FACULTY PROFILE

Name: Dr. Vikas Goyat

Designation: Assistant Professor

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Professional Qualification:

- Ph.D (2014-2018), in Mechanical Engineering from Deenbndhu Chotu Ram University of Science and Technology, Murthal, Sonepat, Haryana, India.
- M.TECH (2010-2012), in Mechanical Engineering (CAD) from Deenbndhu Chotu Ram University of Science and Technology, Murthal, Sonepat, Haryana, India. (With Gold Medal)
- B.TECH (2005-2009), in Mechanical Engineering Kurukshetra University, Kurukshetra, Haryana, India. (With honors)

Publications (Journals & Conferences):

Journal Papers (SCI/Scopus)

- Goyat, V., Verma, S. and Garg, R.K., 2018. Reduction in stress concentration around a pair of circular holes with functionally graded material layer. Acta Mechanica, 229(3), pp.1045- 1060. https://doi.org/10.1007/s00707-017-1974-5 (IF-2.645)
- Goyat, V., Verma, S. and Garg, R.K., 2017. Reduction of stress concentration for a rounded rectangular hole by using a functionally graded material layer. Acta Mechanica, 228(10), pp.3695- 3707.https://doi.org/10.1007/s00707-017-1907-3 (IF-2.645)
- Goyat, V., Verma, S. and Garg, R.K., 2018. On the reduction of stress concentration factor in an infinite panel using different radial functionally graded materials. International Journal of Materials and Product Technology, 57(1-3), pp.109-131. https://doi.org/10.1504/IJMPT.2018.092937 (IF-0.8)

- Goyat, V., Verma, S. and Garg, R.K., 2019. Stress concentration reduction using different functionally graded materials layer around the hole in an infinite panel. Strength, Fracture and Complexity, 12(1), pp.31-45. https://doi.org/10.3233/SFC-190232
- Goyat, V., Verma, S. and Garg, R.K., 2021. Level Set function-based Functionally Graded Material for the reduction of maximum stresses around a pair of inclined unequal circular holes. Strength, Fracture and Complexity, vol. 14, no. 1, pp. 27-43. https://doi.org/10.3233/SFC-210273
- Kannan, M., Elavarasan, G., Karthikeyan, D. and Goyat, V., 2021. Analysis of emission and performance characteristics of compression ignition engine using Mahua oil-based biodiesel. Materials Today: Proceedings, 46, pp.10142-10146. https://doi.org/10.1016/j.matpr.2020.10.383
- Kumar, A., Kumar, A., Goyat, V., Sharma, J., Nain, J. and Jain, V., 2022. Interfering of liquid fuel droplets—A burning approach. Materials Today: Proceedings, 56, pp.278-281. https://doi.org/10.1016/j.matpr.2022.01.133
- Goyat, V., Ghangas, G., Sirohi, S., Kumar, A. and Nain, J., 2022. A review on mechanical properties of coir based composites. Materials Today: Proceedings, 62, pp.1738- 1745. https://doi.org/10.1016/j.matpr.2021.12.252
- Ghangas, G., Goyat, V., Sirohi, S., Sharma, S.K. and Dhull, S., 2022. Investigation for mechanical properties of dissimilar friction stir welded joints of AA5083 and pure Cu. Materials Today: Proceedings, 56, pp.77-81. https://doi.org/10.1016/j.matpr.2021.12.163
- Jaiswal, P., Makin, S., Dubey, A.D., Ghangas, G. and Goyat, V., 2022. Analysis of stress concentration reduction around rounded rectangular slot with FGM ring. Materials Today: Proceedings, 50, pp.1953-1957. https://doi.org/10.1016/j.matpr.2021.09.323
- Rani, P., Goyat, V., Dhull, S., Kadiyan, S. and Ghangas, G., 2022. Multi-objective parametric optimization of FSW for mechanical properties of AA5083 joint. Materials Today: Proceedings. https://doi.org/10.1016/j.matpr.2022.06.486
- Singh, V., Kumar, A., Alam, M., Kumar, A., Kumar, P. and Goyat, V., 2022. A study of morphology, UV measurements and zeta potential of Zinc Ferrite and Al2O3 nanofluids. Materials Today: Proceedings. https://doi.org/10.1016/j.matpr.2022.02.371
- Goyat, V., Verma, S. and Garg, R., 2022. Effect of an edge crack on stress concentration around hole surrounded by functionally graded material layer. Engineering Solid Mechanics, 10(4), pp.325-340. https://doi.org/10.5267/j.esm.2022.6.005
- Ghangas, G., Singhal, S., Dixit, S., Goyat, V. and Kadiyan, S., 2022. Mathematical modeling and optimization of friction stir welding process parameters for armor-grade aluminium alloy. International Journal on Interactive Design and Manufacturing (IJIDeM), pp.1-18. https://doi.org/10.1007/s12008-022-01000-1.
- Goyat, V., Enab, T.A., Ghangas, G., Kadiyan, S. and Kumar, A., 2022. On stress concentration analysis of inverse distance weighted function based finite FGM panel with circular hole under biaxial loading. Multidiscipline Modeling in Materials and Structures, Vol. 18(4), pp. 708-733. https://doi.org/10.1108/MMMS-04-2022-0070 (IF- 2.65)
- Kumar, A. and Goyat, V., 2023. A review on reinforcement strategies of friction stir processing to fabricate metal matrix composites. Materials Today: Proceedings.
- Chandan Pandey, Vikas Goyat and Sunkulp Goel, 2021. Advances in Materials and Mechanical Engineering. Series Title: Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-16-0673-1.

- Ajay, Parveen, Ashish Kumar Srivastava, Vikas Goyat, (In Process). Modeling, Characterization, and Processing of Smart Materials. IGI Global. Book Chapters (Scopus)
- Kumar, J., Chaudhary, S., Goyat, V. and Goyal, A., 2021. A Review on Mechanical Properties of Bamboo Fiber-Based Composites. In Advances in Materials and Mechanical Engineering (pp. 61-73). Springer, Singapore. https://doi.org/10.1007/978-981-16-0673-1_7
- Goyat, V., Verma, S. and Garg, R.K., 2021. On Study of Stress Intensity Factors for Different FGM Plates Having Inclined Edge Crack Using Extended Finite Element Method. In Advances in Metrology and Measurement of Engineering Surfaces (pp. 1-12). Springer, Singapore. https://doi.org/10.1007/978-981-15-5151-2_1
- Chaudhary, S., Goyat, V., & Verma, S., Reduction in Stress Concentration around Circular Notch using Functionally Graded Material, presented at the 19th ISME Conference on Advances in Mechanical Engineering (Mechanical Systems and Sustainability) held at Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, during December 20-22, 2018.
- Goyat, V., Verma, S., Jangra, P.: Stress Analysis of Functionally Graded material with XFEM. National Conference on Engineering, Management and Apparel Textile Technology (COLLOQUIUM 2015) held at Galaxy Global Group of Institutions, Ambala on 21 Feb 2015.
- Goyat, V., Nain, J., Verma, S.: A Review on Fracture Mechanics and J-Integral. International Conference on Emerging Trends in Engineering and Management (ICETEM12) held at Sat Priya Group of Institutions, Rohtak on 24 June 2012.
- Suresh., Dahiya, J., Goyat, V., Bhatia. G.: "Experimental Investigation of Machining Parameters for Wire-EDM on Tungsten Carbide" in the AICTE Sponsored International Conference on Recent Trends in computing, Mechatronics and communication (RTCMC) held at OM Institute, Hisar, on 25th Feb 2012.

Awards and Achievements

- Certificate of Merit and gold medal I M. Tech Deenbandhu Chhotu Ram University of Science and Technology, Murthal, Haryana in the year 2012.
- Guest Editor for Materials Today: Proceedings – Elsevier.
- Session Chair in different International Conferences.
- Organized two international Conferences (ICFTMME 2020 and 2022)

Workshops/Seminars/FDPs

- Attended FDP on "Quality Assurance in Engineering and Technology Education" at DCRUST Murthal, Haryana during 21-25/12/2015.
- Attended FDP on "Recent Research Trends in Industrial and Manufacturing Engineering" at DCRUST Murthal, Haryana during 13-17/04/2015.
- Attended FDP on "Advance in Manufacturing Challenges and Opportunities" at DCRUST Murthal, Haryana during 18-22/11/2016.

- Attended FDP on “Multi-Criteria Decision Making Method and Analysis” at DCRUST Murthal, Haryana during 09-13/09/2016.
- Attended STTP on "IOT in Manufacturing through ICT" organized by NITTTR, Chandigarh during 15-17/10/2018.
- Attended STTP on "Human Engineering in Design through ICT" organized by NITTTR, Chandigarh during 10-14/09/2018.
- Attended STTP on "Industry 4.0 Standard through ICT" organized by NITTTR, Chandigarh during 23-25/01/2019.
- Attended STTP on "Recent Trends in Automobile Technology" through ICT organized by NITTTR, Chandigarh during 25/02/2019 -01/03/2019.
- Attended FDP on "Inculcating Universal Human Values in Technical Education" organized by ALL INDIA COUNCIL FOR TECHNICAL EDUCATION, Delhi During 01-05/02/2021.
- Attended FDP on "Novel Materials" organized by Ajay Kumar Garg Engineering College, Ghaziabad during 04-08/10/2021.
- Attended FDP on "RESEARCH ISSUES IN ELECTRIC VEHICLES" organized by Alagappa Chettiar Government College of Engineering and Technology, Tamil Nadu during 06-10/12/2021.
- Attended FDP on "Part 1 of the online UHV Refresher 1" organized by ALL INDIA COUNCIL FOR TECHNICAL EDUCATION, Delhi during 14-18/02/2022.
- Attended FDP on "Advanced Security Analytics and Machine Learning" organized by SRM Institute of Science and Technology, NCR Campus, Ghaziabad during 18-23/04/2022.
- Attended FDP on "Recent Trends in Mechanical Engineering" organized by SRM Institute of Science and Technology, NCR Campus, Ghaziabad during 23-28/05/2022.
- Attending PDP on "Recent Developments in Renewable Energy" organized by Amity School of Engineering and Technology, Noida during 20-24/06/2022.
- A Refresher course on "Engineering Mechanics - Statics and Dynamics" offered by NPTEL-IIT Madras during Jan 2019 - March 2019.
- A Refresher course on "Engineering Mechanics" offered by NPTEL-IIT Madras during July 2019 - October 2019

Work Experience:

- Assistant Professor, SRM Institute of Science and Technology, Delhi NCR Campus, June 2018-till date.
- Assistant Professor, Hindu College of Engineering Industrial Area, Sonipat, July 2013 to June 2018.
- Assistant Professor, Panipat Institute of Engineering & Technology, Samalkha, Panipat, July 2012 to July 2013.

Professional Memberships:

- Associate Member of The Institute of Research Engineers and Doctors
- Member of International Association of Engineers