

Name : Dr. B.Satyanarayana
B.E., M.Tech.,Ph.D.,MASME, LMISTE
Designation : Professor
Department : Mechanical Engineering
Mail.I.D : satyanarayana_b@vnrvjiет.in

Experience (in years): Teaching: 24 Research: 12 Industrial: 04



1. Educational / Technical qualifications:

| S. No. | Level (UG / PG / Ph.D.) | Year of passing | Specialization |
|--------|-------------------------|-----------------|------------------------|
| 1 | BE | 1994 | Mechanical Engineering |
| 2 | M.Tech. | 2002 | Production Engineering |
| 3 | Ph.D. | 2014 | Machining |

2. Teaching and Learning:

a. Teaching Interests:

Metrology, Production Technology, Metal Cutting and Tool Design, Mechanics of Solids, Operations Research, Numerical Methods, CAM, SMP, AMP and Computer Programming in 'C'.

b. Novel Teaching & Learning Techniques adopted:

a) PPT and Video b) Wit and Will c) POGIL d) Seminars

c. Involvement in curriculum updating / Design:

- As a Chairman of Board of Studies of ME, reviewed the entire syllabus.
- Involved in updating the syllabus for four subjects- AMP, SMP, MP and MP Lab

3. Co-curricular and Extra-Curricular Activities

3.1. Interests and Hobbies:

- To promote work efficiency and good attitude towards work, in organizations.
- Social service and playing a few games.

3.2 CCA/ECA Organized:

- Chaired various departmental CCA/ECA committees
- Organized Telangana State Level Sports & Cultural Meet for Polytechnic Students at VNR VJIET from 19th December 2019 to 20th December 2019.

3.3 CCA/ECA participated:

Discipline Committee member, Sintillashunz, at VNRVJIET

3.4 Counseling and Mentoring Activity:

- Conducting counseling and mentoring activities every year for Diploma Students
- Conducted class review meetings with student representatives

3.5. Committees involved in:

Department level: All committees at department level as a HOD/ME

Institute Level: Member- Institute Academic committee, Academic council, IQAC
etc.,

4. Conference / Workshop / Seminar / Guest Lectures:

4.1. Conducted: 06

4.2 .Attended: 27

5. Academic Contribution and Research & Consultancy:

5.1. Invited Lectures: Nil

5.2. Articles / Chapters published in Books: one

5.3. Books published as single author or as editor:

| S.No | Title with page nos. | Type of Book & Authorship | Publisher & ISSN/ ISBN No | Whether Peer reviewed |
|------|---|---------------------------------------|--|-----------------------|
| 1 | Optimization of Controllable Turning Parameters for HSM of Inconel 718 Pg.Nos: 113 | Text book & both Author and Publisher | LAMBERT Academic Publishing West Germany ISBN: 978-3-659-88251-7 | Yes |
| 2 | Experimental Investigations on Machinability Parameters of Inconel 718 Pg.Nos: 91 | Text book & both Author and Publisher | LAMBERT Academic Publishing West Germany ISBN: 978-3-659-91338-9 | Yes |

5.4. Projects Guided:

a) UG: 32

b) PG: 14

5.5. Research Interests: Manufacturing Processes

5.6. Ph.D students:

a) Enrolled: Nil

b) Submitted: Nil

c) Awarded: Nil

5.7. Papers published in reviewed International Journals:

International Journals:

1. B Satyanarayana et al., “Manufacturing of Complex Components Using Photogrammetry in Association with Additive Manufacturing”, *Materials Today: Proceedings*, ISSN:2214-7853, Indexed in Scopus, Google Scholar- *in production*.
2. B Satyanarayana et al., “Making of Religious Components Using Reverse Engineering Technology”, *IOP conference series- Material Science and Engineering*, ISSN:1757-8981 E-ISSN:1757-899X, indexed in Scopus, Thomson Reuters and COMPENDEX – *in press*.
3. B Satyanarayana et al., “Characterization of Hyper elastic Material Using Experimental Data and Finite Element Simulation”, *Materials Today: Proceedings Vol. 24 (2020)* 1660-1669, ISSN:2214-7853, Indexed in Scopus, Google Scholar.
4. B Satyanarayana et al., “Characterization of Hyper elastic Material by Experimental Tests and Curve Fitting”, *Materials Today: Proceedings Vol. 24 (2020)* 1670-1679, ISSN: 2214-7853, Indexed in Scopus, Google Scholar.
5. B Satyanarayana et al., “Eyeball Movement based Cursor Control using Raspberry Pi and OpenCV”, *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, Volume-9 Issue-7, 392-395, May 20220, ISSN: 2278-3075, Indexed in Scopus.
6. B Satyanarayana et al., “Optimization of controllable turning parameters for high speed dry machining of a super alloy”, *Materials Today: Proceedings Vol. 5 (2018)* 4878–4886, ISSN: 2214-7853, Indexed in Scopus, Google Scholar.
7. B Satyanarayana et al., “Design and Fabrication of Hybrid 3D Printing Machine”, *International Journal of Engineering Technology Science and Research (IJETSR)*, Volume 4, Issue 8 August 2017, ISSN: 2394 – 3386, Indexed by Google scholar and UGC approved journal, IF: 2.12.
8. B Satyanarayana et al., “Fabrication, Mechanical Characterization and Analysis of Carbon Fiber Reinforced Composite used for Aircrafts”, *International Journal of Advanced Research in Science and Engineering*, Vol.6, Issue 7, July 2017, pg. 269-275, ISSN: 2319-8354, Indexed by Google Scholar, IF: 2.83.
9. B Satyanarayana et al., “Optimization of Controllable Turning Parameters for High Speed Dry Machining of Super Alloy: FEA and Experimentation”, *Materials Today: Proceedings Vol. 4 issue 2(2017)* 2203-2212 *published by Elsevier*, ISSN: 2214-7853, Indexed in Scopus, Google Scholar.
10. B Satyanarayana et al., “**Manufacturing of a Powerless Amplifier using 3d Printing Technology**”, *International Journal on Mechanical Engineering and Robotics*, Vol 4,

Issue 2, 2016, pg. 35-38, ISSN (Print): 2321-5747, Indexed by Google scholar, Impact Factor 1.95.

11. B Satyanarayana et al., "Design and manufacturing of a chess coin through CAD/CAM integration", *Science and Technology (The International quarterly journal)* Vol.2, Issue 7, 2016, pp 370-377, ISSN: 2394-3750 EISSN 2394-3769, Indexed in Google Scholar.
12. B Satyanarayana et al., "Optimization of CNC Laser Cutting Process Parameters", *International Advanced Research Journal in Science, Engineering and Technology*. Vol.3, Issue 5, May 2016, ISSN(O): 2393-8021 ISSN(P): 2394-1588, IARJSET-2016. 3543, Indexed in Google Scholar, Cross Ref. with Impact Factor 3.943.
13. B Satyanarayana et al., "Simultaneous Optimization of Multi Performance Characteristics in Dry Turning of INCONEL 718 using NSGA-II, *Materials Today: Proceedings* Vol. 2(2015) 2423-2432 *published by Elsevier*, ISSN: 2214-7853, Indexed in Scopus, Google Scholar.
14. B Satyanarayana et al., "Component Replication using 3D Printing Technology", *Procedia Material science*, Vol. 10 (2015) 263-269 *published by Elsevier*, ISSN: 2211-8128, Indexed in Google scholar, Web of science.
15. B Satyanarayana et al., "Optimization of Controllable Turning Parameters for High Speed Machining of Inconel 718 By Measurement of Surface Roughness", *International Journal of Scientific & Engineering Research (IJSER)*, Volume 7, Issue 2, Feb 2016, ISSN: 2229-5518, Indexed in Google scholar with Impact Factor 3.8.
16. B Satyanarayana et al., "Modeling and Analysis of Steam Turbine Blade by Varying Its Profile", *International Journal for Scientific Research & Development* Vol. 3, Issue 09, 2015, pp. 1010-1013, ISSN: 2321-0613, Indexed in Google scholar with Impact Factor 2.39.
17. B Satyanarayana et al., "Multi-Response Optimization of CNC WEDM Process Parameters for Machining INCONEL 718 using Taguchi Grey Relational Analysis (TGRA), *International Journal of Mechanical & Production Engineering (IJMPE)* Vol. 2, Issue 10, 2014, pp. 35-41, ISSN (P): 2320-2092; ISSN (O): 2321-2071, Indexed in Google scholar with Impact Factor 3.05.
18. B Satyanarayana et al., "Analysis, Simulation and Fabrication of the Remote Terminal Unit for Automated Commando Training System", *International Journal of Mechanical and Production Engineering Research and Development (IJMPERD)* Vol. 3, Issue 5,

2013, pp. 125-132, ISSN (P): 2249-6890; ISSN (E): 2249-8001, Indexed in Scopus with Impact Factor 5.3403.

19. B Satyanarayana et al., “Modeling and Optimization of Cutting Parameters in High-Speed Dry Machining of Inconel 718 Alloy”, International Journal of Advanced Research in Engineering and Technology(IJARET) , Vol. 4, Issue 4, 2013, pp242-252, ISSN Print: 0976-6480 ISSN Online: 0976-6499, Indexed in Thomson Reuters' Research ID : H-3771-2015 with Impact Factor 5.8376.
20. B Satyanarayana et al., “Prediction of Optimal cutting parameters for high speed dry turning of Inconel 718 using GONNS”, International Journal of Mechanical Engineering &Technology(IJMET), Vol. 3, Issue 3, 2012, pp.294-305, ISSN Print: 0976 – 6340 ISSN Online: 0976– 6359, Indexed in Thomson Reuters' Research ID : H-3771-2015 with IF: 3.8071.
21. B Satyanarayana et al., “Development of Mechanical System for Automated Commando Training System”, International Journal of Advances in Science and Technology, Vol. 4, Issue 2, 2012, pp. 81-92, ISSN: 2229-5216, Indexed in Google Scholar.
22. B Satyanarayana et al., “Experimental Investigations for Optimized High Speed Turning on Inconel 718 Using Taguchi Method Based Grey Relational Analysis”, International Journal of Manufacturing Science and Engineering (IJMSE), Vol 2, Issue 2, 2011, pp. 73-80, ISSN 0976-6812.
23. B Satyanarayana et al., “Experimental Investigations on Turning of Inconel 718”, International Journal on Mechanical & Automobile Engineering, Vol. 11, Issue 01, 2010, pp. 18-25, ISSN 0974-231X.

National Journals:

1. B Satyanarayana et al., “Optimized high speed turning on Inconel 718 using Taguchi method based Grey relational analysis”, Indian Journal of Engineering & Materials Sciences (IJEMS) Vol. 20, Aug. 2013, pp.269-275, ISSN: 0975-1017 (Online); 0971-4588 (Print), Indexed in Scopus and Google Scholar with Impact Factor 0.641.
2. B Satyanarayana et al., “Study on the Machinability Characteristics During High-Speed Turning of Inconel 718 With PVD Coated Tool”, Journal of Manufacturing Engineering, Vol. 7, Issue 2, pp. 58-66, 2012, ISSN: 0973-6867.
3. B Satyanarayana et al., “Multi-Response Optimization of Inconel 718 High Speed Turning Using Taguchi Method Based Grey Relational Analysis”, Journal on Manufacturing Technology Today, CMTI, Bangalore, Vol. 10, Issue 6, 2011, pp. 11-19, ISSN 0972-7396.

4. B Satyanarayana et al., “Multi-Response Optimization of High-Speed Turning Parameters of Superalloy Inconel 718 Material Using Taguchi Method Based Grey Relational Analysis”, i-manager’s Journal on Mechanical Engineering, Vol. 1, Issue 3, 2011, pp. 48-59, ISSN-2230-9055, Indexed in Google Scholar.

Books Published:

1. B Satyanarayana et al., “Optimization of Controllable Turning Parameters for HSM of Inconel 718”, No. of Pages: 113, LAMBERT Academic Publishing West Germany ISBN: 978-3-659-88251-7.
2. B Satyanarayana et al., “Experimental Investigations on Machinability Parameters of Inconel 718” No. of Pages: 91, LAMBERT Academic Publishing West Germany ISBN: 978-3-659-91338-9.

Completed Projects / Consultancies

1. B. Satyanarayana, “Optimization of controllable turning parameters in high speed dry turning of super alloys for minimization of Tool Wear”, UGC- Minor Project F.No: MRP-4564/14(SERO- UGC), 2 Years, April 2014 to March 2016, 3.5 LAC.
2. B Satyanarayana, “Machining of Super alloys”, AICTE-MODROBS, Ref. No. 8024/RIFD/MOD-332/2010-11 (1 Year), 15 LAC.
3. B Satyanarayana et al., “Automated Commando Training System (ACTS)”, AP Grey Hounds, A.P. State Police, Govt. of A.P. MAY 2009, 2 Years, 9L,
4. B Satyanarayana et al., “Automated Commando Training System (ACTS)”, National Police Academy (NPA), 2 Years, 28L.

Patents Granted

1. B Satyanarayana et al., “COLLABORATIVE FEDERATIVE LEARNING APPROACH FOR INTERNET OF VEHICLES TRAFFIC PREDICTION”, An innovation patent granted by Australian Government with Patent number 2020101613 dated 26th August 2020.

5.8. Papers presented at National / International Conferences:

International Conferences

1. B Satyanarayana et al., "Development of Semi- Automated Wall Plastering Machine", International Conference on Science, Engineering and Technology (ICSET-2019) organized by Pallavi Engineering College, Nagole, Hyderabad in association with IFERP, One, 27th-28th September 2019.
2. B Satyanarayana et al., "3D Printing of Various Components using Custom made 3D Printer", International Conference on Contemporary Design Analysis of Manufacturing and Industrial Engineering Systems (CDAMIES-2018), NIT, Trichy, ISBN-978-93-86954-00-8, 18th-20th January 2018.
3. B Satyanarayana et al., "Simultaneous Optimization of CNC WEDM Process for Machining Inconel 718 using Taguchi Grey Relational Analysis (TGRA)", International Conference on Advanced in Materials and Product Design (AMPD-2015), Organized by *NIT Surat*, ISBN- 978-93-5196-956-3, 10th - 11th January 2015.
4. B Satyanarayana et al., "Modelling and Optimization of Cutting Parameters in High-Speed Dry Machining of Inconel 718 Alloy using ANN and GA", 4th International and 25th AIMTDR Conference, Organized by *Jadavpur University*, ISBN-978-93-8206-2752, 14th – 16th December 2012.
5. B Satyanarayana et al., "Design and modeling of the Remote Terminal Unit for Automated Commando Training System", International Conference on Materials Processing and Characterization (ICMPC 2012), 8th-10th March 2012.
6. B Satyanarayana et al., "Optimization of Temperature during High Speed Turning of Inconel 718", International Conference on Computational Methods in Manufacturing IIT, Guwahati, 15th -16th December 2011.
7. B Satyanarayana et al., "Development of Hybrid 3D Printer", 3rd International conference on "Innovative Design, Analysis and Development Practices in Aeronautical and Automobile Engineering" (IDAD 2018), 22nd to 24th February 2018, Vel Tech Rangarajan Dr Sagunthala R&D Institute of Science and Technology, Chennai, India.
8. B Satyanarayana et al., "Design, Modeling & Fabrication of a Screw Jack using 3D Printing Technology", International Conference on Advances in Materials and Manufacturing (ICAMM-2016), 8th to 10th December 2016, OU and DRDL, Hyderabad.
9. B Satyanarayana et al., "Design and Manufacturing of a Chess Coin through CAD/CAM Integration", International Conference on Trends in Industrial and Mechanical Engineering (IC TIME-2016), 4th – 6th February 2016, NIT, Bhopal.
10. B Satyanarayana et al., "Parametric Modeling and Dynamic Characterization of Steam Turbine Blade Test Rig", International Conference on Emerging Trends in Science

Technology Engineering and Management (ICET STEM-2015), 9th – 10th October 2015, Malla Reddy Engineering College, Hyderabad.

11. B Satyanarayana et al., “Experimental Investigations on Residual Stress and Surface Roughness in dry Turning of INCONEL 718”, International Conference on Emerging Technologies in Mechanical Sciences (ICEMS-2014), 26th – 27th December 2014, Malla Reddy College of Engineering & Technology, Hyderabad, ISBN: 978-93- 83 038- 28- 2.
12. B Satyanarayana et al., “AWJM Process Optimization using Principle Component Analysis (PCA)”, International Conference on Advanced Materials and Manufacturing Technologies (AMMT), 18th – 20th December 2014, JNTU College of Engineering, JNTU, Hyderabad, ISBN: 978-93-82163-46-6.
13. B Satyanarayana et al., “Multi-Response Optimization of WEDM Process using TGRA & PCA”, International Conference on Advances in Design & Manufacturing (ICAD&M’2014), 5th – 7th December 2014, National Institute of Technology, Tiruchirappalli, ISBN 978-93-84743-12-3.
14. B Satyanarayana et al., “Optimization of Abrasive Water Jet Machining Process Parameters using Taguchi Grey Relational Analysis (TGRA)”, 13th International Conference on Research and Development in Engineering & Technology (ICRDET), 20th July 2014, IRAJ Research Forum.
15. B Satyanarayana et al., “Experimental Investigations during high speed turning of Inconel 718 using CVD coated tool”, 5th International academic conference on electrical, electronics and computer engineering (IACEECE), 22nd September 2013, Institute of Research and Journals.
16. B Satyanarayana et al., “Experimental Investigations to study the Influence of Machinability Factors in Turning of Inconel 718”, 3rd International and 24th AIMTDR Conference, 13th – 15th December 2010, AU, Vizag.

National Conference

1. B Satyanarayana et al., “Machinability study of Nickel base super alloy using CBN Cutting Tools in High Speed Machining”, National conference on Advances in Manufacturing & Industrial Engineering (NCOAIMAIE-2007), 12th- 14th July 2007, VNR VJIET, Hyderabad.
2. B Satyanarayana et al., “Review of Developments towards the Machinability Characteristics of Inconel 718 Alloy”, National Conference on Advances in Mechanical Engineering (NCAME 2010), 18th December 2010, VREC, Vijayawada, AP.

5.9. Sponsored research Projects:

| S.No | Title | Agency | Period | Grant amount | Ongoing / Completed |
|------|---|-----------------------------|---------|--------------|---------------------|
| 1 | Optimization of controllable turning parameters in high speed dry turning of super alloys for minimization of Tool Wear | UGC- Minor Research Project | 2 Years | Rs. 3.5 lacs | Completed |

5.10 Consultancy Projects:

| S.No | Title | Agency | Period | Sanctioned Amount | Ongoing / Completed |
|------|---|-------------------------------|---------|-------------------|---------------------|
| 1 | Machining of Super alloys | AICTE | 1 Year | 15 | Completed |
| 2 | Automated Commando Training System (ACTS) | AP Grey Hounds | 2 Years | 9 | Completed |
| 3 | Automated Commando Training System (ACTS) | National Police Academy (NPA) | 2 Years | 28 | Completed |

6.Awards / Honors received:

- Guided II best B.Tech Final Year Project in the State Level B.Tech. Final year project Presentations held at Engineering Staff College of India, Gachiboli, Hyderabad in May 2012.
- Received Best Paper Publication Award in an International Conference for the paper titled “Experimental Investigations on Residual Stress and Surface Roughness in dry Turning of INCONEL 718”, International Conference on Emerging Technologies in Mechanical Sciences (ICEMS-2014), December 26-27, 2014, pp. 73-78, organized by Department of Mechanical, Aeronautical & Mining Engineering, Malla Reddy College of Engineering & Technology, Hyderabad.
- Chaired two sessions for the 4th International Conference on Materials Processing and Characterization (ICMPC- 2015), 14th – 15th March 2015, organized by Department of Mechanical Engineering, Gokaraju Ranga Raju Institute of Engineering & Technology, Hyderabad.
- Chaired one session for the 5th International Conference on Materials Processing and Characterization (ICMPC- 2016), 12th – 13th March 2016, organized by Department of Mechanical Engineering, Gokaraju Ranga Raju Institute of Engineering & Technology, Hyderabad in collaboration with Maulana Azad National Institute of Technology, Bhopal, M.P.

- Chaired one session for the 7th International Conference on Materials Processing and Characterization (ICMPC- 2017), 17th – 19th March 2017, organized by Department of Mechanical Engineering, Gokaraju Ranga Raju Institute of Engineering & Technology, Hyderabad in collaboration with Maulana Azad National Institute of Technology, Bhopal, M.P.
- Chaired one sessions for the 9th International Conference on Materials Processing and Characterization (ICMPC- 2019), 8th – 10th March 2019, organized by Department of Mechanical Engineering, Gokaraju Ranga Raju Institute of Engineering & Technology, Hyderabad.

7. Motto:

To produce citizens with human values and right attitude towards their profession