

Progress Report for the Period April to July, 2020

DEPARTMENT: MECHANICAL ENGINEERING DEPARTMENT

STAFF DEVELOPMENT THROUGH EDUCATION AND TRAINING

I. Long Term Programs

S. No.	Date(s) / Period	Name of the Program	Faculty
1.	April & May, 2020	Online classes: M.E. Mechanical Engineering (Manufacturing Technology), Regular Batch 2019, 2 nd Semester	Dr. B. S. Pabla, Dr. S. S. Banwait, Dr. S. S. Dhami, Dr. Rupinder Singh, Dr. P. S. Rao
		Thesis Guidance: M.E. Mechanical Engineering (Manufacturing Technology), Regular Batch 2018, 4 th Semester	Dr. B. S. Pabla, Dr. S. S. Banwait, Dr. S. S. Dhami, Dr. Rupinder Singh, Dr. P. S. Rao
2.	June & July, 2020	Online classes: M.E. Mechanical Engineering (Manufacturing Technology), Modular Batches 2018, 5 th Spell & 2017, 3 rd Spell	Dr. B. S. Pabla, Dr. S. S. Dhami, Dr. Rupinder Singh
		Thesis Guidance: M.E. Mechanical Engineering (Manufacturing Technology), Modular Batches 2017 & 2016	Dr. B. S. Pabla, Dr. S. S. Banwait, Dr. S. S. Dhami, Dr. Rupinder Singh, Dr. P. S. Rao

II. Short Term Programs

S. No.	Date(s) / Period	Name of the Course	Coordinator(s)
1.	09-04-2020 to 13-04-2020	Additive Manufacturing & Process Optimization (ICTO-03)	Dr. Rupinder Singh Dr. S. S. Dhami
2.	27-04-2020 to 01-05-2020	Computer Aided Design and Manufacturing (CAD/CAM) (ICTO-25)	Dr. P. S. Rao
3.	29-04-2020 to 03-05-2020	NBA Accreditation of Diploma Programs (ICTO-32)	Dr. B. S. Pabla
4.	02-05-2020 to 06-05-2020	ATAL FDP on ROBOTICS (SP-13; ATAL Code AOJPR057)	Dr. S. S. Dhami
5.	11-05-2020 to 15-05-2020	NBA Accreditation of Engineering Programs (ICTO-30)	Dr. B. S. Pabla
6.	11-05-2020 to 15-05-2020	Waste Management (ICTO-29)	Dr. Rupinder Singh Dr. S. S. Dhami
7.	18-05-2020 to 22-05-2020	Modeling & Simulation using MATLAB (ICTO-40)	Dr. S. S. Dhami
8.	23-05-2020 to 28-05-2020	Recent Advances in Materials Characterization (ICTO-68)	Dr. Rupinder Singh

S. No.	Date(s) / Period	Name of the Course	Coordinator(s)
9.	25-05-2020 to 29-05-2020	Computer Integrated Manufacturing & CNC (CIM/CNC) (ICTO-58)	Dr. P. S. Rao
10.	08-06-2020 to 12-06-2020	Waste Management (ICTO-62)	Dr. Rupinder Singh
11.	01-06-2020 to 05-06-2020	“NBA Accreditation of Diploma Programs” (ICTO-65)	Dr. B. S. Pabla
12.	15-06-2020 to 19-06-2020	NBA Accreditation of UG Engineering Degree Programs (ICTO-66)	Dr. B. S. Pabla
13.	25-06-2020 to 29-06-2020	Mechanical Manufacturing and Process Optimization (ICTO-95)	Dr. Rupinder Singh
14.	29-06-2020 to 03-07-2020	Accreditation of Engineering Programs (ICTO-CP-01)	Dr. B. S. Pabla
15.	06-07-2020 to 10-07-2020	Materials Processing and Optimization (ICTO-87)	Dr. Rupinder Singh
16.	13-07-2020 to 17-07-2020	Engineering Optimization (ICTO-96)	Dr. B. S. Pabla Dr. S. S. Dhami
17.	27-07-2020 to 31-07-2020	PLC Programming for Industrial Applications (ICTO-97)	Dr. S. S. Dhami
18.	27-07-2020 to 31-07-2020	CAD/CAM & Rapid Prototyping Technologies (ICTO-127)	Dr. P. S. Rao

III. Seminars / Conferences

S. No.	Date(s) / Period	Name of the Webinar	Coordinator(s)
1.	26-06-2020	ANSYS: Additive Manufacturing Applications and MakerBot 3D Printer (ICTO-PDA-01)	Dr. S. S. Dhami Dr. Rupinder Singh

RESEARCH AND DEVELOPMENT

I. Ph.D. Guidance

S. No.	Name of the Project	Research Scholar	Supervisor(s)
1	Development Of Performance Metrics For Reconfigurable Manufacturing Systems	Mr. Chandrakant Ghadage	Dr. B. S. Pabla Dr. S. S. Dhami
2	Guidance to QIP Ph.D. scholar for preparing synopsis	Mr. Mohd. Yunus Khan	Dr. B. S. Pabla Dr. P. S. Rao
3	Guidance to QIP Ph.D. scholar for preparing synopsis	Mr. Smruti Ranjan	Dr. S. S. Banwait Dr. Rupinder Singh
4	Performance Evaluation of Nanoparticles based Lubricants on Static Thermal Behaviour of Non-Circular Journal Bearings	Mr Rajeev Dang	Dr. S. S. Dhami Dr. Amit Chauhan (UIET, PU)
5	Guidance to Ph.D. scholar for preparing synopsis	Ms. Kanika Saini	Dr. S. S. Dhami

S. No.	Name of the Project	Research Scholar	Supervisor(s)
6	Development of poly lactic acid, hydroxyapatite and chitosan based functional prototypes by additive manufacturing	Mr. Nishant Ranjan	Dr. Rupinder Singh Dr. I.P.S. Ahuja (Punjabi University, Patiala)
7	Experimental investigations for barium titanate and graphene reinforced PVDF matrix for 4-D applications	Mr. Ravinder Sharma	Dr. Rupinder Singh Dr. Ajay Batish (TIET, Patiala)
8	Investigating the PLA composite matrix as functional prototypes for four dimensional applications	Mr. Sudhir Kumar	Dr. Rupinder Singh Dr. Ajay Batish & Dr. T. P. Singh (TIET, Patiala)
9	Investigations on debris reinforced thermoplastic based 3D customized solution for maintenance and repair of heritage structures	Mr. Vinay Kumar	Dr. Rupinder Singh Dr. I.P.S. Ahuja (Punjabi University, Patiala)
10	Development of ABS composite matrix as functional prototypes from industrial waste for non-structural engineering applications	Mr. Kapil Chawla	Dr. Rupinder Singh Dr. Jaspreet Singh (LPU, Phagwara)

II. M.E. Thesis/Pre-Thesis Guidance

S. No.	Thesis Title	Student	Supervisor(s)
1	Characterization of Additive Manufactured 316L Stainless Steel parts for Biomedical Applications	Mr Amritbir Singh, 182201	Dr. B. S. Pabla
2	Infrared Thermography based fault Diagnosis and Prognosis for Rotating Machines	Mr. Ankush Mehta, 182202	Dr. B. S. Pabla
3	Experimental Investigation of Composite Of Aluminium Alloy 2024 Grade With TiC Reinforcement	Mr. Gaurav Shrivastva, 151211	Dr. S. S. Banwait
4	Productivity Improvement of Milling, Turning and Drilling Machines by Work and Motion Study	Mr. Man Kumar, 182207	Dr. S. S. Dhami
5	Design feature assessment for Fused Deposition Modelling using Machine learning	Mr. Rahul Bansal, 182210	Dr. S. S. Dhami
6	Design & Development of a Device for Air Aspiration and Improved Needle Decompression for Pneumothorax	Mr. Nitin Sharma, 172211	Dr. S. S. Dhami
7	Comparison of cold and hot forming of EN8 (080M40) flats: spring back effect, surface hardness and morphological features	Mr. Bibandeeep Singh, 182203	Dr. Rupinder Singh & Dr. S. S. Banwait
8	Investigations on almond skin reinforced PLA based 3D printed functional prototypes	Mr. Mohit Singh (P.T.U.: GNDEC Ludhiana)	Dr. Rupinder Singh Dr. J.S.Grewal

S. No.	Thesis Title	Student	Supervisor(s)
9	Investigations for flexural and compressive properties of almond skin reinforced PLA based 3D printed functional prototypes	Mr. Pawanpreet (P.T.U.: GNDEC Ludhiana)	Dr. Rupinder Singh Dr. J.S.Grewal
10	Study of Electrochemical Discharge Machining of Glass	Shivangi Palival, 182212	Dr. P. S. Rao
11	Effect of CBN Tool Cutting Edge Angles on the Formation and Thickness of White Layer in Machining of EN31 Steel	Ravi Kumar, 182212	Dr. P. S. Rao
12	Experimental Investigation on using Different Electrolytes for Electrochemical Machining of Titanium	Vikas Sharma, 182211	Dr. P. S. Rao

III. Research Projects

S. No.	Name of the Project	Activity	Coordinator / Team Member
1.	Proposal for FIST (DST) project	Prepared proposal for grant of FIST and submitted to DST on May 29, 2020	Dr. Rupinder Singh Dr. B. S. Pabla Dr. S. S. Dhami
2.	SERB (TARE) project	Mentor for SERB (TARE) project on ' <i>On piezoelectric actuated fused filament based 4D printing with controlled material deposition</i> '	Dr. Rupinder Singh
3.	Indo-Portugal DST project	Submitted proposal for Recycling of plastic solid waste for environmental protection by multi-hybrid material 3D printing for 4D applications, July 2020	Dr. Rupinder Singh, Dr. B. S. Pabla

INSTRUCTIONAL MATERIAL DEVELOPMENT

S. No.	Title of the Instructional Material	Faculty
1.	NBA Accreditation for UG programs	Dr. B. S. Pabla
2.	NBA Accreditation for Diploma programs	Dr. B. S. Pabla
3.	Zero Effect Zero Defect- Process and equipment selection	Dr. B. S. Pabla
4.	Industrial Applications of Robots	Dr. B. S. Pabla
5.	Introduction to Industrial Robotics	Dr. S. S. Banwait
6.	Presentations on various topics related to 'Sensors & Actuators'	Dr. S. S. Dhami
7.	Presentation on the topic 'Matrices and Homogeneous Transformations in Robots'	Dr. S. S. Dhami
8.	Presentation on MATLAB Programming for Optimization in Manufacturing	Dr. S. S. Dhami
9.	Presentation on Modeling & Simulation of Dynamic Systems using MATLAB	Dr. S. S. Dhami
10.	Presentation on Deriving Boolean Expressions for Industrial Logic Circuits	Dr. S. S. Dhami
11.	Presentation on PLC Programming for Industrial Applications	Dr. S. S. Dhami

12.	Editor for book on 'Non-Conventional Hybrid Machining Processes: Theory and Practice' Part of the Manufacturing Design and Technology Series (Series Editor: J. Paulo Davim), CRC Press, Taylor & Francis, 2020.	Dr. Rupinder Singh
13.	Guest Editor for Special Collection on 'Nano-Composites and Smart Materials: Design, Processing, Manufacturing and Applications' in Advanced Composites Letter, 2020 (SAGE publications, SCIE, Impact Factor 0.55).	Dr. Rupinder Singh
14.	Editor for book on '4D Printing: Fundamentals and Applications, Elsevier, 2021.	Dr. Rupinder Singh
15.	Section Editor for 'Fundamentals of thermoset and thermoplastic polymers & their recycling and sustainability' as part of Encyclopedia of materials: plastics and polymers (M. Saleem. J. Hashmi, 'Editor-in-Chief'), Elsevier, 2021.	Dr. Rupinder Singh
16.	Guest Editor for Special issue "3D and 4D Hybrid Printed Functional Prototypes" Materials International Open Access Journal (ISSN: 2668-5728	Dr. Rupinder Singh
17.	Developed presentations on: 1. CAD/CAM 2. Additive Mfg 3. CIM 4. Industrial applications of Robots, CNC Programming RPT	Dr. P. S. Rao

CURRICULUM DEVELOPMENT

S.No.	Name of Curriculum	Number of Subjects / Course	Beneficiary States
1.	Design of NSQF Compliant Curriculum for Diploma Program in Automobile Engineering for Board of Technical Education, Delhi on 02-07-2020	1 diploma program	Delhi

EXTENSION SERVICES AND CONSULTANCY

Extension Services Project	Date(s) / Period	Remarks
Prepared and submitted a consultancy project to Punjab State Cooperative Bank Limited, Sector 34, Chandigarh	April / May 2020	Dr. S. S. Banwait
<ul style="list-style-type: none"> Finalised the answer keys in consultation with the experts for the Subordinate Services Selection Board, Punjab recruitment examination conducted on 15th March 2020. Prepared, printed and handed over the result of the said recruitment examination. 	April / May 2020	Dr. S. S. Banwait
Coordination with PWD, Chandigarh Administration and SBI for online payment collection.	April / May 2020	Dr. S. S. Banwait
Coordination of recruitment application requirements by VERKA.	April / May 2020	Dr. S. S. Banwait

Coordinating the online notice display for TGT recruitment by Department of Higher Education, Chandigarh Administration.	April / May 2020	Dr. S. S. Banwait
Expert lecture on 'PLC Programming' to students of Shri Vishwakarma Skill University, Gurugram	02-04-2020	Dr. S. S. Dhami
Expert Talk in Webinar for faculty & students of University Institute of Engineering & Technology, Hoshiarpur Panjab University Swami Sarvanand Giri Regional Centre, Hoshiarpur	09-05-2020	Dr. Rupinder Singh
Expert Lecture on " Assessment and evaluation in OBE Environment" for Faculty members of MMM University Gorakhpur.	13-05-2020	Dr. B. S. Pabla
Expert Lecture on ' <i>Sensors & Actuators in Automation</i> ' to the faculty & students of PUSSGRC UIET, Hoshiarpur	13-05-2020	Dr. S. S. Dhami
Expert lecture on ' <i>MATLAB Programming for Simulation</i> ' in FDP on 'Latest Software Tools for Engineering & Sciences' conducted by Bikaner Technical University from May 17 to 26, 2020	May, 2020	Dr. S. S. Dhami
Expert Lecture on DOE/RSM in an online STC of Modelling and Optimization Techniques For Materials and Manufacturing Processes conducted by Lakireddy Bali Reddy College of Engineering, AP during 18th to 22nd May 2020.	May, 2020	Dr. P. S. Rao
Expert Lecture on 3D transformations in an online 5 days FDP on Emerging Technology in Robotics conducted by MREC, Hyd during 26 to 30 May 2020.	May, 2020	Dr. P. S. Rao
Expert lecture on 'PLC Programming' to students of Shri Vishwakarma Skill University, Gurugram	June 21, 2020	Dr. S. S. Dhami
Expert lecture on 'Hardware Interfacing with PLC' to students of Shri Vishwakarma Skill University, Gurugram	June 28, 2020	Dr. S. S. Dhami
Expert Talk on "Norms for Faculty & Students" to faculty & students of Mohd Ali Joha University, Rampur, UP	20 July 2020	Dr. B. S. Pabla
Expert Talk on "Application of 3D and 4D Printing" (organized by Mech. Dept. GLA University Mathura and Indian Institute of Metals Mathura Chapter) in 2nd International Faculty Development Program	22 July, 2020	Dr. Rupinder Singh

Expert Talk on “Outcome Based Accreditation” to faculty of Bharati Vidyapeeth's Institute of Computer Applications and Management (BVICAM), New Delhi	27 July 2020	Dr. B. S. Pabla
Reviewer for ICFTMME-2020, FLAME 2020, ICIMAE-2020, ICESDM 20, IJMPT journal	April – July, 2020	Dr. P. S. Rao
Webex meeting about AICTE Internship portal	05-05-2020	Dr. B. S. Pabla
Ph.D viva at IKGPTU Jalandhar	09-05-2020	Dr. Rupinder Singh
Meeting of Board of Studies in Mechanical Engineering (UG), Panjab University, Chandigarh	15-05-2020	Dr. S. S. Dhami
Ph.D. Examination of Mr. Himanshu Jindal, Chitkara University, Rajpura	21-05-2020	Dr. S. S. Dhami
M.E. Thesis Examination of Mr. Tarun Singla, UIET, PU, Chandigarh	21-07-2020	Dr. S. S. Dhami
M.E. Thesis Examination of one student, UIET, PU, Chandigarh	27-07-2020	Dr. B. S. Pabla
Ph.D. State-of-Art Examination of Mr. Vikram Singh, Punjab Engineering College, Chandigarh	29-07-2020	Dr. S. S. Dhami

TRAINING PROGRAMMES / WEBINARS ATTENDED BY THE INSTITUTE FACULTY/STAFF

S. No.	Date(s) / Period	Program	Remarks
1.	04-05-2020 to 08-05-2020	“Introduction of Accreditation Mechanism : NBA Approach” conducted by NITTTR Kolkota	Dr. S. S. Banwait
2.	25-05-2020	Online Quiz on “Finite Element Analysis” conducted by AISSMS College of Engineering, Pune.	Dr. S. S. Banwait
3.	27-05-2020	Online summit on “AM Medical Virtual Summit” conducted by ASME, USA.	Dr. S. S. Banwait
4.	26-05-2020 to 30-05-2020	STC on ‘Capacity Building Module 3’ conducted by National Institute of Technical Teachers Training & Research, Chandigarh	Dr. S. S. Dhami
5.	June 24-25, 2020	Webinar on “Automation Studio on Electro-Hydraulics” by Automation Studio India	Dr. S. S. Dhami
6.	23/05/2020 to 28/05/2020	National Institute of Technical Teachers Training & Research-GRIET online Short Term Courses on Recent Advances in Material Characterization	Dr. P. S. Rao
7.	June 2020	Attended webinar hosted by STRATASYS on “Additive Mfg”	Dr. P. S. Rao

8.	June 2020	Attended webinar hosted by COMSOL on “CFD Comsol”	Dr. P. S. Rao
9.	June 2020	Attended webinar quiz on Elements of Mechanical Engineering, Automation & Robotics, Design Engineering and Thermal Engineering	Dr. P. S. Rao

RESEARCH PAPERS PUBLISHED / COMMUNICATED / DRAFTED

S. No.	Period	Research Paper Details	Team
1.	April, 2020	Improvement in performance of cryogenically treated tungsten carbide tools in face milling of Ti-6Al-4V alloy in Materials and Manufacturing Processes	Saini, Abhineet; Pabla, BS; Dhami, SS;
2.	May, 2020	Effect of non-newtonian lubricants on static and dynamic characteristics of journal bearings in Materials Today: Proceedings	Dang, Rajeev Kumar; Goyal, Deepam; Chauhan, Amit; Dhami, SS;
3.	June, 2020	‘Geometric Features Extraction of a 3D CAD Model for Reconfigurable Manufacturing’ by Mr. Chandrakant Ghadage (Ph.D. student) in International Journal of Mechanical and Production Engineering Research & Development	Dr. B. S. Pabla Dr. S. S. Dhami
4.	May, 2020	Paper titled ‘Selection of Spindle Orientations in Reconfigurable Manufacturing System Environment’ in 4th International Conference (Online) on Recent Trends and Research in Engineering and Science	Mr. Chandrakant Ghadage Dr. B. S. Pabla Dr. S. S. Dhami
5.	April & May, 2020	Submitted: Two research papers in SCI journals by Ph.D. students (Completed)	Dr. B. S. Pabla
6.	April & May, 2020	Submitted: Book chapter by one of my M.E. students (Completed) in the forthcoming publication by Springer	Dr. B. S. Pabla
7.	April, 2020	Communicated the research paper titled ‘On crown fabrication for prosthetic dentistry of veterinary patients: A review’ to Advanced Composites Letters (SAGE Publications)	Dr. Rupinder Singh Dr. S. S. Banwait
8.	May, 2020	Submitted one research paper on “Effectiveness of ERP”	Dr. S. S. Banwait
9.	April, 2020	Communicated the research paper titled ‘On EDM and ECM machined AISI 304 steel: surface roughness, hardness and morphological characteristics’ to Transactions of the Indian Institute of Metals (Springer)	Dr. Rupinder Singh Dr. S. S. Dhami
10.	April, 2020	Communicated the research paper titled ‘Numerical and Experimental Studies on Performance Enhancement of Journal Bearings using Nanoparticles Based Lubricants’ to Archives of Computational Methods in Engineering (ARCO)	Dr. S. S. Dhami
11.	May, 2020	Drafted: Research paper titled ‘A Review of Externally Aided Syringe Retraction Techniques for Needle Thoracostomy’	Dr. S. S. Dhami

12.	May, 2020	Drafted: Research paper titled ' <i>Performance Comparison of Fixed and Tracking Type Solar Plants: A Review</i> '	Devendra Pratap Singh, Dr. S. S. Dhami, Dr. S. S. Banwait
13.	April to July, 2020	List of In-press / Communicated papers (39 numbers) of Dr. Rupinder Singh attached as Annexure-I	Dr. Rupinder Singh
14.	26th-27th June, 2020	" <i>Applicability of 3-D Printing Process in Footwear Industry</i> " in International Conference on Future Engineering (ICFE-2020) held jointly organized by Mazedan International Research Academy, Dr. R.M.L Avadh University, Ayodhya and Dr. Ambedkar Institute of Technology, Bengaluru	Z. Khan M. Y. Khan Dr. P. S. Rao
15.	April – July 2020	Md Yunus Khan , Ph.D. student (QIP) has published one research paper in SCOPUS indexed journal and another one paper as a BOOK CHAPTER publication by Springer	Dr. P. S. Rao, Dr. B. S. Pabla
16.	April – July 2020	Md Khan has also submitted one book chapter in FLAME 2020, two conference papers in DAAAM 2020 & CFTMME 2020 each.	Dr. P. S. Rao, Dr. B. S. Pabla
17.	To be held on 9-11 Oct., 2020	"Materials for 4-D Printing: A Comprehensive Review", International Conference on Industrial and Manufacturing Systems (CIMS-2020) to be held on 9-11 Oct., 2020 by Dr. B. R. Ambedkar National Institute of Technology, Jalandhar. (Accepted)	A. Gupta Dr. P. S. Rao M. Y. Khan
18.	To be held on 6-7 Nov., 2020	" <i>3-D Printing Technology: Inclusive Study and Applicability in Different Sectors</i> ", 1st International Conference on Future Trends in Materials and Mechanical Engineering (ICFTMME-2020) to be held on 6-7 Nov., 2020 organized by SRM Institute of Science and Technology, Ghaziabad. (Accepted)	M. Y. Khan Dr. P. S. Rao Dr. B. S. Pabla

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Annexure - I

Research papers In-press / communicated by Dr. Rupinder Singh as author/co-author

1.	Friction welding for functional prototypes of PA6 and ABS with Al powder reinforcement	Rupinder Singh , Ranvijay Kumar, IPS Ahuja	Proc. Natl. Acad. Sci., India, Sect. A Phys. Sci. (Springer Publications) DOI: 10.1007/s40010-020-00659-z	In-Press
2.	Multifactor optimization for development of hybrid aluminum matrix composites	Swarandeep Singh, Rupinder Singh , S..S. Gill	Indian Jol. of Engg and Material Science	In-Press
3.	On investigations of thermal conductivity, circumferential compressive strength and surface characterization of 3D printed hybrid blended magnetostrictive PLA composite	Sudhir Kumar, Rupinder Singh , T.P.Singh, Ajay Batish	Journal of Thermoplastic Composite Materials, 2020 DOI: 10.1177/0892705720907651 (Sage Publications)	In-Press
4.	Friction welding for functional prototypes of PA6 and ABS with Al powder reinforcement	Rupinder Singh , Ranvijay Kumar, IPS Ahuja	Proc. Natl. Acad. Sci., India, Sect. A Phys. Sci. (Springer Publications) DOI: 10.1007/s40010-020-00659-z	In-Press
5.	Mechanical, rheological and thermal investigations of biocompatible feedstock filament comprising of PVC, PP and HAp	Nishant Ranjan, Rupinder Singh , IPS Ahuja	Proc. Natl. Acad. Sci., India, Sect. A Phys. Sci., 2020 DOI: 10.1007/s40010-020-00664-2 (Springer Publication)	In-Press
6.	Post processing of ABS replicas with vapour smoothing for investment casting applications	J.S.Chohan, Rupinder Singh , K.S.Boparai	Proc. Natl. Acad. Sci., India, Sect. A Phys. Sci., 2020 (Springer Publications) DOI: 10.1007/s40010-020-00669-x	In-Press
7.	Processing Techniques of Polymeric materials and their reinforced composites	Ranvijay Kumar, Rupinder Singh , IPS Ahuja,	Advances in Materials and Processing Technologies, 2020, DOI: 10.1080/2374068X.2020.1728989 (Taylor and Francis publications)	In-Press
8.	Secondary recycled ABS and graphene composite for 3D/4D applications: rheological, thermal, magnetometric and mechanical analysis	Vinay Kumar, Rupinder Singh , I.P.S. Ahuja	Journal of Thermoplastic Composite Materials (Sage Publications)	In-Press
9.	ZnO nano particle grafted PLA thermoplastic composites for 3D printing applications: Tuning of thermal, mechanical, morphological and shape memory effect	Rupinder Singh , Ranvijay Kumar, Mohit Singh, Pawan Kumar	Journal of Thermoplastic Composite Materials (Sage Publications)	In-Press
10.	Comparison of mechanical and morphological properties of 3D printed functional prototypes: multi and hybrid blended thermoplastic matrix	Sudhir Kumar, Rupinder Singh , TP Singh, Ajay Batish	Journal of Thermoplastic Composite Materials (Sage Publications)	In-Press

11.	3D printing of dual thermoplastic materials with different layer combinations: Tensile, flexural and fractured surface investigations	Sudhir Kumar, Rupinder Singh , T.P. Singh, Ajay Batish, Akshay Kumar	Journal of Thermoplastic Composite Materials (Sage Publications)	In-Press
12.	On recyclability of thermosetting polymer and wood dust as reinforcement in secondary recycled ABS for non structural engineering applications	Kapil Chawla, Jaspreet Singh, Rupinder Singh	Journal of Thermoplastic Composite Materials (Sage Publications) DOI: 10.1177/0892705720925135	In-Press
13.	Some investigations on PLA-PEKK-HAp-CS composite: rheological, mechanical, thermal, tribological and morphological properties	Gurchetan Singh, Ranvijay Kumar, Rupinder Singh , M. M. Rahman, S. Ramakrishna	Jol. of Central South University (Springer publications)	In-Press
14.	Investigations for wear characteristics of aluminum based metal matrix composite prepared by hybrid reinforcement	Swarandeep Singh, Rupinder Singh , S.S.Gill	Proc. Natl. Acad. Sci., India, Sect. A Phys. Sci. (Springer Publications) DOI: 10.1007/s40010-020-00683-z	In-Press
15.	Repair of automotive bumpers and bars with modified friction stir welding	Ranvijay Kumar, Rupinder Singh and IPS Ahuja	Jol. of central south university (Springer publications)	In-Press
16.	Investigations for partial denture casting by fused deposition modelling assisted chemical vapour smoothing	Gurpartap Singh, Rupinder Singh , Sarbjit Singh	Assembly Automation (Emerald publications)	In-Press
17.	On cryogenic milling of primary recycled ABS: rheological, morphological and surface properties	Vinay Kumar, Rupinder Singh , I.P.S. Ahuja	Journal of Thermoplastic Composite Materials (Sage Publications)	In-Press
18.	On 3D printed ZnO reinforced PLA matrix composite: tensile, thermal, morphological and shape memory characteristics	Mohit Singh, Rupinder Singh , Ranvijay Kumar, Pawan Kumar, Pawanpreet	Journal of Thermoplastic Composite Materials (Sage Publications)	In-Press
19.	Fused filament fabrication: A review	Sudhir Kumar, Rupinder Singh , TP Singh, Ajay Batish	Journal of Thermoplastic Composite Materials (Sage Publications)	Communicated
20.	Thermo-mechanical investigations for friction stir spot welding of dissimilar thermoplastic	Ranvijay Kumar, Rupinder Singh , IPS Ahuja, Antoio Fortunato	Composite Structures	Communicated
21.	On mechanical and morphological investigations of innovative almond skin powder reinforced PLA matrix structures prepared by 3D printing	Rupinder Singh , Ranvijay Kumar, Pawanpreet, Mohit Singh, Jatenderpal Singh	<i>Sadhana</i> (Springer publications)	Communicated
22.	On shear fracture and morphological features of fused filament fabrication based almond skin powder reinforced PLA structures	Rupinder Singh , Ranvijay Kumar, Mohit Singh, Pawanpreet	Proc. Natl. Acad. Sci., India, Sect. A Phys. Sci.	Communicated

23.	On nano polypyrrole and carbon nano tube reinforced PVDF for 3D printing applications: rheological, thermal, electrical, mechanical, morphological characterization	R. Kumar, A.K. Pandey, Rupinder Singh , Vinay Kumar	Journal of composite materials	Communicated
24.	Multi-material 3D printed PLA/PA6-TiO ₂ composite matrix: rheological, thermal, tensile, morphological and 4D capabilities	Rupinder Singh , Sudhir Kumar, Mohit Singh	Journal of the Chinese Society of Mechanical Engineers	Communicated
25.	Mechanical, thermal, morphological and shape memory effect of Sol-gel prepared ZnO nano particle reinforced PLA composites materials	Rupinder Singh , Ranvijay Kumar, Mohit Singh, Pawan Kumar, Pawanpreet	Jol. of Brazilian Society of Mechanical Sciences and Engg. (Springer publications)	Communicated
26.	3D printed scaffolds for tissue engineering applications: mechanical, morphological, thermal, in-vitro and in-vivo investigations	Nishant Ranjana, Rupinder Singh , IPS Ahuja, Ranvijay Kumar, Divya Singh, Seema Ramniwas, Anita K. Verma, Disha Mittal	CIRP Journal of Manufacturing Science and Technology	Communicated
27.	On flexural and pull out properties of smart polymer based 3D printed functional prototypes	Ravinder Sharma, Rupinder Singh , Ajay Batish	Journal of Thermoplastic Composite Materials (Sage Publications)	Communicated
28.	Multi-material 3D printing of PLA-PA6-TiO ₂ polymeric matrix: flexural, wear and morphological properties	Sudhir Kumar, Rupinder Singh , Mohit Singh, T.P Singh, Ajay Batish	Jol. of Brazilian Society of Mechanical Sciences and Engg. (Springer publications)	Communicated
29.	Multi stage primary and secondary recycled PLA composite matrix for 3D printing applications	Sudhir Kumar, Rupinder Singh , TP Singh, Ajay Batish, Mohit Singh	Journal of Mechanical Engineering Science, (iMech Part C) (Sage Publications)	Communicated
30.	On shear resistance of almond skin reinforced PLA composite matrix based scaffold using cancellous screw	Mohit Singh, Sudhir Kumar, Rupinder Singh , Ranvijay Kumar, Vinay kumar	Journal of Thermoplastic Composite Materials (Sage Publications)	Communicated
31.	On effect of twin screw extrusion parameters for preparation of almond skin powder reinforced PA6 composite	Karan Mankotia, Jasgurpreet Singh Chohan, Rupinder Singh	Journal of Thermoplastic Composite Materials (Sage Publications)	Communicated
32.	Comparison of cold and hot forming of EN8 (080M40) flats: spring back effect, surface hardness and morphological features	Rupinder Singh , Bibandeep Singh, S.S. Banwait	Transactions of the Indian Institute of Metals (Springer publications)	Communicated
33.	On chemical assisted blending of secondary recycled ABS with bakelite and wood dust: mechanical, rheological, morphological and thermal investigations	Kapil Chawla, Jaspreet Singh, Rupinder Singh	Journal of Thermoplastic Composite Materials (Sage Publications)	Communicated

34.	On multi-factor optimization of Ni-Cr based partial dentures by centrifugal casting	Gurpartap Singh, Rupinder Singh , Sarbjit Singh, Arvind Bhardwaj	Advances in Materials and Processing Technologies, 2020 DOI:10.1080/2374068X.2020.1793093 (Taylor and Francis publications)	In-Press
35.	On effect of chemical assisted mechanical blending of barium titanate and graphene in PVDF for 3D printing applications	Ravinder Sharma, Rupinder Singh , Ajay Batish	Journal of Thermoplastic Composite Materials (Sage Publications)	In-Press
36.	Thermo-mechanical investigations for friction stir spot welding of dissimilar thermoplastic	Ranvijay Kumar, Rupinder Singh , IPS Ahuja, Antoio Fortunato	Composite Structures	In-Press
37.	Comparison of compressive, thermal and morphological properties of cement mortar with blast furnace slag and fly ash reinforced cement	I Farina, R Singh , M Singh, Pawanpreet, R Kumar, F Fraternali, F Colangelo	Proceedings of 2020 7th International Conference on Mechanical, Materials and Manufacturing, September 25-27, 2020; Washington, USA	In-Press
38.	On statistical analysis of 3D printed tensile and flexural prototypes of PVDF matrix reinforced with Graphene and Barium Titanate	Ravinder Sharma, Rupinder Singh , Ajay Batish, I Farina, F Fraternali	Proceedings of 2020 7th International Conference on Mechanical, Materials and Manufacturing, September 25-27, 2020; Washington, USA	In-Press
39.	3D printed tensile and flexural prototypes of thermoplastic matrix reinforced with multi-materials: A statistical analysis	Sudhir Kumar, Rupinder Singh , TP Singh, Ajay Batish	Proceedings of 11 th International Conference on Materials Processing and Characterization, 15-17, Dec. 2020, IIT, Indore India Materials Today: Proceedings (Elsevier), 2020,	In-Press