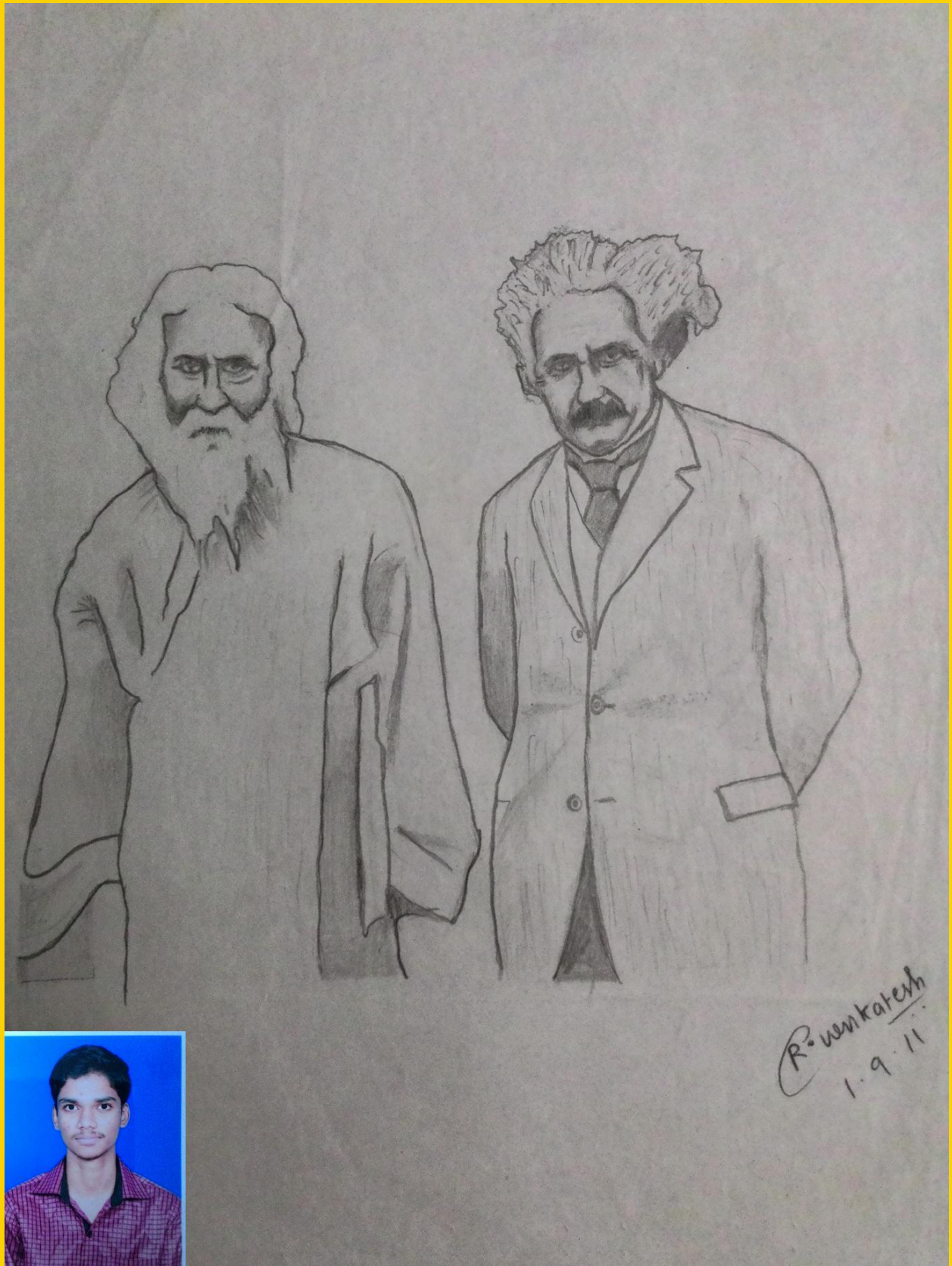
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