GHULAM ASHRAF-UL-HARMAIN 🕾: +91-9419018804 | 🖳:gharmain@nitsri.ac.in

🖂: Broadway Street Naseem Bagh, Lane Number 1, House Number 1, Hazratbal, Srinagar, J&K, 190006, India

­­ **PROFILE**

* Academically qualified **Doctorate in Mechanical Engineering (Ph. D)** with illustrious career of over **35 years** in teaching **Mechanical Engineering**/ allied subjects at university level, administrative and research projects with prestigious academic and research institutions.
* Administrative works as HOD and job requirements as Professor which includes Teaching B. Tech., M. Tech. & PhD level students in completing their course program degree requirement.
* Promoting interactive learning among students and channelizing their creative talents & igniting their passion for knowledge. Designing teaching/ training curriculum customized to the needs of the students/participants.
* Managing teaching/ training logistics to facilitate efficient conduct of training sessions besides teaching & research activities
* A tireless zeal to build battery of real-life performers out of raw students with focus on their all-round development. Diligent and dedicated with abundant positive attitude and leadership abilities. Superior written and verbal communication.

**AREAS OF INTEREST**

**THIN FILM LUBRICATION**

Design, Modelling, fabrication, development and experimentation of unconventional water-cooled Thrust bearing

**COMPUTATIONAL MECHANICS**

Computational Fluid Dynamics (CFD), Finite Element Methods (FEA), Meshless methods (EFGM, Coupled FE-EFGM, XFEM)

**WAVE MOTION**

Thermo-elasticity with second sound, Applications of theories of second sound such as Green & Lindsay, Lord & Schulman

Second sound in Non-homogenous inner structure materials

**EROSIVE WEAR**

Design & development of test rig for quantification of wear in hydro turbines such as Francis & Pelton type, Studies on mechanisms of erosive wear, developing remedial measures for mitigation of erosive wear

**FRACTURE & FATIGUE**

Single overload Fatigue crack growth retardation, Load Interaction effects, Creep, fatigue & creep fatigue interaction

High temperature fatigue

**CHRONOLOGY OF PROFESSIONAL ASSIGNMENTS**

**NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR, J&K, INDIA**

**Professor** *since July 2008*

**Professor and Head of the Mechanical Engineering Department** *May 2014 – Aug 2018*

**Associate Professor** *July ‘2006 to June ‘2008*

**Assistant Professor** *March ‘1998 to July ‘2006*

**Senior Lecturer** *March ‘1993 to March ‘1998*

**Lecturer (The Then Teaching Assistant)** *April ‘1986 to March 1993*

**UNIVERSITY OF VICTORIA, VICTORIA, BRITISH COLUMBIA, CANADA**

**Faculty Member** *Sept. 97 to Dec 97, Jan. 98 to Apr. 98 and Apr. 98 to June 98*

Department of Mechanical Engineering, Camosun College, Interurban Campus, Victoria, British Columbia, Canada

**Teaching Assistant** *Academic Years 1992- 1996*

Department of Mechanical Engineering

**Research Assistant** *Academic Years 1994- 1996*

Fracture Mechanics and Material Fatigue, Department of Mechanical Engineering

**Research Assistant** *Academic Years 1992- 1994*

Wave Motion, Thermoelasticity and Second Sound, Department of Mechanical Engineering

**Fellowship Holder** *Academic Years: 1992- 1996*

**PROFESSIONAL BODY MEMBERSHIPS**

Fellow Member of ***Institution of Engineers India*** (119236-1)

Member of ***Indian Society for Technical Education*** (LM 32713)

Member of ***Tribology Society of India, Affiliated to International Tribology Society*** (LM 3 7 4 1)

Member of ***Alumni IIT Delhi*** (I- 1 6 4 9 / 0 2)

Member of Alumni, ***University of Victoria, Canada*** (92- 0 1 5 5 3)

**EDUCATIONAL CREDENTIALS**

**MASc leading to Ph. D (Mechanical Engineering), 1997 |** University of Victoria, British Columbia, Canada

**M. Tech. (Tribology and Maintenance Engineering), 1990 |** IIT Delhi, India; 9.61

**B. E. (Mechanical Engineering), 1985 |** University of Kashmir; 1st Division

**PUC, 1979 |** J&K Board of School Education; 1st Division

**Matric, 1978 |** J&K Board of School Education: 1st Division

**ACADEMIC ACCOLADES**

* University of Victoria Fellowship, University of Victoria, Victoria, British Columbia, Canada, Academic Years: 1992- 1993, 1993-1994, 1994-1995, 1995-1996.
* Research Assistantship (part time), University of Victoria, Victoria, British Columbia, Canada, Academic Years: 1992- 1993, 1993-1994, 1994-1995, 1995-1996.
* Research Assistantship (full time), University of Victoria, Victoria, British Columbia, Canada, academic Year 1996-1997.
* Integrated PhD (MASc leading to PhD) 1992-1997.
* First Class CGPA for 7 subjects taken at PhD Level.
* Bagged 1st Position in M. Tech. scoring highest CGPA 9.61 on a scale of 10 in Tribology and Maintenance Engineering at IIT Delhi.
* QIP Scholarship for M. Tech., ITMMEC, IIT Delhi, New Delhi, India, 1988-1990
* MCM Scholarship for BE, REC Srinagar, University of Kashmir for Academic Years 1980-1985

**RESPONSIBILITIES HANDLED AT DEPARTMENTAL LEVEL**

***Several new research labs have been established in the department during my tenure as HoD which includes***

* Advanced Tribology lab (which has equipment worth more than Rupees 1.5 crore.
* Advanced Thin Film Lubrication lab (which has equipment worth more than Rupees 60 lacs)
* Turbine Erosion Testing Laboratory (for which equipment worth Rupees 40 Lacs is being installed)
* Advanced Strength of Materials Lab (for which equipment worth Rupees 4.5 Crore has been already ordered)
* Software’s worth more than Rupees 50 Lacs have been procured for CAD Lab (which includes ANSYS, Solid Works & SPSS)
* Mechatronics Lab (some equipment’s worth several Lacs Rupees has been procured while sanction for Rupees 99 Lacs has been granted for the procurement of high end equipment which is in final stage of ordering.
* Fluid Mechanics Lab has been equipped with Hot wire Anemometer, Micro-manometers, COMSOL Software, Data Acquisition system worth more than Rupees 75 Lacs.
* Rapid Prototyping Lab is being established with an amount of Rupees 1.5 crore.
* IC Engine Lab is being modernized with equipment’s worth rupees 50 Lacs.
* High speed computation Laboratory has been sanctioned worth Rupees 25 Lacs

**RESPONSIBILITIES HANDLED AT INSTITUTE LEVEL**

1. Currently spearheading the position of ***Dean Research and Consultancy.***
2. Credentials of holding the position of ***NBA Coordinator*** for NIT Srinagar for a period of 2 years.
3. Served as Superintendent central workshop of NIT Srinagar and obtained Rupees 1 crore for its modernization
4. Active member of FIST under which Rs 68 lac were sanctioned in 2006.
5. Served as a member of Finance Settlement Committee 2007-2008.
6. Served as a ***Chairman for Purchase Committee Central Workshop***, for the year 2007-2009
7. Served as a ***Chairman Library committee*** (2012-2013) and procured Science Direct & IEE electronic access worth more than Rs 2 crore.
8. Member of Advisory Committee for Incubation Centre NIT Srinagar 2016.
9. Serving as a Board Member of Research Studies BORS since 2002 in the Mechanical Engineering Department.
10. Member Departmental Monitoring Committee (Chemical Engineering Department) since 2012.
11. Served as a member of National Advisory Council for IVth International Conference on Production & Industrial Engineering (CPIE-2016) Dr. B. R. Ambedkar National Institute of Technology, Jalandhar (December 19-21, 2016).
12. Member of Local Advisory Committee for Third International Conference on Nanotechnology for Better Living held in National Institute of Technology Srinagar, INDIA May 25-29, 2016
13. Member of National Advisory Board ICCMEET 2016.

**ACCOMPLISHMENTS**

1. One of the Ph.D. Candidates namely Dr. Farooq Ah. Najar, was conferred with Young Scientist Award, International Travel Grant by Scientific Engineering Research Board (SERB), Department of Science of Technology, Govt. of India.
2. Five of the mentored candidates have been appointed as Assistant Professors in several well reputed universities like University of Kashmir, SMVDU Katra and IUST Awantipora.

**CONSULTANCY PROJECTS UNDERTAKEN**

**Sponsored Project**

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| *Title* | Multipurpose Portable Room Heater |
| *Organization* | National Innovation Foundation (NIF)-India, Ahmadabad |
| *Amount* | Rs 1,00,000/- |
| *Description* | The innovation, incubation and entrepreneurship development center of NIT Srinagar received a wood fired “Bukhari” innovating the traditional Bukhari for heating purpose in Kashmir. |

**Testing Consultancy**

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| *Title* | Material And Hydraulic Testing of Sewerage Pipes |
| *Organization* | ERA J&K Govt. |
| *Amount* | Rs 1,08,000/- |

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| *Title* | NDT of domes at Awantipora Airport Station |
| *Organization* | Awantipur Air Force Station |
| *Amount* | Rs 4,00,000/- |

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| *Title* | Safety Audit of Kashmir University |
| *Organization* | Kashmir University |

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| *Title* | NDT of Aluminum cabins at Makhdoom Sahib Cable Car System |
| *Organization* | J&K State Cable Car Corporation Ltd |
| *Amount* | Rs 15,000/- |

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| *Title* | NDT of Steel frame structure of Multi level car Parking |
| *Organization* | JK ERA |
| *Amount* | Rs 4,00,000/- |

**INTERNATIONAL VISITS**

1. Presented paper on, “Numerical Solutions of a Coupled Thermo Elastic Interaction with Second Sound”, in the Second International Symposium on Thermal Stresses and Related Topics, Rochester, New York, USA, 1997.
2. Credentials of being invited as the speaker for Seventh International Symposium on Energy, held at Mercure Manchester Piccadilly Hotel, Piccadilly Plaza Portland Street, Manchester, M1 4PH, United Kingdom, 2017.

*Oral Presentation on:* A CFD approach for prediction of Sediment Erosion for Dulhasti Power Station.

**OUTREACH ACTIVITIES**

1. ***Member of All India Board of Undergraduate Studies in Engineering & Technology from May’ 2016 for a period of 3 years***.
2. Member of several selection committees of academic bodies which include
* University of Kashmir
* Central Institute of Temperate Horticulture, Srinagar (CITH)

**BOOK PUBLISHED**

1. Azher Jameel, Ghulam Ashraf Ul Harmain, “Modeling of Discontinuities by Enriched Techniques (XFEM, EFGM, Coupled FE-EFGM)”, LAMBERT Academic Publishing (2017-06-28)

**REMOVAL OF OBSSOLESENCE/ DEVELOPMENT OF NEW LABS**

**DESIGN OF NEW COURSES & CURRICULAM**

Annexure I attached

**PHD DISSERTATION, M. TECH THESIS & B. TECH PROJECT DETAILS**

Annexure II attached

**DETAILS OF PARTICIPATION IN SUMMER / WINTER SCHOOLS OR CONTINUING EDUCATION**

Annexure III attached

**SEMINAR/WORKSHOP ATTENDED AND ORGANIZED**

Annexure IV attached

**JOURNAL PUBLICATIONS & CONFERENCES PUBLISHED**

Annexure V attached

**ANNEXURE I *REMOVAL OF OBSSOLESENCE/ DEVELOPMENT OF NEW LABS***

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| **S. No.** | **LABORATORY** | **REMARKS** |
| **1** | **Advanced Strength of Materials**1. *Torsion Testing machine*
2. *Universal Testing machine (100kN)*
3. *Rockwell &Micro Vickers Hardness Tester*
4. *Advanced Impact Tester*
5. *Advanced Fatigue Testing Equipment*
 | Research activities in the PhD & M. Tech programs will be greatly enriched by addition of equipments. The equipments are state of art, useful for resesrch activities. Videogage equipment has also been procured  |
| **2** | **Advanced Thin Film Lubrication** | Design & development of water cooled thrust bearing to study the performance characteristics |
| **3** | **Turbine Erosion Testing of Hydro turbines** | Design & development of test rig for quantification of wear in hydro turbines such as Francis & Pelton types. |
| **4** | **Metrology**1. *Talysurf*
2. *Talyround*
 | Associated with development of Metrology Laboratory under Direct Assistance Thrust Areas of Technical Education Schemes Area of Weakness Seventh Plan Period of The Government of India MHRD (Department of Higher Education) 1987An amount of Rs.18, 42,000/- was granted under this scheme. I was deputed to IIT Roorkee for 2 months for training on similar equipment’s in 1991 |
| **5** | **Stress Analysis** 1. *Measurement of stresses in Cantilever Beam*
2. *Measurement of stresses in Simply Supported Beam*
 | Involved Measurement of stresses in Cantilever Beam wherein devised new set up with digital display in the year 2000. These experiments were incorporated into lab classes.  |
| **6** | **Photo Elastic Bench** | Measurement and display of stress contours. The machine was made operational after 30 years. |
| **7** | **Central Workshop of Institute** | Obtained Rs. 1 Cr. for central workshop of the Institute on the proposed scheme for up gradation of equipment as Superintendent of the Central Workshop under TEQIP Proposal 2003-2004.  |
| **8** | **FIST LAB***High Temperature Tribology Experiments* | Member (FIST-2006) Fund for Improvement of S&T Infrastructure of DST GOIAn amount of Rs. 68 lacs has been given to the Depart of Mechanical Engineering of the Institute. |

***DESIGN OF NEW COURSES & CURRICULAM***

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| **S NO** | **COURSE NAME** | **B. TECH/****M. TECH** | **YEAR OF INTRODUCTION** | **REMARKS** |
| **1** | Computer Applications in Mechanical Engineering | B. Tech | 2005 | New numerical methods were introduced. This also helps students to learn new programming algorithms and languages.  |
| **2** | Materials Science and Fracture Mechanics | B. Tech. | 2003 | Concepts of fracture mechanics have been introduced. Students are able to handle problems related to failure analysis and mechanical design better |
| **3** | Finite Element Method | M. Tech | 2006 | A detailed introductions to FEM and new ideas of meshing. Several softwares are also used like abacus, ANSYS, HYPERMESH, NASTRAN etc. |
| **4** | Fracture Mechanics | M. Tech | 2005 | New Concepts of Design of Mechanical Components based on fracture mechanics. This subject is taught at very limited number of Institutes in the country due to non-availability of Experts in this field |
| **5** | Continuum Mechanics | M. Tech | 2005 | The subject is taught is multidisciplinary wherein concepts of Continua with Tensorial Approach are taught |
| **6** | Control of Fatigue in Structures | M. Tech | 2007 | Based on Stress Intensity Factor. This has applications in aircraft and ship building industry |
| **7** | Design Against fatigue | M. Tech | 2009 | The course Control of Fatigue in Structures was modified and several design topics from perspective of Mechanical Engineering were added  |
| **8** | Wave Motion | M. Tech | 2009 | Numerical treatment of wave motion for various Mechanical Engineering Application. |

**ANNEXURE II**

  ***PhD Dissertation Details***

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| **S. No** | **Program** | **Title** | **Completion** | **Candidate Name** |
| **1** | Ph.D. | An Investigation on Thermal Effects on Large Hydro-generator Bearing | 2017 Awarded | Dr. Farooq A. Najar |
| **2** | Ph.D. | Applications of Enriched methods in solving problems containing discontinuities | 2017 Awarded | Dr. Azhar jameel |
| **3** | Ph.D. | Effect of Buoyancy and height ratio on the flow and heat transfer around a bluff body - An assumption on a trapezoidal geometry | 2018 Awarded | Dr. Parvez Malik |
| **4** | Ph.D. | Supplier Involvement in Product Development Using Fuzzy Adaptive Resonance Theory | 2018 Awarded | Mr. Saad Parvaz |
| **5** | Ph.D. | A Study on Sediment Erosion of Francis Turbine Runner Blade | 2019 Awarded | Mr. Junaid Massodi |
| **6** | Ph.D. | Study of tribology of ceramic cutting tools during machining of Nickel alloy 718 | 2020 Awarded | Mr. Irshad Qadri |
| **7** | Ph.D. | An Assessment of Sediment Erosion of Pelton Turbine Buckets In Himalayan Belt of Jammu and Kashmir | Pursuing | Mr. Mohd Zehab Ud Din |
| **8** | Ph.D. | Sediment based Tri-biological studies on some hydro runner materials used in Jammu & Kashmir State | Pursuing | Mr. Ishfaq Makkai |
| **9** | Ph.D. | Modeling and simulation of contact problems by enriched techniques | Pursuing | Mr. Azim Lone |
| **10** | Ph.D. | An investigation on fatigue of advanced supercritical alloy 718  | Pursuing | Mr. Ashutosh |
| **11** | Ph.D. | Elastoplastic Crack Growth Using Enriched Numerical Techniques | Pursuing | Mr. Showkat |
| **12** | Ph.D.  | An analysis of fatigue Crack Propagation in 304 LN Stainless Steel | Pursuing | Mr. Chandra kant |
| **13** | Ph.D. | **Broad area:** Thermal Effects in Unconventional Thrust Bearings | Enrolled 2020 | Mr. Junaid Ah Bhat |
| **14** | Ph.D. | **Broad area:** Fatigue of high entropy alloys | Enrolled 2020 | Mr. Umar Das |
| **15** | Ph.D.  | **Broad area:** Erosion of turbine materials | Enrolled 2020 | Mr. Saif |

 ***M. Tech Project Details***

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| **1** | **Title**  | Study of Fatigue and Fracture Properties of High Entropy Alloys |
| **Program** | M Tech, 2020 | **Name of the Student** | Mr. Raghvendra Pratap Singh |

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| **2** | **Title**  | Study of Wear behavior of Ni-cr-B-Si Hard Face Coating s Made by Cold Metal Transfer and Plasma transfer Arc Welding Process |
| **Program** | M Tech, 2019 | **Name of the Student** | Mr. Rismaya Kumar Mishra |
| **Co-Supervisor** | Dr. Hemant Kumar **|** Scientific Officer ‘F’ Material Development and Technology Division, IGCAR, Kalpakkam |

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| **2** | **Title**  | Study of Evolution of Micro Structure of 5000 h Aged RAFM Steel at 823 K Under Low Cycle Fatigue Loading |
| **Program** | M Tech, 2019 | **Name of the Student** | Mr. Kishan Dwivedi |
| **Co-Supervisor** | Dr. Vani Shankar **|** Scientific Officer ‘F’, Fatigue Studies Section, Material Development and Technology Division, IGCAR, Kalpakkam |

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| **3** | **Title**  | HCF – Creep interaction behavior of alloy 617 M  |
| **Program** | M Tech, 2019 | **Name of the Student** | Mr. Abhishek kumar |
| **Co-Supervisor** | Dr. Artik Sarkar **|** Scientific Officer ‘E’ Fatigue Studies Section, Materials Development and Technology Division, IGCAR, Kalpakkam |

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| **4** | **Title**  | Influence of temperature, Strain rate and Triaxial state of Stress on Tensile behavior of Alloy 617M |
| **Program** | M Tech, 2019 | **Name of the Student** | Mr. Ashutosh Mittal |
| **Co-Supervisor** | Dr. Sunil Goyal **|** Scientific Officer ‘F’ Fatigue Studies Section, Materials Development and Technology Division, IGCAR, Kalpakkam |

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| **5** | **Title**  | Ultrasonic Inspection of Austenitic Stainless Steel Weld Joint Using Phased Array EMAT |
| **Program** | M Tech, 2019 | **Name of the Student** | Mr. Siddharth Samal |
| **Co-Supervisor** | Dr. Anish Kumar **|** Head, UMS, Non Destructive Evaluation Division, IGCAR, Kalpakkam |

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| **6** | **Title**  | Effect of Thermal Ageing on tensile Stress – Strain behavior of 316 LN – SS with Varying Nitrogen Content |
| **Program** | M Tech, 2019 | **Name of the Student** | Mr. Ankush Chaudhary |
| **Co-Supervisor** | Dr. G. V. Prasad **|** Head Creep Studies Section, Materials Development technology Division (MDTD) Metallurgical and Material Group (MMG), IGCAR, Kalpakkam |

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| **7** | **Title**  | Ultrasonic LCR Technique for Estimating Residual Stresses in Stainless Steel |
| **Program** | M Tech, 2018 | **Name of the Student** | Mr. Gaurav Kumar |
| **Co-Supervisor** | Dr. C. K. Mukhopadhyay **|** Scientific Officer ‘H’ Non Destructive Evalauation Division, IGCAR, Kalpakkam |

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| **8** | **Title**  | Effect of Multiaxial State of Stress on Tensile Behaviour of Modified 9Cr-Mo Steel |
| **Program** | M Tech, 2018 | **Name of the Student** | Mr. Mohit Goswami |
| **Co-Supervisor** | Dr. Sunil Goyal **|** Scientific Officer ‘F’ Fatigue Section (MDTD), IGCAR, Kalpakkam |

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| **9** | **Title**  | High Temperature Strain Controlled Fatigue Behavior of Advanced Ultra Supercritical power plant Alloy Inconel 740H |
| **Program** | M Tech, 2018 | **Name of the Student** | Mr. Chandan Kumar |
| **Co-Supervisor** | Dr. Ing. J. K. Sahu | Principal Scientist & ACSIR Coordinator Materials Engineering Division CSIR National Metallurgical Laboratory Jamshedpur |

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| **10** | **Title**  | Design & Evaluation of Fatigue Behaviour of U-Joint |
| **Program** | M Tech, 2018 | **Name of the Student** | Mr. Sunil |
| **Co-Supervisor** | Dr. S. Sivaprasad | Sr Principal Scientist Material Testing & Evaluation Division CSIR NML Jamshedpur |

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| **11** | **Title**  | Elevated Temperature , High Cycle Fatigue Behaviour of Alloy 10wt%Cr Steel and Dissimilar Metal Weld Joint: 10wt%Cr and 617 M |
| **Program** | M Tech, 2018 | **Name of the Student** | Miss Rukhsana Mehdi |
| **Co-Supervisor** | Dr. A. Nagesha | Scientific Officer G, Fatigue Studies section, Mechanical metallurgy Division, IGCAR |

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| **12** | **Title**  | Low Cycle Fatigue Behaviour of Alloy 625 (as Cast) at Ambient and Elevated Temperatures |
| **Program** | M Tech, 2018 | **Name of the Student** | Miss Mubashir BAshir |
| **Co-Supervisor** | Dr. R. Sandhya | Scientific Officer ‘H+’ & Head Fatigue Studies section, Mechanical Metallurgy Division, IGCAR mechanical Metallurgy Division, IGCAR, Kalpakkam |

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| **13** | **Title**  | Sliding Friction and Wear Behavior of Colmonoy – 5 Hard face Coating Made By laser and GTAW Processes  |
| **Program** | M Tech, 2018 | **Name of the Student** | Mr. Suraj Kumar Singhdeo |
| **Co-Supervisor** | Dr. S. K, Albert |Associate Director |
|  | **Co-Supervisor** | Mr. Hemant Kumar | Scientific Officer – E, Material Engineering Group, IGCAR |

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| **14** | **Title**  | Tribological Investigation on Graphite Grease  |
| **Program** | M Tech, 2018 | **Name of the Student** | Mr. Prbhat Kumar |
| **Co-Supervisor** | Dr. G. D. Tharke **|** Senior Scientist (Tribology & Combustion Division) CSIR – Indian Institute of Petroleum, Dehradun |

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| **15** | **Title**  | Estimation of Constraint factor for correlating tensile Behaviour of FCC Materials as assessed from uniaxial tensile and automated Ball indentation tests |
| **Program** | M Tech, 2017 | **Name of the Student** | Mr. Rohit Kumar Sharma |
| **Co-Supervisor** | Dr. J Ganesh Kumar | Scientific Officer ‘E’, Material Development and Technology Division, IGCAR, Kalpakam |

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| **16** | **Title**  | Non destructive Ultrasonic Phased Array Evaluation of narrow gap Welds |
| **Program** | M Tech, 2017 | **Name of the Student** | Mr. Raj Kumar |
| **Co-Supervisor** | Dr. K. V. Raj Kumar | Scientific Officer ‘F’,Non Destructive Evaluation Division, IGCAR, Kalpakam |

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| **17** | **Title**  | Study on Reliability characteristics of Ward-Leonard System |
| **Program** | M Tech, 2017 | **Name of the Student** | Mr. Raj Kumar |
| **Co-Supervisor** | Dr. A. John Arul | Scientific officer ‘H+’, Head Reactor Shielding & data Division Reactor Design Group, IGCAR, Kalpakam |

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| **18** | **Title**  | Study of Constraint factor for Austenitic Stainless Steels Using Automated Ball Indentation (ABI) Technique |
| **Program** | M Tech, 2017 | **Name of the Student** | Mr. Rohit Kumar Sharma |
| **Co-Supervisor** | Dr. K. Laha **|** Scientific Officer ‘H+’ & Head mechanical Metallurgy Division, IGCAR, Kalpakkam |

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| **19** | **Title**  | Friction Stir Spot Welding of Aluminum Alloy 5052 |
| **Program** | M Tech, 2017 | **Name of the Student** | Mr. Anuranjan Kumar |
| **Co-Supervisor** | Dr. Rajesh Kumar **|**Engineering DepartmentCSIR-NML, Jamshedpur |

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| **20** | **Title**  | Effect of Notch on tensile behavior of 316 LN SS and correlation with DIC and FEA |
| **Program** | M Tech, 2017 | **Name of the Student** | Mr. Abhay Kumar |
| **Co-Supervisor** | Dr. Sunil Goyal**|** Scientific Officer F, Mechanical Metallurgy Division IGCAR, Kalpakkam |

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| **21** | **Title**  | Weight Measurement of Moving Rail Wagon By FBG Sensor: Experimental and Simulation Studies |
| **Program** | M Tech, 2017 | **Name of the Student** | Mr. Iqbal Ahmad |
| **Co-Supervisor** | Dr. T. k. Das **|** NDE-Department, CSIR-NML, Jamshedpur |

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| **22** | **Title**  | Structural Vibrations Analysis on Spider Web |
| **Program** | M Tech, 2017 | **Name of the Student** | Mr. Vijay Kumar |
| **Co-Supervisor** | Dr. Navin Kumar | Associate Professor And Head School Of Mech, Material and Energy Engg., IIT Ropar |

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| **23** | **Title**  | Power Law Fluid Flow Around a Circular Cylinder |
| **Program** | M Tech, 2017 | **Name of the Student** | Mr. Jalil Ul Rehman |
| **Co-Supervisor** | Mr. Parvez Malik **|** Chemical Engineering Department, NIT Srinagar, J&K |

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| **24** | **Title**  | Investigation of Swing Check Valve Using CFD |
| **Program** | M Tech, 2017 | **Name of the Student** | Mr. Yawar Iqbal |
| **Co-Supervisor** | Mr. Parvez Malik **|** Chemical Engineering Department, NIT Srinagar, J&K |

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| **25** | **Title**  | A Study of Tibia Bone Modelling Using Ct Data and Static Analysis of Ti-6Al-4V and SS-316L Tibia Implant Using FEA Techniques |
| **Program** | M Tech, 2016 | **Name of the Student** | Mr. Rishi Sharma |
| **Co-Supervisor** | Mr. Vijay Kumar Meena **|** Scientist, CSIR-CSIO, Chandigarh |

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| **26** | **Title**  | An Experimental Study On Characterization of Skin Using Blister Test and DIC |
| **Program** | M Tech, 2016 | **Name of the Student** | Mr. Lakhani Piyush Kumar |
| **Co-Supervisor** | Dr. Navin Kumar | Associate Professor And Head School Of Mech, Material and Energy Engg., IIT Ropar |
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| **27** | **Title**  | Creep Fatigue Interaction Behavioiur of 316LN Stainleess Stell And Simulation Of Cyclic Plasticity |
| **Program** | M Tech, 2016 | **Name of the Student** | Mr. Qazi Junaid Ashraf |
| **Co-Supervisor** | Shri M. Nani babu**|** Scientific Officer/ F, Fatigue Studies Section, MED. IGCAR, Kalpakkam |

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| **28** | **Title**  | Elastic Plastic Fracture Behaviour of Alloy 617 at Different Temperatures |
| **Program** | M Tech, 2016 | **Name of the Student** | Mr. Chhhandra Kant |
| **Co-Supervisor** | Shri M. Nani babu**|** Scientific Officer/ E, MTD/ MMG, IGCAR, Kalpakkam |

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| **29** | **Title**  | Elastic Plastic FE Analysis for Compact tension (CT) Specimen Evaluation of Deformation and Plastic ‘n’ factor for Weld |
| **Program** | M Tech, 2016 | **Name of the Student** | Mr. Ashutosh Kumar |
| **Co-Supervisor** | Shri. S. Athimoola Krishnan **|** Scientific Officer/ E, MTD/ MMG, IGCAR, Kalpakkam |

|  |  |  |
| --- | --- | --- |
| **30** | **Title**  | An investigation on tribological Properties and Wear Simulation of Cu an Al Alloys in Dry Rolling/ Sliding Condition |
| **Program** | M Tech, 2016 | **Name of the Student** | Mr. Vinay Saini |
| **Co-Supervisor** | Dr. G. D. Thakre**|** Senior Principal Scientist Tribology research Division CSIR-IIp Dehradun |

|  |  |  |
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| **31** | **Title**  | Effect of Chain Length on Viscosity and Tribological Characteristics of Lubricants Condition |
| **Program** | M Tech, 2016 | **Name of the Student** | Mr. Upendra Kantra Maurya |
| **Co-Supervisor** | Dr. G. D. Thakre**|** Senior Principal Scientist Tribology research Division CSIR-IIp Dehradun |

|  |  |  |
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| **32** | **Title**  | Studies On Magneto rheological Fluid and Magneto rheological Brake Operating Under Shear Mode |
| **Program** | M Tech, 2016 | **Name of the Student** | Mr. Deepak |
| **Co-Supervisor** | Dr. Harish Hirani**|** Professor, Dept. of MED, Director , CSIR (CMERI) Durgapur |

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| **33** | **Title**  | Effect of Loading Rate And Constraint On Dynamic Ductile Fracture Toughness of P91 Steel |
| **Program** | M Tech, 2016 | **Name of the Student** | Mr. Jashveer Singh |
| **Co-Supervisor** | Dr. S. Sathyanarayanan **|** Scientific Officer/ F, MTD/ MMG, IGCAR, Kalpakkam |

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| **34** | **Title**  | Reduction of Environmental Impact of Products Through Hotspot Analysis in LCA |
| **Program** | M Tech, 2016 | **Name of the Student** | Mr. Jitendar |
| **Co-Supervisor** | Dr. Prabir Sarkar **|** Asst. Professor SMME, IIT Ropar |

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| **35** | **Title**  | Influence of Temperature And Load Ratio on Fatigue Crack Growth Behaviour of 316L (N) |
| **Program** | M Tech, 2015 | **Name of the Student** | Mr. Avinash Kumar |
| **Co-Supervisor** | Shri M. Nani Babu**|** Scientific Officer/ E, MTD/ MMG, IGCAR, Kalpakkam |

|  |  |  |
| --- | --- | --- |
| **36** | **Title**  | Assessment of Ductile Damage Parameter And Prediction of Crack Initiation |
| **Program** | M Tech, 2015 | **Name of the Student** | Mr. Sunil Kumar |
| **Co-Supervisor** | Shri. S. Athimoola Krishnan **|** Scientific Officer/ E, MTD/ MMG, IGCAR, Kalpakkam |

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| **37** | **Title**  | Fatigue Crack Growth under High Temperature conditions at IGCAR |
| **Program** | M Tech, 2014 | **Name of the Student** | Mr. Shudanshu Patro |

|  |  |  |
| --- | --- | --- |
| **38** | **Title**  | Behavior of Ferritic Steels Proposed As Structural material For Nuclear power plant At Different Strain Rate |
| **Program** | M Tech, 2014 | **Name of the Student** | Mr. Ankit Baranwal |
| **Co-Supervisor** | Mr. S. A. Krishnan **|** Materials Technology Division IGCAR |

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| **39** | **Title**  | Numerical Investigation of flow around 3D Bluff Body using Deflectors |
| **Program** | M Tech, 2013 | **Name of the Student** | Mr. Ankush Raina |

|  |  |  |
| --- | --- | --- |
| **40** | **Title**  | Computational Investigation of Flow over 2D NACA 4412 Airfoil using Various Turbulence Models |
| **Program** | M Tech, 2013 | **Name of the Student** | Mr. Zehab Ud-din |

|  |  |  |
| --- | --- | --- |
| **41** | **Title**  | A Study on V-Butt Weld Joint with Modifications |
| **Program** | M Tech, 2012 | **Name of the Student** | Mr. Shabir  |
| **Co-Supervisor** | Singhania University Rajasthan |

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| **42** | **Title**  | An Investigation on Analysis of Dense Gas Dispersion in Presence of Obstacles |
| **Program** | M Tech, 2012 | **Name of the Student** | Mr. Shiekh Nasir Wahid |
|  |  |  |  |  |
| **43** | **Title**  | Enhancing The Tensile Strength of A Single V-Butt Weld Joint |
| **Program** | M Tech, 2011 | **Name of the Student** | Mr. Tanveer Amir Wani |

|  |  |  |
| --- | --- | --- |
| **44** | **Title**  | Flow Path Design For Automatic Guided Vehicles |
| **Program** | M Tech, 2011 | **Name of the Student** | Mr. Musroor Ali  |
| **Co-Supervisor** | Mr. Saad Parvaiz **|** NIT Srinagar |

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| **45** | **Title**  | A Study on Comparison of Drag on a Bluff Body with and LES Models using CFD Analysis |
| **Program** | M Tech, 2010 | **Name of the Student** | Mr. Oweis Majeed Bhat |

|  |  |  |
| --- | --- | --- |
| **46** | **Title**  | Application of CFD in Modelling and Design of Ventilation System of Green Houses |
| **Program** | M Tech, 2010 | **Name of the Student** | Mr M. Rafiq Gujrei |

|  |  |  |
| --- | --- | --- |
| **47** | **Title**  | Design and Analysis of Wind Turbine Blade S809 Series Airfoil using Computational Fluid Dynamics |
| **Program** | M Tech, 2010 | **Name of the Student** | Mr. Farooq Ahmed Najar |

|  |  |  |
| --- | --- | --- |
| **48** | **Title**  | Crack Tip Plasticity Assessment with Crack Closure at Design Stage |
| **Program** | M Tech, 2010 | **Name of the Student** | Mr. Junaid Masoodi |

|  |  |  |
| --- | --- | --- |
| **49** | **Title**  | An Investigation on Temp & Heat Transfer Coefficient Distribution on a Gas Turbine Blade at Design Stage |
| **Program** | M Tech, 2010 | **Name of the Student** | Mr. Mushtaq Ah. Rather |

|  |  |  |
| --- | --- | --- |
| **50** | **Title**  | Design Life Prediction of Structural Components Subjected to Various Fatigue Loadings |
| **Program** | M Tech, 2010 | **Name of the Student** | Mr. Imran Firdous |

|  |  |  |
| --- | --- | --- |
| **51** | **Title**  | Design Life Prediction of Structural Components Subjected to Various Fatigue Loadings |
| **Program** | M Tech, 2010 | **Name of the Student** | Mr. Mudassir Ali Ronga |

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| **52** | **Title**  | Computational Analysis of Flow in Wheelhouse of a Simplified Car Body |
| **Program** | M Tech, 2009 | **Name of the Student** | Mr. Azhar Mirza |

|  |  |  |
| --- | --- | --- |
| **53** | **Title**  | A Numerical Investigation of Flow over a Two dimensional Typical Passenger Car |
| **Program** | M Tech, 2009 | **Name of the Student** | Mr. Sirajud Din |

|  |  |  |
| --- | --- | --- |
| **54** | **Title**  | A Numerical Study on Failures Due to Creep and Fracture Of Thin-Walled Pipe-Liners |
| **Program** | M Tech, 2009 | **Name of the Student** | Mr. Azhar Jamil |

|  |  |  |
| --- | --- | --- |
| **55** | **Title**  | Closure Effects on Fatigue Crack Growth |
| **Program** | M Tech, 2008 | **Name of the Student** | Miss Fouzia Farhat |

|  |  |  |
| --- | --- | --- |
| **56** | **Title**  | A Simulation Study of Various Effects on Fatigue Crack Growth |
| **Program** | M Tech, 2008 | **Name of the Student** | Mr. Abdul Hamid |

|  |  |  |
| --- | --- | --- |
| **57** | **Title**  | Simulation of Cutting Tool Temperature by Finite Element Method |
| **Program** | M Tech, 2008 | **Name of the Student** | Mr. M. Mushtaq Shah |

|  |  |  |
| --- | --- | --- |
| **58** | **Title**  | A study on Non Fourier Effects in Non-Homogenous Inner Structure Materials |
| **Program** | M Tech, 2007 | **Name of the Student** | Mr. M. Hanief |

|  |  |  |
| --- | --- | --- |
| **59** | **Title**  | Fracture Mechanics Based Design of Pressure Vessels |
| **Program** | M Tech, 2007 | **Name of the Student** | Miss. Nahida |

|  |  |  |
| --- | --- | --- |
| **60** | **Title**  | Computational Investigation of Flow in the Wake of a Simplified Car Model |
| **Program** | M Tech, 2007 | **Name of the Student** | Mr. Farhat Rasool Khan |

|  |  |  |
| --- | --- | --- |
| **61** | **Title**  | Analysis of Flow for Passive Ventilation using FLUENT |
| **Program** | M Tech, 2007 | **Name of the Student** | Mr. Waheed Ahmed |

|  |  |  |
| --- | --- | --- |
| **62** | **Title**  | Fatigue Crack Growth with Crack Closure Effect |
| **Program** | M Tech, 2006 | **Name of the Student** | Mr. Shuja Hussain Queresh |

|  |  |  |
| --- | --- | --- |
| **63** | **Title**  | Thermoelasticity with Second Sound |
| **Program** | M Tech, 2006 | **Name of the Student** | Mr. Asif |

|  |  |  |
| --- | --- | --- |
| **64** | **Title**  | Thermal Modeling of Metal Cutting Process |
| **Program** | M Tech, 2006 | **Name of the Student** | Mr. Imtiyaz  |
| **Co-Supervisor** | Dr. M F Wani **|**NIT Srinagar |

 ***B. Tech Project Details***

|  |  |  |
| --- | --- | --- |
| **1** | **Title** | Software Solutions For The Design Of Gears |
| **Program** | B. Tech |
| **Year** | 2003 |

|  |  |  |
| --- | --- | --- |
| **2** | **Title** | Software Solutions for all purpose Gear Design |
| **Program** | B. Tech |
| **Year** | 2005 |

|  |  |  |
| --- | --- | --- |
| **3** | **Title** | Auto-CAD Customization For Gear Design  |
| **Program** | B. Tech |
| **Year** | 2006 |

|  |  |  |
| --- | --- | --- |
| **4** | **Title** | Computerized Solution For Design Of Gears |
| **Program** | B. Tech |
| **Year** | 2007 |

|  |  |  |
| --- | --- | --- |
| **5** | **Title** | Design of Central Heating System for Residential houses |
| **Program** | B. Tech |
| **Year** | 2008 |

|  |  |  |
| --- | --- | --- |
| **6** | **Title** | Multi-Purpose pneumatic machine |
| **Program** | B. Tech |
| **Year** | 2008 |

|  |  |  |
| --- | --- | --- |
| **7** | **Title** | Safety System for Blind Curves |
| **Program** | B. Tech |
| **Year** | 2010 |

|  |  |  |
| --- | --- | --- |
| **8** | **Title** | Compressed Air Powered Engine |
| **Program** | B. Tech |
| **Year** | 2010 |

|  |  |  |
| --- | --- | --- |
| **9** | **Title** | Advanced Multipurpose Pneumatic Machine |
| **Program** | B. Tech |
| **Year** | 2010 |

|  |  |  |
| --- | --- | --- |
| **10** | **Title** | Solid Waste Management Using Biogas Plant |
| **Program** | B. Tech |
| **Year** | 2011 |

|  |  |  |
| --- | --- | --- |
| **11** | **Title** | Fabrication of Painting Robot For Ceiling  |
| **Program** | B. Tech |
| **Year** | 2011 |

|  |  |  |
| --- | --- | --- |
| **12** | **Title** | An Investigation on Typical Journal Bearing |
| **Program** | B. Tech |
| **Year** | 2011 |

|  |  |  |
| --- | --- | --- |
| **13** | **Title** | Fabrication of Peltier Refrigerator |
| **Program** | B. Tech |
| **Year** | 2011 |

|  |  |  |
| --- | --- | --- |
| **14** | **Title** | Design and Fabrication of a Smart and Safety Device for Blind Curves |
| **Program** | B. Tech |
| **Year** | 2012 |

|  |  |  |
| --- | --- | --- |
| **15** | **Title** | Design and Fabrication of Combined Snow Blowing and Grass Cutting Machine |
| **Program** | B. Tech |
| **Year** | 2012 |

|  |  |  |
| --- | --- | --- |
| **16** | **Title** | An Investigation on Tensile Strength of Single V-Butt Weld joint |
| **Program** | B. Tech |
| **Year** | 2013 |

|  |  |  |
| --- | --- | --- |
| **17** | **Title** | Automation of Multi-Purpose Pneumatic Machine |
| **Program** | B. Tech |
| **Year** | 2014 |

|  |  |  |
| --- | --- | --- |
| **18** | **Title** | Explorer Bot |
| **Program** | B. Tech |
| **Year** | 2014 |

|  |  |  |
| --- | --- | --- |
| **19** | **Title** | Messenger Robot |
| **Program** | B. Tech |
| **Year** | 2014 |

|  |  |  |
| --- | --- | --- |
| **20** | **Title** | Semi-Autonomous Tele Operated Urban search and rescue (USAR) Robot |
| **Program** | B. Tech |
| **Year** | 2015 |

|  |  |  |
| --- | --- | --- |
| **21** | **Title** | Amplitude And Frequency response of A Steel Structure To An External vibration |
| **Program** | B. Tech |
| **Year** | 2015 |

|  |  |  |
| --- | --- | --- |
| **22** | **Title** | Semi Active damping Control for Vibration Isolation |
| **Program** | B. Tech |
| **Year** | 2015 |

|  |  |  |
| --- | --- | --- |
| **23** | **Title** | Electric Car Prototype |
| **Program** | B. Tech |
| **Year** | 2016 |

|  |  |  |
| --- | --- | --- |
| **24** | **Title** | Stair Climbing, Smart Wheel Chair |
| **Program** | B. Tech |
| **Year** | 2017 |

|  |  |  |
| --- | --- | --- |
| **25** | **Title** | Design And fabrication of Electric Car Prototype |
| **Program** | B. Tech |
| **Year** | 2017 |

|  |  |  |
| --- | --- | --- |
| **26** | **Title** | Application of MATLAB for Design of Some Mechanical Components  |
| **Program** | B. Tech |
| **Year** | 2018 |

|  |  |  |
| --- | --- | --- |
| **27** | **Title** | Stair Climbing, Smart Wheel Chair with Obstacle Detection System |
| **Program** | B. Tech |
| **Year** | 2018 |

|  |  |  |
| --- | --- | --- |
| **27** | **Title** | Vehicle to Vehicle Communications |
| **Program** | B. Tech |
| **Year** | 2019 |

**ANNEXURE III**

***Details of Participation in summer / winter Schools for Continuing Education***

|  |  |  |
| --- | --- | --- |
| **1** | **Title** | Non Local Mechanics Approaches for Modeling Localized Deformations (NMAMLD 2020)  |
| **Venue** | IIT-Hyderabad |
| **Duration** | 19th to 21st Feb, 2020 |

|  |  |  |
| --- | --- | --- |
| **2** | **Title** | Finite Element Method 2012 |
| **Venue** | IIT-Hyderabad |
| **Duration** | 19th to 21st Dec, 2012 |

|  |  |  |
| --- | --- | --- |
| **3** | **Title** | Numerical Simulations Using FEM, XFEM and Mesh Free Methods |
| **Venue** | IIT Roorkee |
| **Duration** | 24th to 28th Dec, 2012 |

|  |  |  |
| --- | --- | --- |
| **4** | **Title** | Six Days Short Term course on Mechatronics |
| **Venue** | PG Deptt. of Electronics and Instrumentation Technology in collaboration with Academic Staff College KU |
| **Duration** | 21st to 26th June, 2011 |

|  |  |  |
| --- | --- | --- |
| **5** | **Title** | AICTE/MHRD Collaborative Summer School on Instrumentation & Signal Processing |
| **Venue** | Department of Electrical Engineering, NIT Srinagar |
| **Duration** | 21st to 25th June, 2010  |

|  |  |  |
| --- | --- | --- |
| **6** | **Title** | Indo-German Workshop-cum-Lecture Series on Computational Models and Methods Driven by Industrial Problems” Phase III |
| **Venue** | Department of Mathematics IIT Madras Chennai |
| **Duration** | 16th to 27th Feb, 2009 |

|  |  |  |
| --- | --- | --- |
| **7** | **Title** | Advanced Course on Fatigue and Fracture Behavior of Materials, Components and Structures ACFF’09 |
| **Venue** | Structural Engineering Research Centre, CSIR Campus, Taramani, Chennai |
| **Duration** | 11th to 13th Feb, 2009 |

|  |  |  |
| --- | --- | --- |
| **8** | **Title** | Earthquake Prediction: Recent Development and Challenges |
| **Venue** | Department of Physics, University of Kashmir |
| **Duration** | 6th to 7th Aug 2008 |

|  |  |  |
| --- | --- | --- |
| **9** | **Title** | Product Design and Development |
| **Venue** | Department of Metallurgy, NIT Srinagar |
| **Role** | **Convener** |
| **Duration** | 14th July to 25th July, 2008 |

|  |  |  |
| --- | --- | --- |
| **10** | **Title** | MEMS Design, Fabrication and Characterization: Fundamentals and Hands-on |
| **Venue** | Mechanical Engineering Department, IIT Bombay, India |
| **Duration** | 22nd to 26th May 2008 |

|  |  |  |
| --- | --- | --- |
| **11** | **Title** | CATIA Modeling |
| **Venue** | MSR School of Advanced Studies Bangalore, India |
| **Duration** | 17th Jan 2006 to 3rd Feb 2006 |

|  |  |  |
| --- | --- | --- |
| **12** | **Title** | Medical Modelling and Rapid Prototyping |
| **Venue** | Department of Mechanical Engg, NIT Srinagar |
| **Duration** | 21st March 2005 to 28th March 2005 |

|  |  |  |
| --- | --- | --- |
| **13** | **Title** | Advances in Rapid Design and Manufacturing |
| **Venue** | Department of Mechanical Engg, NIT Srinagar |
| **Duration** | 22nd March 2004 to 26th March 2004 |

|  |  |  |
| --- | --- | --- |
| **14** | **Title** | Earthquake Risk Management |
| **Venue** | Department of Civil Engg, NIT Srinagar, sponsored by Ministry of Home Affairs, Government of India |
| **Duration** | 4th Dec to 6th Dec, 2006 |

|  |  |  |
| --- | --- | --- |
| **15** | **Title** | ANSYS & Introduction to HYPERMESH |
| **Venue** | MSR School of Advanced Studies Bangalore, India |
| **Duration** | 4th Feb 2006 to 18th Feb 2006 |

|  |  |  |
| --- | --- | --- |
| **16** | **Title** | Reverse Engineering and Rapid Prototyping |
| **Venue** | MSR School of Advanced Studies Bangalore, India |
| **Duration** | 20th Feb, 2006 to 24th Feb, 2006 |

|  |  |  |
| --- | --- | --- |
| **17** | **Title** | Product Development and Design |
| **Venue** | TTTI Chandigarh  |
| **Duration** | 4th Feb 2002 to 8th Feb 2002 |

**ANNEXURE IV *Seminar/Workshop Attended***

|  |  |  |
| --- | --- | --- |
| **1** | **Title** | Workshop on Outcome Based Education (OBE) for Engineering Programs  |
| **Venue** | AICTE Auditorium Nelson Mandela Marg Road Vasnt Kunj, New Delhi |
| **Duration** | 8th to 9th Feb, 2018 |

|  |  |  |
| --- | --- | --- |
| **2** | **Title** | 11th Annual Meet & Workshop of INDEST-AICTE Consortium |
| **Organization** | IIT Delhi/ Indian Institute of Science Education & Research Mohali |
| **Duration** | 29th to 30th April, 2015 |

|  |  |  |
| --- | --- | --- |
| **3** | **Title** | 9th Annual meet and Workshop of INDEST-AICTE Consortium |
| **Venue** | IIM Ahmedabad |
| **Duration** | 17th to 19th Jan, 2013 |

|  |  |  |
| --- | --- | --- |
| **4** | **Title** | NRC-M Winter Workshop on ICME |
| **Venue** | Materials Science Deptt.,IISC Bangalore |
| **Duration** | Dec. 23rd to 27th, 2013 |

|  |  |  |
| --- | --- | --- |
| **5** | **Title** | National Mission on Education (through information communication technology Awareness workshop) |
| **Venue** | NIT Srinagar |
| **Duration** | 18th June, 2013 |

|  |  |  |
| --- | --- | --- |
| **6** | **Title** | Promoting Excellence in Research among NITs Through E-Journals  |
| **Venue** | NIT Warangal |
| **Duration** | 12th to 13th July, 2013 |

|  |  |  |
| --- | --- | --- |
| **7** | **Title** | Promoting innovations in individuals’ startups and Micro, Small and Medium Enterprises PRISM and Techno entrepreneurship Promotion Program TEPP sensitization by USIC |
| **Venue** | NIT Srinagar |
| **Duration** | 13th Oct, 2012 |

|  |  |  |
| --- | --- | --- |
| **8** | **Title** | Nano-Technology |
| **Venue** | Department of Chemistry, NIT Srinagar |
| **Duration** | 8th Sep, 2007 |

|  |  |  |
| --- | --- | --- |
| **9** | **Title** | Workshop on Science and Society Programs (Sponsored by DST, Government of India |
| **Venue** | Department of Chemistry, NIT Srinagar |
| **Duration** | 13th to 14th, June 2005  |

 ***Seminar/Workshop Organized***

|  |  |  |
| --- | --- | --- |
| **1** | **Title** | TEQIP III Sponsored One week Faculty Program on Outcome Based Education |
| **Venue** | National Institute of Technology Srinagar |
| **Role** | **Convener FDP** |
| **Duration** | 18 th May, 2019 to 22 nd May, 2019 |

|  |  |  |
| --- | --- | --- |
| **2** | **Title** | Outcome Based Education (OBE) (under TEQIP III) |
| **Venue** | National Institute of Technology Srinagar |
| **Role** | **Coordinator** |
| **Duration** | 17th to 18th Feb, 2018 |

|  |  |  |
| --- | --- | --- |
| **3** | **Title** | INSPIRE Science Camp |
| **Venue** | National Institute of Technology Srinagar |
| **Role** | **Chairman** |
| **Duration** | 14th Nov, 2015 to 18th Nov, 2015 |

|  |  |  |
| --- | --- | --- |
| **4** | **Title** | Inspire Internship Program |
| **Venue** | National Institute of Technology Srinagar |
| **Role** | **Chairman** |
| **Duration** | 14th March 2014 to 18th March, 2014 |

|  |  |  |
| --- | --- | --- |
| **5** | **Title** | INSPIRE Science Camp |
| **Venue** | National Institute of Technology Srinagar |
| **Role** | **Chairman** |
| **Duration** | 17th March 2012 to 21st March, 2012 |

|  |  |  |
| --- | --- | --- |
| **6** | **Title** | ISTE Short Term Course “Advances in Rapid Design & Manufacturing”  |
| **Role** | **Coordinator** |
| **Venue** | Maintenance Engineering Centre, NIT Srinagar |
| **Duration** | 22nd to 26th March, 2004 (One Week) |

 ***Conferences Attended***

|  |  |  |
| --- | --- | --- |
| **1** | **Title** | International Conference on Contemporary issues in Engineering, Agriculture, Applied Science & Humanities |
| **Topic** | Study of Sediment Erosion of Hydro Turbines |
| **Venue** | Department of Metallurgical and Materials Engineering, NIT Srinagar, J&K and Krishi Sanskrit, New Delhi |
| **Duration** | 22nd to 23rd June 2019 |

|  |  |  |
| --- | --- | --- |
| **2** | **Title** | Fifth International Conference on Nanotechnology for Better living  |
| **Role** | **Session Chairman** |
| **Venue** | SKUAST Shalimar Srinagar (jointly organized by NIT Srinagar and IIT Kharagpur) |
| **Duration** | 17-11 April 2019 |

|  |  |  |
| --- | --- | --- |
| **3** | **Title** | International Conference on Materials Science and Manufacturing Technology 2019  |
| **Venue** | Hotel Alfot, Coimbatore, Tamil Nadu |
| **Duration** | 12-13 April 2019 |

|  |  |  |
| --- | --- | --- |
| **4** | **Title** | International conference on Recent trends in “Engineering, Technology, Agriculture, Applied Sciences, Humanities and Business Management for sustainable Development” |
| **Role** | **Tech. Session Chairing** |
| **Venue** | Department of Metallurgical and Materials Engineering, NIT Srinagar, J&K and Krishi Sanskrit, New Delhi |
| **Duration** | 20th to 21st October, 2018s |

|  |  |  |
| --- | --- | --- |
|  | **Title**  | International Conference on Contemporary issues in Engineering, Agriculture, Applied Science & Humanities |
| **5** | **Topic** | Creep Fatigue Interaction in 316 LN Steel |
| **Venue** | Department of Metallurgical and Materials Engineering, NIT Srinagar, J&K and Krishi Sanskrit, New Delhi |
| **Duration** | 20th to 21st October, 2018 |

|  |  |  |
| --- | --- | --- |
| **6** | **Title** | Seventh International Symposium on Energy |
| **Topic** | A CFD approach for prediction of Sediment Erosion for Dulhasti Power Station |
| **Venue** | Mercure Manchester Piccadilly Hotel, Piccadilly Plaza Portland Street, Manchester, M1 4PH, United Kingdom, 2017 |
| **Duration** | 13th to 17th August, 2017 |

|  |  |  |
| --- | --- | --- |
| **7** | **Title** | 1st International Conference on Structural Integrity (ICONS-2014) |
| **Venue** | IGCAR Indira Gandhi Atomic Research Centre, Kalpakam, Chennai, IGCAR |
| **Duration** | 4th to 7th Feb, 2014 |

|  |  |  |
| --- | --- | --- |
| **8** | **Title** | 1st International Conference on Structural Integrity (ICONS-2014) |
| **Venue** | NRC-M Winter Workshop on ICME |
| **Duration** | 4th to 7th Feb, 2014 |

|  |  |  |
| --- | --- | --- |
| **9** | **Title** | 6th International Conference on Creep, Fatigue and Creep-Fatigue Interaction |
| **Venue** | Indira Gandhi Atomic Research Centre, Kalpakam, Chennai, IGCAR |
| **Duration** | Dec 24-28, 2012 |

|  |  |  |
| --- | --- | --- |
| **10** | **Title** | 5th International Conference on Creep, Fatigue and Creep-Fatigue Interaction |
| **Venue** | Indira Gandhi Atomic Research Centre, Kalpakam, Chennai, IGCAR |
| **Duration** | 24th to 26th Sept, 2008 |

|  |  |  |
| --- | --- | --- |
| **11** | **Title** | The 16th Canadian Congress of Applied Mechanics |
| **Venue** | University of Laval Montreal, Canada, |
| **Duration** | 15th to 20th June, 1997 |

|  |  |  |
| --- | --- | --- |
| **12** | **Title** | The Second International Symposium on Thermal Stresses and Related Topics |
| **Venue** | Hetnaskeri Rochester Institute of Technology Rochester, New York |
| **Duration** | 7th to 12th July, 1997 |

**ANNEXURE V**

***Journal Publication***

1. **Abhay Kumar, Ghulam Ashraf Ul Harmain**, “Assessment of Notch Effect Based on Finite Element Analysis and Digital Image Correlation Technique”, **Steel Research International**
2. Aritra Sarkar, Abhishek Kumar, Abhishek Kumar, Nagesha Atikukke, Ghulam Ashraf Ul Harmain**, “Influence of creep damage on HCF behavior in alloy 617 M”, International Journal of Pressure Vessels and Piping, Elsevier, August 2020.**
3. Azher Jameel, Ghulam Ashraf Ul Harmain, **“Large deformation in bi-material components by XIGA and coupled FE-IGA techniques”, Mechanics of Advanced Materials and Structures, July 2020**
4. Ishfaq Amin Maekai, G.A.Harmain, **“An assessment of erosive wear of hydro-turbine steel using statistical modeling and optimization”, International Journal of Surface Science and Engineering, July 2020**
5. Mohammad Zehab Ud Din, G. A. Harmain**, “Assessment of erosive Wear of Pelton Turbine Injector: Nozzle and Spear Combination- A study of Chenani Hydro Power Plant)”, Engineering Failure Analysis, Elsevier, July 2020.**
6. Azher Jameel, G. A. Harmain, **“Effect of material Irregularities on fatigue crack growth by enriched Techniques”, International Journal for Computational Methods in Engineering Science and mechanics, Taylor and Francis, 2020.**
7. Abhishek Kumar, Arira Sarkar, A nagesha, G. A. harmain**, “Generation of HCF creep interaction diagram in alloy 617M at 973 K”, International journal of fatigue, Elsevier, 2020.**
8. Irshad Qadri Ghulam Ashraf Ul Harmain and M. F. Wani, **“Temperature on crater Wear of Ceramic Inserts during Turning Process of Inconel – 718 at varying hardness”, Tribology in Industry. 2020**
9. Mohit Goswami, Sunil Goyal, Abhay Kumar, G.A. Harmain, and S.K. Albert**, “Effect of Triaxial State of Stress on Tensile Behavior of Modified 9Cr-1Mo Steel”, Journal of Materials Engineering and Performance, Springer, 2020**
10. Aazim Shafi Lone, Showkat Ahmad Kanth, GA Harmain, Azher Jameel**, “XFEM modeling of frictional contact between elliptical inclusions and solid bodies”, Materials Today Proceedings, Elsevier. 2020**
11. Aazim Shafi Lone, Showkat Ahmad Kanth, GA Harmain, Azher Jameel**, “Modeling of embedded and edge cracks in steel alloys by XFEM”, Materials Today Proceedings, Elsevier. 2020**
12. Ishfaq Amin Maekai, G.A.Harmain, **“Effect of sediment concentration and particle size on erosion behavior of forged stainless steel”, Materials today: Proceedings. 2020**
13. Ishfaq Amin Maekai and G. A. Harmain**,”** **Influence of Operating Parameters on Slurry Erosion of Stainless Steel F6NM”, Tribology in Industry. 2020**
14. **Ishfaq Amin Maekai and G. A. Harmain, “Experimental and numerical investigation on the influence of rotational speed and particle size on wear of hydro turbine steel”, Materials Today Proceedings, Elsevier.**
15. **Mubashir Bashir, R Kannan, R Sandhya, GA Harmain “**Low Cyclic Fatigue Behavior of Alloy 625 at Ambient and Elevated Temperatures**”** **Structural Integrity Assessment, 2020, Springer, Singapore.**
16. **Rukhsana Mehdi, Aritra Sarkar, A Nagesha, R Sandhya, GA Harmain “**High Cycle Fatigue Behaviour of a 10 wt% Cr Steel at Ambient and Elevated Temperatures**”,**  **Structural Integrity Assessment, 2020, Springer, Singapore.**
17. **F. A. Najar and G. A. Harmain, “**Influence on temperature profile in an oil film in thrust bearings using an embedded cooling circuitry beneath the pad surface**: An experimental investigation: Proc Engineering Tribology, IMECH 2019, SAGE**
18. **G. A. Harmain, Anuranjan Kumar, Rajneesh Kumar Gupta, Kanwar Singh Arora,** “Investigation on Interface Morphology and Joint Configuration of Dissimilar Sheet Thickness FSSW of Marine Grade Al Alloy”, **The Brazilian Society of Mechanical Sciences and Engineering, Springer, 2019.**
19. **Irshad Qadri Ghulam Ashraf Ul Harmain and M. F. Wani, “**The effect of cutting speed and work piece hardness on turning performance of nickel based super alloy – 718 using ceramic cutting insets**”, Journal of Engineering Research Express, 2019 IOP Publishing Ltd.**
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22. **Irshad Qadri Ghulam Ashraf Ul Harmain and M. F. Wani,** An Experimental Study on Investigation of Machining of nickel based Super Alloy 718, **Materials Today Proceedings, Elsevier, 2019.**
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24. **Showkat Ahmad Kantha\*, Aazim Shafi Lone a, G. A. Harmain b, Azher Jameel c** “Elasto Plastic Crack Growth by XFEM: A Review”, **Materials Today Proceedings, 9th International Conference of Materials Processing and Characterization, ICMPC-2019**
25. **G. A. Harmain c Aazim Shafi Lone a\*, Showkat Ahmad Kanth a, Azher Jameel b, “**A state of art review on the modeling of Contact type Nonlinearities by Extended Finite Element method**”, Materials Today Proceedings, 9th International Conference of Materials Processing and Characterization, ICMPC-2019.**
26. **Saad Parvez, G.A. Harmain** “Building Taxonomy for developing strategic partnerships with Original Equipment Manufacturers of a firm”, **Materials Today: Proceedings, 2018.**
27. **Malik Parveez, Amit Kumar Dhiman, GA Harmain**, “Influence of height ratio on flow and heat transfer around trapezoidal geometry (a generic sharp-edged body) covering transition to periodic flow”, **International Journal of Heat and Mass Transfer, 2018**
28. **Malik Parveez, Amit Dhiman, GA Harmain**, “Aiding buoyancy driven flow and heat transfer features of converging and diverging trapezoidal cylinders”, **Sādhanā, Springer India, 2018.**
29. **Azher Jameel, G. A. Harmain,** “Extended Iso-Geometric Analysis for modeling Three Dimensional Cracks”, **Mechanics of Advanced Materials and Structures, Taylor and Francis, 2018.**
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31. **Showkat Ahmad Kanth, GA Harmain, Azher Jameel, “**Modeling of Nonlinear Crack Growth in Steel and Aluminum Alloys by the Element Free Galerkin Method”, **Materials Today: Proceedings, Elsevier, 2018.**
32. **G. A. Harmain Aazim Shafi Lone, Azher Jameel**, “A coupled finite element-element free Galerkin approach for modeling frictional contact in engineering components”, **Materials Today, Elsevier, 2018.**
33. **Ghulam Harmain, Azher Jameel,** “A coupled FE-IGA technique for modeling fatigue crack growth in engineering materials”, **Mechanics of Advanced Materials and Structures, Taylor and Francis, 2018.**
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35. **GA Harmain, Azher Jameel, Farooq A Najar, Junaid H Masoodi,** “Large Elasto-Plastic Deformations in Bi-Material Components by Coupled FE-EFGM”, **IOP Conference Series: Materials Science and Engineering, IOP Publishing, 2017**
36. **Ankush Rainaa, G.A. Harmainb, Mir Irfan Ul Haq, “**Numerical investigation of flow around a 3D bluff body using deflector plate**”, International Journal of Mechanical Sciences, (Elsevier).2017**
37. **A. Jameel, G. A. Harmain, Y. Anand, J. H. Masoodi, F. A. Najar,** “Effect of Inclusions on the Shape and Size of Crack Tip Plastic Zones by Element Free Galerkin Method**”, World Academy of Science, Engineering and Technology International Journal of Mechanical, Aerospace, Industrial, Mechatronic and Manufacturing Engineering Vol:11, No:3, 2017.**
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39. **Junaid H Masoodi, G. A Harmain,** “Sediment erosion of Francis turbine runners in the Himalayan region of India”, **International Journal on Hydropower and Dams, Issue 1, 82-89, (2017).**
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42. **Saad Parvez, G.A. Harmain,**“Performance Evaluation of Original Equipment Manufacturers of a Firm using Fuzzy AHP and Fuzzy TOPSIS Technique”, **International Journal of Engineering Sciences (ISSN 0976 – 6693).**
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44. **Azher Jameel and G. A. Harmain, “**Modelling and Numerical Simulation of Fatigue Crack Growth in Cracked Specimens Containing Material Discontinuities”, **Strength of Materials (Springer), Vol 48, No 2, March 2016.**
45. **Najar, F A and G. A. Harmain,** “Performance characteristics in hydrodynamic water cooled thrust bearings”,**Jurnal Tribology, Vol 10, Pp 28-47, 2016.**
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48. **Farooq Ahmad Najar and G. A. Harmain**, “Numerical Investigation of Pressure Profile in Hydrodynamic Lubrication Thrust Bearing,” **International Scholarly Research Notices, vol. 2014, Article ID 157615, 8 pages, 2014. doi:10.1155/ 2014/ 157615**
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50. **Harmain, G. A., S. N. Ahmed, Aijaz Ahmed Dar,** “Comparative Study of Mechanical Behavior of Riveted and Spot Welded MS Sheets under Different Loading Conditions”, **International Journal of Advanced Scientific and Technical Research Vol. 3 Issue 2, Technology (IJERT) ISSN: 2278-0181 February - 2014**
51. **G. A. Harmain, Ankush Raina**, “Simulation of Fatigue Crack Growth for Pearlite Structured Steel Using MATLAB”**, International Journal of Emerging Technology and Advanced Engineering (ISSN 2250-2459 (Online), An ISO 9001:2008 Certified Journal, Volume 3, Special Issue 2, January 2013).**
52. **Harmain, G. A., Junaid Hassan Masoodi, and Imran Firdous,** “Design life prediction of structural components subjected to various fatigue loadings” **Procedia Engineering, (Elseiver) 2012, Vol. 06.**
53. **Harmain, G. A., Azhar Mirza, S. N. Ahmed** “Computational Analysis of Flow in Wheelhouse of a Simplified Car Body”, **International Journal of Advanced Scientific and Technical Research Oct. 2012, Issue 2 Vol 5 ISSN-2249-9954**
54. **Harmain, G. A., Irfan et al,**  “Finite Difference Based Analysis of Annular Bridge Plate Bearing on Elastic Foundation”, **International Journal of Advanced Scientific and Technical Research, Nov. 2012, Issue 2 Vol 6 ISSN-2249-9954**
55. **Harmain, G.A.,** "A model for predicting the retardation effect following a single overload,” **International Journal of Theoretical and Applied Fracture Mechanics, (Elseiver) Vol. 53 pp.80-88, 2010.**
56. **Harmain, G. A., Qureshi, S. H.,** “A simulation study on fatigue with single and block overloads,” **International Journal of Transactions of The Indian Institute of Metals Online Version : Springer-Verlag, Vol. 63, pp. 581-585, Issue 2-3, April-June, 2010.**
57. **Harmain, G.A.,** "A Numerical Investigation on Constant Amplitude Loading", **Journal of Metallurgy and Material Sciences, National Metallurgical Laboratory, Vol. 47, No. 2, pp. 103-117 April-June 2005 India.**
58. **Harmain, G.A.,** "An Investigation on Single Overload Fatigue Crack Growth Retardation Part-I (Plasticity Zone Interaction)”, **Journal of Metallurgy and Material Sciences, National Metallurgical Laboratory, Vol. 47, No.3, pp. 129-140 September 2005.**
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60. **Harmain, G.A. Provan, J.W.,** “Fatigue Crack-tip Plasticity Revisited-issue of Shape Addressed", **International Journal of Theoretical and Applied Fracture Mechanics, (Elsevier), Vol. 26, pp.63-79, 1997.**
61. **Harmain, G.A., Wegner, J.L., and Su, J., Haddow,** "Coupled Radially Symmetric Linear Thermoelasticity", **International Journal of Wave Motion, (Elsevier),** **Vol.25, pp.385-400, 1997.**

***Conference Papers***

1. **Ghulam Harmain Ishfaq Amin Makaei** “A CFD Modelling and Experimental Investigation on Erosive Wear of Hydro Turbine Steel (F6NM) in a slurry pot Test Rig”, **7th International and 45th National Fluid Mechanics and Fluid Power Conference, IIT Bombay, 2018**
2. **Ishfaq Makayei Junaid Hassan Masoodi, G. A. Harmain, Mohammad Zehab Ud Din**, “A CFD Approach for Assessment of Sediment Erosion on Dulhasti Power Station Runner”, **13th J&K Science Congress, 2018**
3. **G. A. Harmain A. K. Singh, Azher Jameel “**Modeling of Large Elasto-Plastic Deformations in Two Dimensional Bi-material Components by FEM”, **Proceedings of the 7th International Conference on Theoretical, Applied, Computational and Experimental Mechanics (ICTACEM-2017)**
4. **Ummer Amin Sheikh, Aditya Kumar Singh, Azher Jameel and G. A. Harmain**, “Three-dimensional large deformation elasto-plastic analysis by fem using total lagrangian approach”, **International Conference on Composite Materials and Structures- ICCMS 2017**
5. **Malik Parveez1\*, Amit Dhiman2, and G.A. Harmain3, “**Lamiar Flow Around Expanded Trapezoidal Prism: Aiding Buoyancy Effect**”, 2nd Computational Science Symposium 2017 organized by Department of Computational and Data Sciences (CDS), at Indian Institute of Science (IISC), Bangalore during 16-18 Mar 2017.**
6. **Malik Parveez, Amit Dhiman, G.A. Harmain, “**Effect of Buoyancy on The Flow Around Tapered Trapezoidal Prism”, **International Conference on Recent Trends in Engineering Science & Management, January, 2017 at NITTTR, Chandigarh.**
7. **Azher Jameel A. S. Lone, G. A. Harmain** “A state of Art Review on the Level Set Method for Modeling Discontinuities in Engineering materials”, **Proceedings of the 62nd Congress of The Indian Society of Theoretical and Applied Mechanics (ISTAM-2017)**
8. **Avnish Kumar, Danish Ali, Azher Jameel, GA Harmain**, “Effect of Inclusions on the Behaviour of Cracks in Three Dimensional Engineering Components”, **Proceedings of the 62nd Congress of The Indian Society of Theoretical and Applied Mechanics (ISTAM-2017), held at University College of Engineering, Osmania University, Hyderabad, India December**
9. **Danish Ali, Avnish Kumar, Azher Jameel, GA Harmain**, “Three Dimensional Analysis of Cracks in Presence of Holes by FEM”, **Proceedings of the 62nd Congress of The Indian Society of Theoretical and Applied Mechanics (ISTAM-2017), held at University College of Engineering, Osmania University, Hyderabad, India December**
10. **Showkat Ahmad Kanth, Aazim Shafi Lone, GA Harmain, Azher Jameel** “Level Set Methodology for Representing Different Discontinuities in Engineering Materials”, **Proceedings of the 62nd Congress of The Indian Society of Theoretical and Applied Mechanics (ISTAM-2017), held at University College of Engineering, Osmania University, Hyderabad, India December**
11. **G. A. Harmain Ankush Raina, Manik Kumar,** “Computational study of Ahmed Body with deflector for different Turbulence Models”, **61st Congress of ISTAM**
12. **Azher Jameel and G. A. Harmain,** “Fatigue Crack Growth Analysis of Cracked Specimens by XFEM ad EFGM”, **Proceedings of the 61st Congress of the Indian Society of Therotical and Applied mechanics (An International Conference) to be held at VIT University of Vellore, India. Dec 11-14-2016**
13. **Azher Jameel and G. A. Harmain,** “Estimation of Cack Tip Plastic Zone by XFEM, EFGM and coupled FE-EFG Techniques”, **Proceedings of the 61st Congress of Indian Society of Therotical and Applied mechanics (An International Conference) to be held at VIT University of Vellore, India. Dec 11-14-2016**
14. **Saad Parvez, G.A. Harmain, “**Supplier categorization using MCDM & cluster analysis techniques: an application from Indian automobile manufacturing firm”, **International Conclave on Innovations in Engineering & Management, Oman Vision 2020: Opportunities & Challenges,** (ICIEM-16, pp. 223-231), 24-25 February, 2016.
15. **Ankush Raina and G. A. harmain,** “Aerodynamic Drag Reduction by passive Flow Control”**, Proceedings of 60th Congress of ISTAm (**[**http://istam.iitkgp.ac.in**](http://istam.iitkgp.ac.in)**), held at MNIT, Jaipur-302017, Rajasthan, India.**
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19. **Junaid Hassan Masoodi& G. A. Harmain,** “Sediment Erosion in Francis Runner: A Case Study of Uri Hydropower Station**”, JK Science Congress, 2015, ISBN: 978-93-82288-87-9.**
20. **Azher Jameel and G. A. Harmain**, “Modeling And Simulation Of Fatigue Crack Growth Using XFEM”,**59-istam-sm-fp-163 Proceedings of 59th Congress of ISTAM (http://istam.iitkgp.ac.in) Held at : Alliance University, Anekal, Bangalore – 562106, Karnataka, India, Dec. 17-20, 2014 (**[**www.alliance.edu.in**](http://www.alliance.edu.in)**).**
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26. **S. A. Krishnan, Ankit Baranwal, A. Moitra, G. Sasikala, S. K. Albert, A. K. Bhaduri, G. A. Harmain, T. Jayakumar, E. Rajendra Kumar**, “Assessment of Deformation Field during High Strain Rate Tensile Tests of RAFM Steel Using DIC Technique”, **First International Conference on Structural Integrity (ICONS-2014), February 4-7, 2014, Kalpakkam, Elsiever Procedia Engineering 86 ( 2014 ) 131 – 138.**
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40. **Harmain, G.A.,** “Single Overload Fatigue Spectrum Crack Growth”, **International Fatigue Congress Georgia Institute of Technology, Atlanta, Georgia USA (Conducted by International Journal of Fatigue, Elseiver). 14-19 May, 2006**
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