

Name of Faculty Dr. S. SOLOMON RAJ  
 Designation Associate Professor  
 Nature of Job/Appointment Regular  
 Date of Joining 26- 09 - 2005  
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Education Qualifications	Name of the Degree	Class
Ph. D	PhD(Mechanical Engineering), OU	Awarded
PG	M. Tech (Solid Mechanics and Design), IIT Kanpur.	First
UG	B. Tech (Mech), Kakatiya University Warangal).	First

**Work Experience**

Teaching	18 Years
Research	08 years
Industry	--
Others	--
Area of Specialization	Solid Mechanics& Design, Composite Materials, Machine Designand Mechanical Vibrations.
Professional Memberships	<b>SAE</b> India: 7190410658 <b>ISTE</b> Life member: LM 133396
Responsibilities held at Institution Level	<ol style="list-style-type: none"> <li>Institute level placement coordinator since 22-1-2022.</li> <li>Member of committees in SHRUTHI every year.</li> <li>Coordinator SUDHEE from Mechanical Department since 2014-2020.</li> <li>Member IIC from April 2021.</li> <li>Member Co-curricular and extracurricular activities from May 2021.</li> <li>Coordinator, Synergeers club.</li> </ol>
Responsibilities held at Department Level	<ol style="list-style-type: none"> <li>Coordinator-MECHANICA,from 2014- 2022</li> <li>ISO- Dept Coordinator, during AY: 2014-2015, 2015-2016.</li> <li>Project coordinator-BE, fromAY: 2019- 2020</li> <li>Member, Performance Assessment Committee: PG CAD/CAM from AY-2014 -2019.</li> <li>Coordinator- PG (CAD/CAM) from 2020-2021.</li> <li>NITTTR coordinator- Mechanical Dept from April 2021.</li> </ol>
Research Guidance	--
Awards Received	--
Courses Handled at Undergraduate / Post Graduate Level.	<p><b>UG:</b> Mechanics of Solidstheory &amp; Lab, Design of Machine Elements, Machine Design, Control Systems Theory, Engineering Graphics, Auto-Cad lab, M/c Drawing.</p> <p><b>PG:</b> Mechanics of Composite Materials, Vibration Analysis and Condition Monitoring.</p>
No. of Papers Published	National Journals – International Journals – 16
Projects Carried out	--
Patents	--
Technology Transfer	--

	<ol style="list-style-type: none"> <li>1. Invited lecture on “Module8: Institutional management and administrative procedures”, at CBIT, on 25/06/2022, Hyderabad.</li> <li>2. Guest Lecture on “Design of Machine Members-II”, on 9<sup>th</sup> May 2021 at Guru Nanak Institute of Technology, Ibrahimpatnam.</li> <li>3. Guest Speaker on “Mechanics of solids”, held on 6<sup>th</sup> March 2021 at Guru Nanak Institutions Technical Campus, Ibrahimpatnam.</li> <li>4. Expert lecture on “Characterization of Composite Materials”, as a part of Three-Day Online FDP on “Advances in Composite Materials and Their Applications”, from 28/01/2021 to 28/01/2021 organized by CMRIT, Hyderabad.</li> <li>5. Keynote Invited Lecture on “Sliding Contact Bearings &amp; Rolling contact Bearings”, on 13<sup>th</sup>&amp;14<sup>th</sup> May 2020, in Department of Mechanical Engineering, GNIT, Ibrahimpatnam.</li> <li>6. Guest Speaker on “Mechanics of Solids” held on 11<sup>th</sup> March 2020 at Guru Nanak Institutions Technical Campus, Ibrahimpatnam.</li> <li>7. Guest Lecture on “Mechanics of Solids”, at GNIT, Ibrahimpatnam on 14<sup>th</sup> Nov 2019.</li> <li>8. Guest Speaker on “Design of Machine Elements”, held on 30<sup>th</sup> Nov 2018 at Guru Nanak Institutions Technical Campus, Ibrahimpatnam.</li> <li>9. Expert Lecture on “Design of Machine Members-1”, at Department of Mechanical Engineering, GNIT, Ibrahimpatnam, on 4<sup>th</sup> July 2018.</li> <li>10. Invited talk on “Material Characterization and Kinematics of Shells”, during one-week TEQIP-II Sponsored FDP on Emerging Trends in Composite Materials and Industrial Applications (ETCMIA-17) on 20 to 25<sup>th</sup> March 2017.</li> <li>11. Expert Lecture on “Introduction to Design of Machine Elements”, ResearchCenter Imarat (RCI), during 14<sup>th</sup> to 18<sup>th</sup> Nov 2011 Hyderabad.</li> <li>12. Expert Lecture on “Strength of materials”, ResearchCentre Imarat (RCI), on 22<sup>nd</sup> Feb 2010, Hyderabad.</li> </ol>
Invited Speaker	
No. of Books/Chapter Published with details	<ol style="list-style-type: none"> <li>1. Vibrations: A tool for condition monitoring, “Machine Vibration Analysis”, ISBN: 978-93-87418-10-3, pp.66-75, Vrindha Publishing House.</li> <li>2. Material Characterization and Kinematics of Shells, “Emerging Trends in Composite Materials and Industrial Applications”, 20<sup>th</sup> to 25<sup>th</sup> March 2017 ISBN: 978-93-85518-09-6, pp.91-115, Vrindha Publishing House.</li> <li>3. Finite Element Analysis of Composite Plates in Ansys, “Emerging Trends in Composite Materials and Industrial Applications”, 20<sup>th</sup> to 25<sup>th</sup> March 2017 ISBN: 978-93-85518-09-6, pp.116-133, Vrindha Publishing House.</li> <li>4. Design, Fabrication and Analysis of Composite Marine propeller, ISBN-13: 978-93-85880-72-8, ISBN-10: 93-85880-72-1. McGraw Hill Education, pp.66-74, Oct 2015.</li> </ol>
Details of Short-Term Training Programs/Faculty Development Programs/Seminars/Workshops. Other Trainings (Attended and/or Organized).	<ol style="list-style-type: none"> <li>1. Understanding Research methods, an online non-credit course authorized by University of London and SOAS University offered through Coursera on 17<sup>th</sup> May 2020.</li> <li>2. “Materials Science: 10 Things Every Engineer Should Know”, an online non-credit course authorized by University of California, Davis and offered through Coursera on 29<sup>th</sup> April 2020.</li> </ol>

3. "Machine Design Part-1", an online non-credit course authorized by Georgia Institute of technology and offered through Coursera on 28<sup>th</sup> April 2020.
4. Mechanics of Materials I: Fundamentals of Stress & Strain and Axial Loading an online non-credit course authorized by Georgia Institute of technology and offered through Coursera on 28<sup>th</sup> April 2020.
5. Co-Convener, 1<sup>st</sup> International conference of "Developments in sustainable materials, manufacturing and energy engineering", during 3<sup>rd</sup>-4<sup>th</sup> April 2021, organized by Department of Mechanical Engineering, CBIT.
6. Organized Guest talk on "Innovative Applications of 3D printing" on 03/03/2021, by Dr, L Siva Rama Krishna, OUCE, during Mechanica-21.
7. Coordinator, MECHANICA-2K21 (Students Technical Symposium) on 03/03/2021 & 04/03/2021.

#### **FDP'S**

8. STTP on "Robotics & Drones", Conducted by CBIT, during 05-09-2022 to 17-09-2022.
9. One-week online workshop on "Recent advances in manufacturing processes for industrial applications", organized by Department of mechanical engineering, NIT Karnataka, Surathkal from February 21 to 25 2022.
10. One week ATAL FDP on "3D Printing and Design", from 25/10/2021 to 29/10/2021 organized by MED OU.
11. One week ATAL FDP on "Novel Materials", from 22/11/2021 to 26/10/2021 organized by MED OU.
12. NITTR One-week short term training programme through ICT mode on "Vibration analysis using MATLAB", organized by NITTRK during 4<sup>th</sup> to 8<sup>th</sup> oct 2021.
13. One week ATAL FDP on "Design and analysis using CATIA/ANSYS", from 20<sup>th</sup> to 24<sup>th</sup> September 2021, Dr Ambedkar Institute of technology.
14. NITTR One-week short term training programme through ICT mode on CAD/CAM organized by NITTRK during 6<sup>th</sup> to 10<sup>th</sup> sep 2021.
15. AICTE Sponsored One Week Online Short-Term Training Program on "Innovations and challenges in Industry 4.0 Automation and smart manufacturing", KHIT during 9<sup>th</sup> to 14<sup>th</sup> August 2021.
16. AICTE, "Online Faculty development program in association with AICTE on New & Emerging Technology", organized by ARK InfoSolutions Pvt Ltd, using simulation tools provided by technology partner Ansys Software Pvt Ltd, during 28/6/2021 to 2/7/2021.
17. AICTE- ISTE Sponsored One Week Online Refresher Program on "CAD Modeling and MATLAB programming" organized by NREC, during 8<sup>th</sup> to 16<sup>th</sup> April 2021.
18. AICTE, "online orientation training programme for mentors" during 1<sup>st</sup> to 5<sup>th</sup> Feb 2021, under NITTT.
19. STTP on "Composites: Fracture toughness, NDE & Failure Analysis", during 18<sup>th</sup> to 23<sup>rd</sup> Jan 2021, Pillai Hoc college of engineering, AICTE sponsored, Rasayani.
20. STTP on "Research methodologies and statistical data analysis", 16<sup>th</sup> to 28<sup>th</sup> Nov 2020, CBIT, AICTE sponsored.
21. One week ATAL FDP on "Molecular Manufacturing", from 19<sup>th</sup> to 23<sup>rd</sup> October 2020, CBIT.
22. AICTE Sponsored One Week Online Short-Term Training Programme on "Modeling and Analysis using MATLAB and

- Python for Mechanical Engineering Applications”, organized by VNRVJIT, during 3<sup>rd</sup> to 8<sup>th</sup> August 2020.
23. AICTE One-week sponsored Faculty Development Programme on “Fostering an Effective Research Environment and Industrial Collaborations in Engineering Education”, from 27<sup>th</sup> July to 1<sup>st</sup> August 2020, at St. Joseph’s College of Engineering.
  24. One Week Faculty Development Programme on “Recent Advances in Renewable Energy & Energy Efficient Technologies”, during 21<sup>st</sup> to 25<sup>th</sup> July 2020 organized by Department of Mechanical Engineering, MGIT, Hyderabad.
  25. One Week Faculty Development Programme on “Recent Advances in Mechanical Engineering: A Research Perspective”, during 6<sup>th</sup> to 10<sup>th</sup> July 2020 organized by Department of Mechanical Engineering, MGIT, Hyderabad.
  26. Organized as Coordinator One week FDP on “Industry 4.0- A design and manufacturing perspective”, 16<sup>th</sup> June to 20<sup>th</sup> June 2020, Department of Mechanical engineering, CBIT.
  27. One week FDP on “Industry 4.0- A design and manufacturing perspective”, 16<sup>th</sup> June to 20<sup>th</sup> June 2020, Department of Mechanical engineering, CBIT.
  28. One week ATAL FDP on “3D Printing & Design”, from 15<sup>th</sup> to 19<sup>th</sup> June 2020, NITW.
  29. One week FDP on Innovative teaching pedagogy in the technical institutions, organized by IQAC, MVPS’s KBT College of engineering Nashik, during 1<sup>st</sup> to 5<sup>th</sup> June 2020.
  30. One week FDP on “Research Among Youth”, by Vardhaman College of engineering 28<sup>th</sup> may to 3<sup>rd</sup> June 2020.
  31. Two Day FDP on “Effective Technical Report Writing Using LaTeX”, during 8<sup>th</sup> and 9<sup>th</sup> June 2020, MGIT, Hyderabad.
  32. One week FDP on “Outcome Based education and NBA Accreditation Process-UG”, 28<sup>th</sup> may to 1<sup>st</sup> June 2020, CBIT, Hyderabad.
  33. IIC online sessions conducted by Institution’s Innovation Counsel (IIC) of MHRD’s Innovation cell new Delhi to Promote Innovation, IPR, Entrepreneurship and start-ups among HEIs from 28<sup>th</sup> April to 22 May 2020.
  34. One-week AICTE sponsored FDP on "Outcome Based Education: A Step Towards Excellence" conducted by Govt. College of Engineering, Karad, Maharashtra from 11<sup>th</sup> to 15<sup>th</sup> May 2020.
  35. One week FDP on “NAAC Awareness Programme for Faculty”, organized by MMIT, Pune from 8<sup>th</sup> to 14<sup>th</sup> May 2020.
  36. One week FDP on “Finite Element Methods for Beginners”, April 20-24, 2020, Chitkara university through class connect.
  37. Two-week AICTE Sponsored FDP “Recent Advances in Design and Development of Mechatronics & Robotic Systems”, Organized by Department of Mechanical (Mechatronics) Engineering, MGIT, 4<sup>th</sup> to 16<sup>th</sup> Dec 2017.
  38. Organized AICTE sponsored Two-day National Seminar on “Machinery Vibration Analysis”, as Coordinator 5<sup>th</sup> to 6<sup>th</sup> Oct 2017.
  39. Organized an FDP “Emerging Trends in Composite Materials and Industrial Applications”, sponsored by TEQIP, 20<sup>th</sup> to 25<sup>th</sup> March 2017.
  40. One week FDP on “Intellectual Property Rights”, Department of Biotechnology, CBIT. 19<sup>th</sup> to 24<sup>th</sup> Dec 2016
  41. Workshop on “Quality Initiatives in Technical & Higher Educational Institutions”, ESCI, Hyderabad during 6-8<sup>th</sup> Dec 2016.

42. One week workshop on “Computational Fluid Sciences”, Department of Mechanical Engineering, CBIT. 6th- 13th April 2016
43. Two-week AICTE sponsored FDP on “Finite Element Analysis and practices through Ansys’ Department of Mechanical Engineering, CBIT. 17<sup>th</sup> -29<sup>th</sup> march, 2014.
44. UGC sponsored Orientation programme, at UGC-Academic Staff College, 12<sup>th</sup> June to 9<sup>th</sup> July 2013, MANUU, Hyderabad.
45. Two-day workshop on “Nano Technology and its Applications”, Department of Mechanical Engineering, CBIT. 27<sup>th</sup>-28<sup>th</sup> Feb, 2012
46. Attended a national convention on “Analysis and Prevention of Fractures and Failures”, Organized by ‘Society for failure analysis (SFA), MGIT, RCMA (Mat.), CEMILAC and DRDO during Feb 3<sup>rd</sup>&4<sup>th</sup> 2012.
47. AICTE sponsored Two weeks faculty development programme on “Research Methods and Tools for Mechanical Engineering Faculty, Bannari Amman institute of technology, Coimbatore, 31<sup>st</sup> May -11<sup>th</sup> June 2010
48. A two-day workshop on “STARCCM+CFD Software” organized in association with Analyzer CAE Solutions at Vasavi College of engineering. 17<sup>th</sup> & 18<sup>th</sup> April 2009
49. A two-day workshop on “Hydraulic and Pneumatic Controls”, organized by Department of Mechanical Engineering, University College of Engineering, Osmania University Hyderabad under formal networking activity of TEQIP and in collaboration with CITD, Hyderabad, 25<sup>th</sup>&26<sup>th</sup> March 2009.
50. Mission 10X Learning Approach Practitioners Certificate, Equivalent to one week FDP. 16<sup>th</sup> and 17<sup>th</sup> July 2008
51. A Two-week Short-Term Training Programme Sponsored by MHRD, Govt. of India, New Delhi on “Management Insights for Engineering Faculty for Academic Leadership, (MIEFAL – 08)” held During June 30<sup>th</sup> – July 12<sup>th</sup>, 2008, at National Institute of Technology, Warangal.
52. Workshop on “High Impact Presentation skills” Dale Carnegie & Associates, Inc and Wipro, at Osmania University, Hyderabad, 28 April - 2<sup>nd</sup> May 2008
53. One Week Short Term Course On “Introduction to Linear Elastic Fracture Mechanics” held at IIT, Guwahati, and Organized by the Department of Mechanical Engineering. During 3<sup>rd</sup> to 7<sup>th</sup> March 2008.
54. One-week in-house training Programme On “Effective Teaching Methodology” at CBIT. 3<sup>rd</sup> July to 8<sup>th</sup> August 2006.

Details of Journal Publications/  
Conferences (National and  
International)

#### International Journals

1. S Solomon Raj, Venkata Sushma Chinta, Zain Afridi, “Bend twist coupling effect on the Performance of the Wing of an Unmanned Aerial Vehicle”, International Research Journal of Engineering and Technology (IRJET), Vol 9, issue 6, e-ISSN:2395-0056 June 2022.
2. S Solomon Raj, Venkata Sushma Chinta, G. Laxmaiah and Manthri Neelima, “Experimental characterization of hybrid composite materials for tension, flexural and impact behaviour”, International Research Journal of Engineering and Technology (IRJET) Vol 9, issue 6, e-ISSN:2395-0056 June 2022.
3. S. Solomon Raj, Venkata Sushma Chinta, Zain Afridi, “Numerical Analysis of an Aircraft Wing”, Turkish Journal of Computer and Mathematics Education, Vol.12 No.11, 3760- 3766, e-ISSN:1309-4653, May 2021. Scopus indexed.
4. Venkata Sushma Chinta, P. Ravinder Reddy, Koorapati Eshwara Prasad, S. Solomon Raj, “Modal Analysis of carbon/epoxy plate by varying fiber orientation”, Turkish Journal of Computer and Mathematics Education, Vol.12 No.10, 7580-7586, e-ISSN:1309-4653, April 2021. Scopus indexed. DOI: <https://doi.org/10.17762/turcomat.v12i10.5667>

5. Venkata Sushma Chinta, S.Solomon Raj, P.Ravinder Reddy and Eluka Vincent, " Numerical and experimental investigation of effect of stacking sequence on the fracture Parameters of composite materials", Journal of Xi'an University of Architecture & Technology, ISSN No : 1006-7930, pp: 76-86, Feb 2021. Scopus indexed. DOI:20.19001/JXAT----- Impact factor: 3.7
6. Dr. S. Solomon Raj, Dr. G. Laxmaiah, N.Sandeep, "Design Analysis and Optimization of 6DOF Robotic Arm", International Journal of Mechanical and Production Engineering Research and Development (IJMPERD), ISSN (P): 2249-6890; ISSN (E): 2249-8001, Vol.10, Issue 3, Jun 2020, 5493-5500.Scopus Indexed.DOI:10.24247/ijmperdjun2020523
7. Dr. G. Laxmaiah, Dr. S. Solomon Raj, Dr P.V.R Ravindra Reddy "Experimental stress Analysis of Rocket Motor Casing Using Elasto-Plastic Strain Theory", International Journal of Mechanical and Production Engineering Research and Development (IJMPERD) ISSN (P): 2249-6890; ISSN (E): 2249-8001 Vol. 10, Issue 3, Jun 2020, 4027-4038 ScopusIndexed.DOI:10.24247/ijmperdjun2020381
8. Dr. S. Solomon Raj, Dr. G.Laxmaiah & V.Ravi kumar, "Design and analysis of fuselage skin repair joint", International Journal of Mechanical and Production Engineering Research and Development (IJMPERD), Vol. 9, ISSN (P): 2249-6890; ISSN (E): 2249-8001 Issue 3, Jun 2019, 887-894, Scopus Indexed, DOI:10.24247/ijmperdjun201997.
9. Dr. G.Laxmaiah, Dr.P.V.R.Ravindra Reddy, Dr.S. Solomon Raj, "Experimental studies on optimization of molding sand composition with tamarind kernel powder as additive", International Journal of Mechanical and Production Engineering Research and Development (IJMPERD), Vol. 9, ISSN (P): 2249-6890; ISSN (E): 2249-8001 Issue 3, Jun 2019, 939-946, Scopus Indexed.DOI:10.24247/ijmperdjun2019102
10. Dr. S. Solomon Raj, "Effect of stacking sequence on the performance of gas turbine casing using modal analysis", International Journal of Mechanical Engineering and Technology. e-ISSN: 0976-6359, p-ISSN:09766340 Vol.9, Issue.3, pp.800-805,2018,Scopus Indexed.
11. S.Solomon Raj and Dr.P.Ravinder Reddy., "Utilization of bendtwist coupling to improve the performance of hybrid marine composite propeller", International Journal of Mechanical Engineering and Technology. e-ISSN: 0976-6359, p-ISSN:09766340 Vol.9, Issue.3, pp.443-449,2018,Scopus Indexed.
12. S.Solomon Raj and Dr.P.Ravinder Reddy., "Design, Fabrication and Analysis of Composite Marine propeller", International Journal of Engineering Technology, Management and Applied Sciences, ISSN: 2349-4476, Vol.3, Special Issue. 2015, pp. 238-245,Scopus Indexed.
13. S.Solomon Raj and Dr.P.Ravinder Reddy., "Bend-Twist coupling and its effect on cavitation inception of composite marine propeller", International Journal of Mechanical Engineering and Technology. e-ISSN: 0976-6359, p-ISSN: 09766340 Vol.5, Issue.9, pp.306-314.2014,Scopus Indexed.
14. S.Solomon Raj and Dr.P. RavinderReddy. "Design of hybrid composite marine propeller for improved cavitation performance", International Journal of Innovative research in Technology and science, ISSN: 2321-1156, Vol. 2, Issue.3, 2014, pp.121-126.
15. S.Solomon Raj and Dr.P.Ravinder Reddy., "Effect of stacking sequence on the performance of marine propeller", International Journal of Applied Engineering Research, ISSN: 0973-4562, Vol. 6, No. 20, 2011, pp.2367-2374.
16. S.Solomon Raj, and Dr.P.Ravinder Reddy., "Performance Evaluation of composite marine propeller using L8 orthogonal array", International Journal of Engineering Science and Technology, ISSN: 0975-5462, Vol. 3, No. 11, 2011, pp.7998-8003.

#### International / National Conferences

1. S.Solomon Raj, and Dr.P.Ravinder Reddy., "Design, Fabrication and Analysis of Composite Marine propeller", International conference on Innovative Research in Engineering, Science and Management, ESM-2015, Volume 2, ISBN-13: 978-93-85880-72-8, ISBN-10: 93-85880-72-1, pp. 66-74, **Mc.Graw** Hill Education, Oct 2015.