


Faculty Profile

Name	Jatinder Madan			
Designation	Professor & Head, Mech Engg			
Pay Scale	Pay level 14, Cell 11 (Rs. 1,93,800/-)			
Department	Mechanical Engineering			
Qualification	BE, ME, PhD (IIT Delhi)			
Date of joining 19-07-2014	Institute CCET Degree Wing	Present Post Professor, Mechanical Engineering		
Experience (<i>in years</i>)	Total 32 year	Teaching 30 year	Industry/Research 2 year	
Research Interests	<ul style="list-style-type: none"> i. Computer-aided Design and Manufacturing ii. Sustainable Design and Manufacturing iii. Design for Manufacture and Assembly iv. Design-manufacturing Integration v. Product Design and Development 			
Contact Details:	Email jatindermadan@ccet.ac.in		Mobile/Phone 9041291970	
Research Publications	International Journals	National Journals	International Conferences	National Conferences
	23	11	06	23
Books/Chapters Published	01 book, 05 book chapters			
Research Guidance	Ph. D.	03	Masters	18
Research Projects	Completed	02	Inprogress	-
Consultancy Projects	Completed	-	Inprogress	-
Seminar/Conference/STTPs	Attended	10	Organized	02
Professional Affiliations	Member ISTE, Member Institution of Engineers, Member IWS, Member ASME			
Awards/ Fellowships etc.	Certificate of merit (for University 1 st rank in ME) College scholarshio (for 1 st position in BE) National scholarship (for being in state merit list)			
List of Publications	<ul style="list-style-type: none"> i. Prince Pal Singh, <i>Jatinder Madan</i> and Harwinder Singh and 2024, System for Product Flow Configuration Selection for Reconfigurable Manufacturing System, <i>International Journal of Advanced Manufacturing Technology</i>. (SCI, IF (2023) 2.9,). Published. ii. P Veer, SC Vettivel, <i>Jatinder Madan</i>, BS Pabla, L Nelson, Effect of Cryogenic Treatment on Tribological and Surface Properties of 3D Printed Thermoplastic Polyurethane, <i>Indian Journal of Science and Technology</i> 16 (40), 3491-3501 (Dated published: Oct. 27, 2023). 			

	<p>iii. Prince pal Singh, <i>Jatinder Madan</i> and Harwinder Singh, 2021, Composite performance metric for product flow configuration selection of reconfigurable manufacturing system (RMS), <i>International Journal of Production Research</i>, vol 59 (11), 3996-4016. (SCI, IF 9.018), ISSN 0020-7543).</p> <p>iv. Prashant Veer, SC Vettivel, <i>Jatinder Madan</i>, BS Pabla, 2023, Biocompatibility characterization of cryogenically treated FDM printed thermoplastic polyurethane, <i>Materials Today: Proceedings</i>, DOI: https://doi.org/10.1016/j.matpr.2023.09.049 (Publication date 2023/9/10) (UGC Care II list)</p> <p>v. Prashant Veer, SC Vettivel, <i>Jatinder Madan</i>, BS Pabla, 2023, Mechanical and tribological characterization of 3D printed-cryogenically treated thermoplastic polyurethane, <i>Materials Today: Proceedings</i>, DOI https://doi.org/10.1016/j.matpr.2023.09.050. (Publication date 2023/9/12) (UGC Care II list)</p> <p>vi. Prince pal Singh, <i>Jatinder Madan</i> and Harwinder Singh, 2020, A systematic approach for responsiveness assessment for product and material flow in reconfigurable manufacturing system (RMS), <i>International Conference on Aspects of Materials Science and Engineering (ICAMSE2020)</i>, UIET, Panjab University, Chandigarh, May 29-30, 2020. Published in <i>Materials Today: Proceedings</i>, vol 28 (3), p 1643-1648. (https://doi.org/10.1016/j.matpr.2020.04.890)</p> <p>vii. Ranjit Singh, <i>Jatinder Madan</i>, 2019, A computer-aided system for gating-system design for die casting dies, <i>International Journal of Advanced Manufacturing Technology</i>, vol 101, 1793–1806. (SCI, IF 3.563), ISSN 0268-3768) (SCI, IF (2023) 2.9)</p> <p>viii. Prince pal Singh, Harwinder Singh and <i>Jatinder Madan</i>, 2018, A review of performance measures for system configuration in reconfigurable manufacturing system, <i>Industrial Engineering Journal</i>, vol 9 (5), 20-22. (UGC Care List I. ISSN 0970-2555)</p> <p>ix. R. Kumar, S. C. Vettivel, <i>J. Madan</i>, B. S. Pabla and S. Kumar, 2017, Characterization, Physical and Mechanical Behavior of Sintered Atomized Iron–Zinc Stearate Composite, <i>Trans Indian Institute of Metals</i>, 2018, vol 71 (1), 41 – 45. (SCI, IF 1.5 (2023), ISSN 0972-2815)</p> <p>x. V. Kumar and <i>J. Madan</i>, 2016, Computer-aided system for multi-cavity die-casting die-design, <i>International Journal of Mechatronics and Manufacturing Systems</i>, vol 9, no 1, p 36-55. (Scopus indexed, ISSN 1753-1039)</p> <p>xi. P. Singh and <i>J. Madan</i>, 2016, A computer-aided system for sustainability assessment for the die-casting process planning, <i>International Journal of Adv. Manufacturing Technology</i>, vol 87, p 1283–1298. (SCI, IF 3.563, ISSN 0268-3768) (SCI, IF (2023) 2.9)</p> <p>xii. V. Kumar and <i>J. Madan</i>, 2015, A system for computer-aided gating design for multi-cavity die-casting dies, <i>Proceedings of the Institution of Mechanical Engineers – Part B Journal of</i></p>
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	Engineering Manufacture, vol 231 (11), 1983-1999. (SCI, IF 2.759, ISSN 0954-4054)
xiii.	J. Madan, M. Mani, J. Y. H. Lee, Kevin W. Lyons, 2015, Energy performance evaluation and improvement of unit-manufacturing processes: injection molding case study, <i>J. of Cleaner Production</i> , vol 105, 157-170. (SCI, IF 11.072 (2021), ISSN 0959-6526)
xiv.	Mahesh Mani, J. Madan, Jae Hyun Lee, Kevin W. Lyons and S.K.Gupta, 2014, Sustainability characterization for manufacturing processes, <i>International Journal of Production Research</i> , vol 52, no 20, p 5895-5912. (SCI, IF 9.018 (2020), ISSN 1366588X).
xv.	R. Singh and J. Madan, 2013, Systematic approach for parting line determination for die-cast parts, <i>Robotics and Computer Integrated Manufacturing</i> , vol 29, no 5, p 346-366. (SCI, IF 10.013, ISSN 0736-5845).
xvi.	R. Singh, J. Madan and R. Kumar, 2014, Automated identification of complex undercut features for side-core design for die-casting parts, <i>Proceedings of the Institution of Mechanical Engineers – Part B Journal of Engineering Manufacture</i> , vol 228, no 9, p 1138-1152. (SCI, IF 1.9, ISSN 0954-4054)
xvii.	V. Kumar, J. Madan and P. Gupta, 2012, A system for design of multi-cavity die-casting dies from part product model, <i>International Journal of Advanced Manufacturing Technology</i> , vol 67, no 9-12, p 2083-2107. (SCI, IF 3.563, ISSN 0268-3768)
xviii.	C. D. Singh, J. Madan and A. Singh, 2013, Computer aided design of gating system for a die-casting die, <i>International Journal of Computer Applications in Technology</i> , vol 46, no 2, p 113-127. (Scopus indexed, ISSN 0952-8091)
xix.	V. Kumar, J. Madan and P. Gupta, 2012, System for computer aided cavity layout design for die-casting dies, <i>International Journal of Production Research</i> , vol 50, no 18, p 5181-5194. (SCI, IF 9.018, ISSN 0020-7543)
xx.	J. Madan, P. V. M. Rao and T. K. Kundra, 2009, Optimal parting direction selection for die-casting, <i>International Journal of Manufacturing Technology and Management</i> , vol 18, no 2, p 167-182. (Scopus indexed, ISSN 1368-2148)
xxi.	J. Madan, P. V. M. Rao and T. K. Kundra, 2007, Die-casting feature recognition for automated parting direction and parting line determination, <i>Transactions of ASME Journal of Computing and Information Science in Engineering</i> , vol 7, p 236-248. (SCI, IF 1.855, ISSN 1530-9827)
xxii.	J. Madan, P. V. M. Rao and T. K. Kundra, 2007, System for early cost estimation of die-cast part, <i>International Journal of Production Research</i> , vol 45, no 20, p 4823-4847. (SCI, IF 9.018, ISSN 0020-7543)
xxiii.	J. Madan, P. V. M. Rao and T. K. Kundra, 2007, Computer aided manufacturability analysis for die-cast parts, <i>Computer Aided Design & Applications</i> , vol 4, no 1-4, p 147-158. (Scopus indexed, ISSN 1686-4360)

	<p>xxiv. P Veer, SC Vettivel, J Madan, BS Pabla, L Nelson, 2023, Effect of Cryogenic Treatment on Tribological and Surface Properties of 3D Printed Thermoplastic Polyurethane, <i>Indian Journal of Science and Technology</i>, vol. 16 (40), p. 3491-3501. (October, 2023)</p> <p>xxv. V. Kumar, J. Madan and P. Gupta, 2010, Cavity layout design methodology for die-casting dies, <i>Int. J. of Engineering Studies</i>, vol 2, no 3, p 263-270. (ISSN 0975- 6469)</p> <p>xxvi. R. L. Viridi, K. Goyal and J. Madan, 2010, Concept and guidelines for design for manufacturability: a shift from traditional design concept, <i>Indian Journal of Engineering, Science, and Technology</i>, vol 4, no1, p 86-89. (ISSN 0974-6846)</p> <p>xxvii. R. Singh, J. Madan and A. Singh, 2010, Optimal selection of parting line for die-casting, <i>Int. J. of Applied Engg. Research</i>, vol 5, no 17, p 2899-2906. (ISSN 0973-4562)</p> <p>xxviii. S. Kumar, K. K. Mishra and J. Madan, 2010, Stress analysis of spur gear using FEM method, <i>Indian Journal of Engineering, Science, and Technology</i>, vol 4, no 1, p 82-85. (ISSN 0974-6846)</p> <p>xxix. K. Goyal, J. Madan and B.S. Pabla, 2010. Current issues in CAD model data exchange: a review, <i>Int. J. of Engg. Studies</i>, vol 2, no 3, p 329-336. (ISSN 0975- 6469)</p> <p>xxx. S. Kumar and J. Madan, 2010, Meshless methods for process simulation of diecasting, <i>Int. J of Applied Engineering Research</i>, vol 5, no 17, p 2949-2956. (ISSN 0973-4562)</p> <p>xxxi. T.P.Singh, J. Singh, J. Madan and G. Kaur, 2010, Effect of cutting tool parameters on surface roughness, <i>Int. Journal of Mechanical Engineering and Technology</i>, vol 1, no1, p 182-189. (ISSN 0976-6340)</p> <p>xxxii. J. Madan, R. Kumar and K. K. Mishra, 2009, Computer aided design and analysis of spur gears, <i>Int. J. of Mechanics and Solids</i>, vol 4, no 1, p 155-160. (ISSN 0973-1881)</p>
Research Project Detail	<p>i. Design and development of an automated modular car parking system for the city of Chandigarh (Funded by DST Chandigarh), Rs. 3,28,340/- (2019-21)</p> <p>ii. System for automated design of a die-casting die, All India Council of Technical Education (AICTE), Rs. 9.00 lac (2009-12)</p>
Patent Detail	<p>i. Radhey Sham, Jatinder Madan, Ashwani Kumar, Vineet Kumar, Rajesh Kumar Saluja, Himanshu Bisht, Yashdeep Singh, Prashant Parkash, Parth Dhar, 2020. Top loading stapler. Application No. 202011041590, Publication of the patent office, the patent office journal no. 42/2020. (Application date 25/09/2020 Publication date 16/11/2020, Issue date 06/07/2021). Status: <i>Granted</i>.</p> <p>ii. Jatinder Madan, Robust stapler with low effort (Translated from German: Robustes Heftgerät mit geringem Kraftaufwand), DE File number 20 2024 103 268.3. Date of registration July 9, 2024. International, German patent. Status: <i>Granted</i>.</p> <p>iii. Jatinder Madan, Radhey Sham, Ashwani Kumar, Himanshu Bisht, Prashant Prakash, 2021. Depth thread plug gauge, Design application number 346385-001. (Application date 16/07/2021, Registration date 19/07/2021, Issue date 13/09/2021). <i>Granted</i>.</p>

	<ul style="list-style-type: none"> iv. <i>Jatinder Madan</i>, Manpreet Singh, Himanshu Bisht, Yashdeep Singh, Prashant Prakash, Saganpreet, 2021. Water cleaning and unwanted waste separator apparatus. Design Application Number 341839-001, April 03, 2021. <i>Granted</i>. v. <i>Jatinder Madan</i>, Rajesh Kumar, Monika Puri, An extendable holder, publication date June 14, 2024, application number 202411041865. Status: published, under examination. vi. <i>Jatinder Madan</i>, Rajesh Kumar, Railway bridge access support system and vehicle. publication date 17-11-2023, Application number 202311050225. Status: published, under examination. vii. Vivek Sharma, <i>Jatinder Madan</i>, 2021. Heavy duty low effort mechanical stapler. (Application No. 202111012066, dated 21-03-2021). Status: published, under examination. viii. <i>Jatinder Madan</i>, Sunil K Singh, D S Saini, Rajesh Kumar, 2021. A system of a modular automatic car parking system for a city marketplace. (Application No. 202111008572 A, Publication of the patent office, the patent office journal no. 10/2021 dated 05/03/2021). Status: published, under examination. ix. <i>Jatinder Madan</i>, Radhey Sham, Ashwani Kumar, Agrim Sharma, Anshuman Kaushik, Rajesh Kumar, 3-D printable, spherical work envelope and 360 degree rotatable mobile/tablet holder, Application No. 202011043310 A, Publication of the patent office, the patent office journal no. 45/2020. (Application date: 06/10/2020. Publication date 06/11/2020, Issue date 01/07/2021). <i>Granted</i>.
Consultancy	--
Ph.D Scholars Name	<p>Dr. Prince Pal Singh Dr. Ranjit Singh Dr. Vijay Kumar</p>
Institute/University Responsibility	<ul style="list-style-type: none"> i. Head of the Department, Mechanical Engineering (wef Aug 1, 2014 – present at CCET) ii. Professor Incharge Academics (Aug 1, 2014 to Feb. 12, 2018) at CCET iii. Member, Research Degree Committee, Panjab University, Chandigarh, India (2014 onwards) iv. Member, Board of Studies for Mechanical Engineering, Panjab University, Chandigarh, India (2015 onwards)
Department Responsibility	<ul style="list-style-type: none"> i. Faculty advisor ASME Student Section of CCET ii. Lab incharge CAD lab -II iii. Chairman, Department Purchase Committee
Invited/Expert talks	<ul style="list-style-type: none"> i. Keynote Speaker, 56th Engineers' Day Celebrations, Institution of Engineers Chandigarh Chapter, Engineers Bhawan, Madhya Mar, Sector 19, Chandigarh. ii. CAD in 3D printing: AICTE/ISTE Sponsored Induction/Refresher Program on Advance Materials and Processes for Sustainable intelligent Manufacturing (Phase - III), Mechanical Engineering Department, DAVIET, Jalandhar, June 07-12, 2021. (Talk delivered on June 7, 2021). iii. CAD modelling and 3D printing: a practice-based interaction with 10+2 students Government Model Senior Secondary School, Sector 19 C, Chandigarh, Feb. 14, 2021.

	<ul style="list-style-type: none"> iv. CAD in 3D printing: Current state and research, Research in Modern Era, Department of Mechanical Engineering, JC Bose University of Science and Technology, Faridabad, June 1 -5, 2020. (Lecture delivered on June 5, 2020). v. Sustainability of Design and Manufacturing, FDP on Green Manufacturing, Mechanical Engineering Department. NITTTR Chandigarh, Feb. 3 - 7, 2020. (Lecture delivered on Feb. 6, 2020) vi. CAD in 3D printing, AICTE Training & Learning (ATAL) One week workshop on 3D printing and design, University Institute of Engineering and Technology, Panjab University, Chandigarh, Nov. 25 -29, 2019. (Lecture delivered on Nov. 25, 2020). vii. Sustainability of unit manufacturing process, energy performance evaluation and improvement, FDP on Green Manufacturing, Mechanical Engineering Department. NITTTR Chandigarh, Feb. 11-15, 2019. viii. Creativity and business - the man behind the venture –the behavioural scientists approach, Entrepreneurship Awareness Camp (EAC), CCET (Degree Wing), Chandigarh, Oct. 31 – Nov. 1, 2019. (Lecture delivered on Nov. 1, 2019). ix. Creativity and business - the man behind the venture –the behavioural scientists approach, Entrepreneurship Awareness Camp (EAC), CCET (Degree Wing), Chandigarh, Sept. 12 – 14, 2018. x. Decision making in Product design and manufacturing, QIP Short Term Course on Decision Making Strategies in Industrial Environment, Guru Nanak Dev Engineering College, Dec. 4 – 8, 2018. (Lecture delivered on Dec 6, 2018) xi. Computer Aided Design and Manufacturing, Current state and research challenges, Chandigarh Science Congress (CHASCON), Panjab University, Chandigarh, March 9 - 11, 2017. (March 10, 2016) xii. Smart Manufacturing and Design-Manufacturing Integration (Near net shape Manufacturing), UIET-Panjab University Regional Campus, UIET, Panjab University SSG Regional Centre, Hoshiarpur, India. (Nov 7, 2015) xiii. Automated die design and process planning for near net shape manufacturing processes, AICTE Sponsored national Seminar on Challenges and Advances in Die Design (CADD), Sri Balaji College of Engineering & Technology, Jaipur, January 17 – 18, 2014. (Delivered on Jan 18, 2014) xiv. Automated Die Design and Process Planning for Die-casting, Invited talk at System Integration Division, NIST, USA (2012)
Courses taught	<ul style="list-style-type: none"> i. Computer-aided design and manufacturing ii. Finite Element Methods iii. Internet of things iv. Product design and development v. Sustainable Design and Manufacturing vi. Computational Fluid Dynamics vii. Manufacturing processes viii. CNC machines ix. Mechanics of materials x. Engineering mechanics xi. Physical metallurgy and heat treatment

	xii. Metal machining and forming
Conferences attended outside India	<ul style="list-style-type: none"> i. 2019 - ASME MSEC Conference at Erie, Pennsylvania, USA to present a research paper. ii. 2015 - ASME International Manufacturing Science and Engineering Conference (MSEC 2015), University of North Carolina, Charlotte, NC, USA, June 8-12. iii. 2011 - 2013 Visiting researcher at System Integration Division (SID), NIST, Gaithersburg, MD, USA iv. 2012 - ASME Manufacturing Science and Engineering Conference (MSEC 2012), University of Notre Dame, Indiana, USA, June 4-8. v. 2011 - North American Manufacturing Research Conference (NAMRC 2011), Oregon State University, Oregon, USA, June 13-17. vi. 2007 - International CAD Conference and Exhibition, Honolulu, Hawaii, USA, June 25-29.
Post Doctoral research	2011-13 (2 years): System Integration Division, NITS, USA

Signature of faculty