

Dr. Vikas Gupta

Mechanical Engineering Department
Ch. Devi Lal State Institute of Engineering and Technology
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Online Links:

<https://scholar.google.co.in/citations?user=IM3Jc7EAAAAJ&hl=en>
https://www.researchgate.net/profile/Vikas_Gupta51
<https://www.slideshare.net/DrVikasGupta6/repair-of-damage-with-composites-by-vikas-gupta-cdlsietpanniwala-mota-73577681>

Education

- Ph.D., Mechanical Engineering Department, National Institute of Technology Kurukshetra
- M.E. (Mechanical Engineering) Mechanical Engineering Department, Birla Institute of Science and Technology Pilani
- B.E. (Mechanical Engineering) Mechanical Engineering Department, Giani Zail Singh College of Engineering & Technology Bathinda

Research Fields

- Additive Manufacturing
- Heterogeneous object modeling of medical implants and soft tissues with dynamic characteristics
- Geometric Modeling
- Robotics and Automation
- CAD/CAM/CAE

Achievements

- Selected Marquis Who's Who in the World® 2016 (33rd Edition) and 2017 (34th Edition)
- Got Financial Aid for M.Tech. program at BITS Pilani
- Topped the batch in M.Tech. program at BITS Pilani (CGPA: 10.00/10.00)
- Awarded two Government Scholarship in B.E. Program

Working Experience: More than 20 years

Publications: more than 50 Papers published in International Journals/International Conferences/National Conferences

Selected Papers:

- American Society of Mechanical Engineers (ASME) *Open J. Engineering* "Dynamic analysis of hip prosthesis using different biocompatible alloys", 04/02/2022, 1: 011001, Paper No: AOJE-21-1012, <https://doi.org/10.1115/1.4053417>
- International Journal of Automotive and Mechanical Engineering (IJAME) "Dry and wet lubrication analysis for multi-material hip assembly," (In Press) 2022.
- Elsevier: *Materials Today: Proceedings*: "Comparative investigation and analysis of hip prosthesis for different bio-compatible alloys", 2214-7853/2020
- Scopus: *Journal of Physics: Conf. Series*: "Homogeneous modelling and analysis of hip prosthesis using FEA", 1240 (July 2019), 012118, doi:10.1088/1742-6596/1240/1/012118
- Scopus: *Journal of Physics: Conference Series*: "Fabrication of hybrid bicycle for minimizing pollutant emissions," 1478, (May 2020) 012036, doi:10.1088/1742-596/1478/1/012036
- Elsevier: *Journal of Computing & information Science in Engg. (ASME USA)*: "Heterogeneous composition adaption with material convolution control features," Vol 17, June 2017. DOI: 10.1115/1.403474
- Elsevier: *Computer Aided Design (Elsevier, UK)* "Heterogeneous Object Modeling with Material Convolution Surfaces," Vol. 62, pp. 236-247, May 2015
- Scopus: *Computer Aided Design & Applications (published by Taylor & Francis)* "Slice

generation and data retrieval algorithm for rapid manufacturing of heterogeneous objects,” Issue 11, No. 3, pp. 255-262, 2013

- Scopus: Computer Aided Design & Applications (published by Taylor & Francis) “Reference based geometric modeling for heterogeneous objects,” Issue 9, No 2, pp. 155-165. 2012
- “A Computer-Aided Design Modeling Approach for Heterogeneous Objects,” CAD’10, International CAD Conference and Exhibition 2010, Dubai, UAE. Organized by CAD Solutions under the Journal “Computer Aided Design and Applications”
- “Algorithm design and cad model for heterogeneous objects,” CAD’09, International CAD Conference and Exhibition, Reno, Nevada, USA. Organized by CAD Solutions under the Journal “Computer Aided Design and Applications”
- “CAD modeling and process planning for rapid manufacturing of heterogeneous objects,” CAD’07, International CAD Conference and Honolulu, Hawaii, USA. Organized by CAD Solutions under the Journal “Computer Aided Design and Applications”

Invited Lectures Delivered in Conferences/Seminars: Lecture delivered in more than 14 International/National Conferences

Membership of Societies

- Life Member of Indian Society of Technical Education (ISTE) (No. 44951, Year 2005)
- Life Member of Red-Cross Society (No. 1099, Year 2008-09)
- Life Member of International Association of Engineers (IAENG) (No. 155413, Year 2015)

Recent Reviewer of Journals/Conferences Papers

- Journal of the Mechanical Behavior of Biomedical Materials(2018), Applications(published by Taylor & Francis) 1751-6161 (Online)
- CAD Conferences CAD’18 (2018), for Computer Aided Design and Applications(published by Taylor & Francis) 1686-4360 (Online)
- CAD Conferences CAD’17 (2017), for Computer Aided Design and Applications(published by Taylor & Francis) 1686-4360 (Online)
- Journal of Mechanical Engineering Science, London. ISSN: 0954-4062 (Print); 2041-2983(Online)
- International Journal of Engineering, Science and Technology (IJEST),Nigeria. ISSN 2141-2839 (Online); ISSN 2141-2820 (Print).
- International Journal of Computer Science Issues, Mauritius. ISSN (online): 1694-0814. www.IJCSI.org/reviewers-list.php
- International Journal of Research in Management, Science & Technology (ISSN: 2321-3264)

On-going Ph.D. Candidates : 01 Candidate

Short Term Course Organized

- Six Week Training Program on “CAD/CAM”
- Two Week Training Program on “Introduction to AutoCAD-2004”
- Four Week Training Program on “Introduction to AutoCAD-2004”
- Four Week Training Program on “CAD/CAM”

Selected Projects Undertaken

- Design and fabrication of Universal Governor set up to evaluate performance characteristics of Watt, Porter, Proell and Hartner Governors; Belt Brake Dynamometer to measure the brake power of an engine; apparatus for analyzing the Gyroscopic effects of rotating objects; apparatus for Static and Dynamic Balancing of rotating objects; Dedicated to DOM Lab
- BITS sponsored project on data flow and control on PARAM-10000 Super Computer.
- Implementing quality control tools in different departments of an industry.
- Study, Analysis and comparison of simple hobbing machine and CNC hobbing machine.
- To find out optimal design of two degree of freedom RR robot manipulator using Pro-E, Pro-Mechanica and ANSYS software.

- To make comparison in terms of stresses and displacements in a rectangular plate with hole using theory of elasticity and finite element analysis approaches.
- To find out temperature distribution and heat flow rates in two dimension objects using MATLAB programming and its comparison with solutions of Finite Element Analysis.
- Casting and machining of working prototype of horizontal cross head.
- Design of automatic air filling system in moving vehicle.
- Project on combustion generated air pollution in Bathinda city – A Survey.
- Solid modeling of natural cooling tower using software PRO-E.
- Generation of cam profiles using circular interpolation method using Auto-Lisp in AutoCAD-2004.
- Design and fabrication of different type of cam-profiles using CNC machines.
- Design and fabrication of CNC trainer model for drilling operation in PCB lab.
- Fabrication and installation of vibration alarm for CNC Milling using piezoelectric sensors.
- Fabrication of counter flow type of heat exchanger.

Main Administrative Responsibilities and Works

- Officer In-charge Mech. Deptt., CDLSIET, PanniwalaMota, Sirsa
- Training and Placement Officer, CDLSIET, PanniwalaMota, Sirsa
- Coordinator, Alumni Cell, CDLSIET, PanniwalaMota, Sirsa
- SPIO, CDLSIET, PanniwalaMota, Sirsa
- Estate Officer, CDLSIET, PanniwalaMota, Sirsa
- Chairman Admission Committee, CDLSIET, PanniwalaMota, Sirsa
- Officer In-charge Administration, CDLSIET, PanniwalaMota, Sirsa
- Officer In-charge Purchase, CDLSIET, PanniwalaMota, Sirsa
- Officer In-charge Sports, CDLSIET, PanniwalaMota, Sirsa
- Officer In-charge Store, CDLSIET, PanniwalaMota, Sirsa
- Officer In-charge Canteen, CDLSIET, PanniwalaMota, Sirsa
- Officer In-charge Public Health, CDLSIET, PanniwalaMota, Sirsa
- Officer In-charge Attendance, CDLSIET, PanniwalaMota, Sirsa
- Member, Organizing Committee of Mega Job Fair planned by Technical Edu. Deptt. Govt. of Haryana
- Member Anti-ragging Squad, CDLSIET, PanniwalaMota, Sirsa
- Member, Admission Committee, CDLSIET, PanniwalaMota, Sirsa
- Member, Students Grievance Committee, Guru Jambheshwar University of Sci. & Tech. Hisar
- Member, Inspection Committee for Government Polytechnic, Manesar
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Major Academic Responsibilities and Works

- Member, Editorial Board for International Journal of Research in Mgt., Sci. & Tech.
- Reviewer of renowned journals (Elsevier, Taylor & Francis etc.)
- Member, Advisory Committee of renowned International Conferences
- Convener, Flying Squad, Ch. Ranbir Singh University (CRSU), Jind
- Member, Flying Squad, Guru Jamb. University of Sci& Tech. (GJUS&T), Hisar
- Member, Students Grievance Committee, Guru Jamb. University of Sci& Tech. (GJUS&T), Hisar
- Member, BOS Committee, Ch. Devi Lal University (CDLU) Sirsa
- Member, UMC Committee, Ch. Devi Lal University Sirsa
- Center and Deputy Superintendent, GJUS&T, CDLU, CRSU