

Dept. of Production Engineering
Guru Nanak Dev Engineering College, Ludhiana

International Collaborations

The Dept. of Production Engineering has made International collaborations for following 04 different activities:-

1. International collaboration for Joint Jol. Editorial Activities
2. International collaboration for Joint Research Projects
3. International collaboration for Joint Book writing
4. International collaboration for Joint Jol. Publications

- I. Prof. Fernando Fraternali
University of Salerno
84084 Fisciano (SA), Italy
Phone: (+39) 089 96-4083
Fax: (+39) 089 96-4045
E-mail: f.fraternali@unisa.it
University of Salerno, Italy

Collaboration for Joint Research Publications (see List attached)

- II. Prof. Seeram Ramakrishna
National University of Singapore
Faculty of Engineering
Department of Mechanical Engineering,
Blk EA, #07-35, 9 Engineering Drive 1
seeram@nus.edu.sg
Mobile number: 65 94876767
- III. Prof. Md Mustafizur Rahman
Universiti Malaysia Pahang
26600 Pekan, Pahang, Malaysia
Faculty of Mechanical Engineering, Universiti Malaysia Pahang,
Email: mustafizur@ump.edu.my
Mobile number: +60163775026

Jol. Editorial activities

- Editor in chief for 'International Journal of Advanced Mechatronics and Robotics', Serial publications, New Delhi.
- Editor in chief for 'International Journal of Materials Science and Engineering', Serial publications, New Delhi.
- Editor for special topic volume 'Rapid casting solutions' for periodical 'Material Science Forum' as print, CD and online at www.scientific.net by Trans Tech Publications Ltd., Switzerland, 2011.
- Editor for Special Issue on: 'Advances in Rapid Manufacturing of Processes and Materials' for International Journal of Materials Engineering Innovation (IJMatEI), Inderscience publications, U.K, Volume 3, Nos. ¾, 2012.
- Editor for special topic volume 'Recent advancement in manufacturing processes' for

periodical ‘Material Science Forum’ as print, CD and online at www.scientific.net by Trans Tech Publications Ltd., Switzerland, Vol. 751, 2013.

- Member Editorial Board Int. Journal of Materials Forming and Machining Processes [IJMFMP] www.igi-global.com/ijmfmp.
- Editor for special topic volume ‘Recent advancement in manufacturing processes’ Vol.II for periodical ‘Material Science Forum’ as print, CD and online at www.scientific.net by Trans Tech Publications Ltd., Switzerland, Vol. 808, 2015.
- Editor for Special Issue on: ‘Advancements in Additive Manufacturing’ for International Journal of Materials Engineering Innovation (IJMatEI), Inderscience publications, U.K, 2015.
- Editor for special topic volume ‘Material processing technologies’ for periodical ‘Material Science Forum’ as print, CD and online at www.scientific.net by Trans Tech Publications Ltd., Switzerland, 2016.

Joint research projects

- Collaboration for Joint Research Publications and DST Project under ASEAN-INDIA science & technology development fund , for the project, “Development of HAp ($\text{Ca}_5(\text{PO}_4)_3(\text{OH})$) reinforced biodegradable porous structures through polymer deposition technology for tissue engineering applications” by Department of Science and Technology.
- Dr.Alina VLADESCU, National Institute for optoelectronics - ReCAST Center Atomistilor no. 409, P.O.Box MG 05, Magurele - Bucharest, 077125, ROMANIA (For joint research activities in SS316L biomedical implants)
- Dr. Fernando Fraternali, University of Salerno, Fisciano (SA), Italy (For project title: 4D printing with E-waste: an insight to physical properties) under INDO-ITALIAN executive programme of cooperation in scientific & technological cooperation
- Dr. J. Paulo Davim, Campus Santiago, University of Aveiro, Portugal, (For project title: Development of cost effective flexible dentures for old age and sugar patients) under INDIA–PORTUGAL inter-governmental programme of cooperation in science and technology
- Dr. M.M.Noor, University of Malaysia (For project title: Development of HAp ($\text{Ca}_5(\text{PO}_4)_3(\text{OH})$) reinforced biodegradable porous structures through polymer deposition technology for tissue engineering applications) under ASEAN-India collaborative R&D proposal.

Joint book/ monograph writing

- Reference Module in Materials Science and Materials Engineering, 2017, Oxford: Elsevier;ISBN: 978-0-12-803581-8 (Co-author: M.S.J Hashmi, Dublin City University, Ireland).
- Additive Manufacturing: Applications and Innovations, Part of the Manufacturing Design and Technology Series (Series Editor: J. Paulo Davim), CRC Press, Taylor & Francis, 2018.

Joint International Jol. Publications

S. No	Title of Paper	Author(s)	Name of Journal, Vol. No. & Year	Page No.
1	Multi-material printing of innovative materials: Mechanical, thermal and micrographic evaluation	Rupinder Singh , R. Kumar, Ilenia Farina, F. Colangelo, L. Feo, Fernando Fraternali	Polymers,11, 62, 2019 doi:10.3390/polym11010062	1-14
2	Thermo-mechanical investigations of PEKK-HAp-CS composites	Rupinder Singh , Gurchetan Singh, Jaskaran Singh, Ranvijay Kumar, Md. Mustafizur Rahman, S.	Jol. of Engineering in Medicine (iMech Part H), Vol. 233, No. 11, 2019 DOI: 10.1177/0954411919877979 Sage publications	1196-1203

		Ramakrishna		
3	Optimization and reliability analysis to improve surface quality and mechanical characteristics of heat-treated fused filament fabricated parts	Sunpreet Singh, M. Singh, C. Prakash, M.K. Gupta, Mozammel Mia, Rupinder Singh	Int J Adv Manufacturing Technology, Vol. 102, 2019 doi:10.1007/s00170-018-03276-8	1521–1536
4	On the additive manufacturing of an energy storage device from recycled materials	Rupinder Singh , Harpreet Singh, I. Farina, F. Colangelo, F. Fraternali	Composite part B: Engineering, Vol. 156, 2019	259-265
5	Metal matrix composite from recycled materials by using additive manufacturing assisted investment casting	Narinder Singh, Rupinder Singh , IPS Ahuja, F. Fraternali, I. Farina	Composite Structures, Vol. 207, 2019	129-135
6	On the 3D printing of recycled ABS, PLA and HIPS thermoplastics for structural applications	Rupinder Singh , Ranvijay Kumar, Ilenia Farina	PSU Research Review, Vol. 2, No. 2, 2018 doi.org/10.1108/PRR-07-2018-0018 (Emerald publications)	115-137
7	Mechanical properties of bio-compatible functional prototypes for joining applications in clinical dentistry	Rupinder Singh , Ravinder Sharma, J.Paulo Davim	International Journal of Production Research, Vol. 56, No. 24, 2018 (Taylor & Francis Publications) doi: 10.1080/00207543.2017.1405167	7330-7340
8	On the applicability of composite PA6-TiO2 filaments for the rapid prototyping of innovative materials and structures	Rupinder Singh , RanvijayKumar, Ida Mascolo, M.Modano	Composite part B: Engineering, Vol. 143, 2018 (Elsevier Publication)	132-140
9	Weldability of thermoplastic materials for friction stir welding- A state of art review and future applications	Ranvijay Kumar, Rupinder Singh , Inderpreet Singh Ahuja, Rosa Penna, L. Feo	Composite part B: Engineering, Vol. 137, 2018 (Elsevier Publication)	1-15
10	On the recyclability of polyamide for sustainable composite structures in civil engineering	Rupinder Singh , R. Kumar, N. Ranjan, Rosa Penna, Fernando Fraternali	Composite Structures, Vol. 184, 2018 (Elsevier Publication)	704-713
11	Graphene as biomedical sensing element: State of art review and potential engineering applications	R.Kumar, Rupinder Singh , David Hui, L.Feo, Fernando Fraternali	Composite part B: Engineering, Vol. 134, 2018	193-206

12	Friction welding for functional prototypes of PA6 and ABS with Fe powder reinforcement	R. Kumar, Rupinder Singh , IPS Ahuja, Ada Amendola, Rosa Penna	Composites Part B: Engineering, Vol. 132, 2018 (Elsevier Publication)	244-257
13	Investigations for mechanical properties of Hap, PVC and PP based 3D porous structures obtained through biocompatible FDM filaments	Ravinder Sharma, Rupinder Singh , Rosa Penna, Fernando Fraternali	Composites Part B: Engineering, Vol. 132, 2018 (Elsevier Publication)	237-243
14	In-vitro studies of SS 316 L biomedical implants prepared by FDM, Vapor smoothing and Investment casting	Daljinder Singh, Rupinder Singh , Kamaljit Singh, Boparai, I.Farina, L. Feo Anita Kamra Verma	Composites Part B: Engineering, Vol. 132, 2018 (Elsevier Publication)	107-114
15	Investigations for thermal and electrical conductivity of ABS-Graphene blended prototypes	Rupinder Singh , Gurleen S Sandhu, Rosa Penna, Ilenia Farina	Materials, Vol. 10, No. 8, 2017 Special Issue: Recycled Materials, Eco-design and 3D Printing (MDPI Publications)	881 (1-13)
16	Recycling of plastic solid waste:: A state of art review and future applications	Narinder Singh, D..Hui, Rupinder Singh , IPS Ahuja, L. Feo, Fernando Fraternali	Composites Part B: Engineering, Vol. 115, 2017 (Elsevier Publications)	409-422
17	Investigations for dimensional accuracy of MMC developed by combining stir casting and ABS replica based investment casting	Rupinder Singh , Ranvir Singh, J.S.Dureja, Ilenia Farina, Francesco Fabbrocino	Composites Part B: Engineering, Vol. 115, 2017 (Elsevier Publications)	203-208
18	On the wear properties of Nylon-6- SiC- Al ₂ O ₃ based FDM feed stock filament	Rupinder Singh , Narinder Singh, Fernando Fraternali, Ada Amendola	Composites Part B: Engineering, Vol. 119, 2017 (Elsevier Publications)	125-131
19	Dimensional accuracy analysis of coupled fused deposition modeling and vapor smoothing operations for biomedical applications process	Jasgurpreet S. Chohan, Rupinder Singh , K. S. Boparai, Rosa Penna, F. Fraternali	Composites Part B: Engineering, Vol. 117, 2017 (Elsevier Publications)	138-149
20	Investigation for surface finish improvement of FDM parts by vapor smoothing process	Rupinder Singh , Sunpreet Singh, Iqwinderpreet Singh, F.Fabbrocono Fernando Fraternali	Composites Part B: Engineering, Vol. 111, 2017	228-234

21	Development of in-house composite wire based feed stock filaments of fused deposition modelling for wear-resistant materials and structures	Rupinder Singh, Sunpreet Singh, F. Fraternali	Composites Part B, Vol. 98, 2016 (Elsevier publications)	244-249
22	Friction welding of dissimilar plastic/polymer materials with metal powder reinforcement for engineering applications	Rupinder Singh, R.Kumar, L. Feo, F. Fraternali	Composites Part B: Engineering, Vol. 101, 2016	77-86
23	Experimental investigations for mechanical and metallurgical properties of friction stir welded recycled dissimilar polymer materials with metal powder reinforcement	Rupinder Singh, Vinay Kumar, Luciana Feo, Fernando Fraternali	Composites Part B: Engineering, Vol. 103, 2016	90-97
24	Waste management by recycling of polymers with reinforcement of metal powder	Rupinder Singh, F. N.Singh, F. Fabbrocino, F. Fraternali, IPS Ahuja	Composites Part B: Engineering, Vol. 105, 2016	23-29
25	Effect of single particle size, double particle size and triple particle size Al ₂ O ₃ in Nylon-6 matrix on mechanical properties of feed stock filament for FDM	Rupinder Singh, P. Bedi, F. Fraternali, IPS Ahuja	Composites Part B: Engineering, Vol. 106, 2016	20-27
26	Thermal characterization of recycled polymer for additive manufacturing applications	K.S.Boparai, Rupinder Singh, F.Fabbrocono F.Fraternali	Composites Part B: Engineering, Vol. 106, 2016	42-47